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The zircon story of the Nile: time-structure maps of source rocks and discontinuous propagation of detrital signals

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Keywords: Nile River; Selection bias in detrital-zircon geochronology; Sm-Nd model ages; Time structure of source terranes; Segmented sediment-routing systems; Sediment budgets.

ABSTRACT

A new dimension has recently been added to provenance analysis by the rapid development of detrital-geochronology techniques. The application of any dating method to sediments allows the definition of a unique age pattern of parent rocks, a “time structure” that represents an essential complement to the information on their lithological structure obtained by traditional petrographic and mineralogical methods. This detrital-geochronology study illustrates the distribution of U-Pb zircon ages in all parts of the Nile catchment from its equatorial headwaters to the Delta, and surveys how the provenance signal is formed, transmitted, and modified along this huge sediment-routing system. Age-spectra obtained by targeting specific parts of zircon grains after cathodo-luminesce imaging and by our Automated Phase Mapping + LAICPMS "blind-dating strategy" were compared. The former approach emphasizes specific magmatic or metamorphic events in source areas, whereas the latter aims at minimizing selection bias and focuses on consistency among samples. Grain-size and hydraulic-sorting controls were also checked, but found to have only a minor effect on zircon-age distributions. The trimodal age spectrum of Kagera zircons sourced from the rift highlands of Burundi and Rwanda, characterized by prominent late Neoarchean (Aruan) and mid-Mesoproterozoic (Kibaran) peaks with a wider mid-Paleoproterozoic (Ubendian) cluster, is lost in the Lake Victoria sediment sink. The sharp unimodal Aruan peak displayed by zircon grains in both Victoria and Albert Nile is supplemented and finally superseded by Neoproterozoic grains across the vast marshlands of South Sudan, where detritus produced in equatorial regions is eventually stored. All Nile tributaries in Sudan and Egypt carry zircon grains yielding predominantly Neoproterozoic ages, with a major peak around 0.6 Ga associated with clusters around 0.8 and 1.0 Ga. A few Oligocene zircons represent the key diagnostic feature of Ethiopian provenance, the Ariadne’s golden thread that allowed retracing the paleo-Nile to its Ethiopian sources back in the Oligocene. The Nile presents a text-book case of discontinuous transmission of provenance signals along a segmented ultra-long drainage system. Zircon-age fingerprints as well as all other detrital signatures are lost repeatedly in large Ugandan lakes, reconstituted or replaced, lost again in the vast marshlands of South Sudan, and finally homogenized downstream from Ethiopia and Sudan to the Mediterranean Sea.

INTRODUCTION

The formidable development of detrital geochronology in the last decade fostered real progress in provenance analysis, allowing the determination of the age of source terranes by a wide spectrum of techniques, the most frequently used being U-Pb dating in zircon, rutile and apatite, $^{40}Ar/^{39}Ar$ dating in white mica, and fission track dating of zircon and apatite (von Eynatten & Dunkl, 2012). As a function of the targeted mineral and isotopic system, each technique reproduces a different age distribution across source areas, providing information on their complex thermal evolution through successive episodes of crustal growth (Vermeesch *et al.*, 2009). In parallel, model mantle extraction ages (i.e., the inferred time of separation of continental crust from the mantle based on a geochemical model of the evolving crust-mantle system) can be derived by the analysis of isotopic parent-daughter tracers such as Sm-Nd or Lu-Hf (e.g., DePaolo & Wasserburg, 1976; Goldstein *et al.*, 1984; Vervoort *et al.*, 1999). A variety of geochronological or model-age maps of source areas can thus be produced by the determination of isotopic ratios in bedrocks (e.g., Bennett & DePaolo, 1987; DePaolo *et al.*, 1991; Champion, 2013) or in sediments (Goldstein *et al.*, 1997; Padoan *et al.*, 2011). In provenance analysis, each of such diverse "time structures" (i.e., age patterns) of parent rocks obtained by applying a geochronological or isotopic method to daughter sediments represents a valuable complement to the description of their lithological structure as obtained by traditional petrographic and mineralogical approaches (e.g., Folk, 1968; Dickinson, 1970; Mange & Morton, 2007).

Detrital geochronology thus provides a fundamental additional dimension to the classical interpretation of detrital modes, which are *per se* unable to determine whether igneous or metamorphic rocks exposed in source terranes are young or old, and hence whether those terranes are active orogenic belts or ancient orogenic roots exposed along rift shoulders or at the core of a craton (Garzanti, 2016). Inferring plate-tectonic setting of ancient sedimentary successions without the help of detrital geochronology can be very misleading (e.g., von Eynatten *et al.*, 1996).

In the case of modern sands, the lithological structure and the diverse time structures of source terranes are generally known through geological mapping and bedrock geochronology, respectively. Bedrock data, however, are seldom distributed evenly throughout an entire orogen or continental block. Detrital geochronology may thus help us to achieve a complete coverage of entire regions, to identify sources overlooked by bedrock geochronology, and to assess the relative importance of crustal-growth episodes provided that mineral fertilities and erosion rates in different sources are taken into due account (Moecher & Samson, 2006; Vezzoli *et al.*, 2016).

In the huge Nile River catchment, parts of which are scarcely accessible because of political and logistic reasons, detrital studies provide the only viable efficient approach to comprehensively investigate source terranes. To this end, bulk Sm-Nd isotope geochemistry on size classes ranging from cohesive mud to medium sand (Padoan *et al.*, 2011) allowed us to produce the first time-structure map of source rocks across the entire catchment in terms of Sm-Nd model ages (fig. 10 in Garzanti *et al.*, 2015). More recently, a range of methods have been deployed to characterize age signatures in sediments of the trunk river and its major branches, including zircon U-Pb geochronology integrated by Hf isotope compositions and Lu-Hf model ages, Ar-Ar data on white mica and plagioclase, U-Pb data on rutile, and Sr, Nd and Hf isotope analysis on mud samples (Fielding *et al.*, 2017). The present study focuses on detrital-zircon geochronology to produce the U-Pb zircon time-structure map of the entire Nile catchment, from its equatorial headwaters of Rwanda and Burundi to the Delta in the Mediterranean Sea, and investigates how provenance signals are formed, transmitted, lost, reconstituted, replaced, or modified along the successive tracts of this ultra-long segmented sediment-routing system.

THE NILE

The Nile River drains an area of $3 \cdot 10^6$ km^2 and flows for ~ 6700 km northward from 3°55' S to 31°30' N (Fig. 1A; Woodward *et al.*, 2015). Climatic conditions across this wide latitudinal range, spanning both the Equator and the Tropic of Cancer, range from warm humid in the south to hot hyperarid in the north. The Kagera-White Nile, the southern equatorial branch, is sourced from rift highlands of Burundi, Rwanda, Uganda and western Kenya, where 1-2 m of rainfall are distributed in two rainy seasons in autumn and spring. After receiving the outflow of Lakes Victoria, Kyoga and Albert, half of White Nile waters are lost in the Sudd marshes of South Sudan, which acts as a real dam (*Sudd* means "dam" in Arabic) for sediments derived from the south. The vast South Sudan marshlands represent the surface expression of buried late Mesozoic rift basins hosting up to 9-10 km-thick Lower Cretaceous to Quaternary sedimentary successions (McHargue *et al.*, 1992; Mohamed *et al.*, 2001; Dou *et al.*, 2007). At the northern edge of the marshes, annual water discharge is restored to ~ 30 km^3 by the Sobat River, and the White Nile eventually flows slowly in its broad channel towards Khartoum, across an area that was occupied by a vast seasonal paleolake in the late Pleistocene (Lombardini, 1865; Williams *et al.*, 2015). The two other major branches, the Blue Nile and Atbara Rivers, drain Ethiopian rift highlands, where elevations are mainly between 2000 and 3000 m a.s.l. with several peaks above 4000 m. Climate is determined by the seasonal migration of the intertropical convergence zone from south to north and back, so that total annual precipitation progressively decreases northward from > 2000 mm to ≤ 1000 mm together with the length of the summer rain and runoff season (Fig. 1B). Fluvial regimes vary consequently from perennial in the subequatorial south (e.g., Baro River, the main branch of the Sobat), to seasonal for the Blue Nile, to markedly seasonal for the Dinder, Rahad, and Tekeze-Atbara rivers that virtually dry out from December to May. In August, the Blue Nile sees a third of its 48 km^3 annual water discharge, and the Atbara nearly half of its 11 km^3 discharge (Sutcliffe & Parks, 1999). The main Nile receives no significant tributary water north of Atbara town, and hardly any rainfall (< 50 mm/a) across the Sahara. Its regime thus reflects evenly distributed runoff from equatorial Africa, with the superposed pulse of summer monsoonal floods from Ethiopian highlands. About 85% of the Blue Nile flow is concentrated from July to October, whereas high levels in the White Nile persist from late September to January. The White Nile provides the main Nile with 83% of its low-season flow, but only 10% of its peak flow (Fig. 1C).

The ultra-long course of the Nile across almost 36 degrees of latitude represents a unique feature on the Earth's surface, strictly linked to the tectonic development of the East African divergent plate margin. Since the early Oligocene, dynamic uplift associated with magmatic upwelling in the south has created a prominent northwestward tilt in the northeastern African lithosphere of Sudan and Egypt, favouring the initial establishment of a paleo-Nile drainage (Adamson *et al.*, 1993; Pik *et al.*, 2003; Faccenna *et al.*, 2018; Fielding *et al.*, 2018). The linear course of the river, broadly following the geological boundary between the Pan-African Orogen and the Saharan Metacraton (Abdelsalam *et al.*, 2003; Johnson *et al.*, 2011), is confined by the Red Sea rift shoulder to the east (Fig. 1D). Nile waters are thus forced to flow northward for > 2000 km across the Sahara Desert, and only where the rift deviates towards the northeast along the Levant transform boundary can river waters eventually meet the sea.

METHODS AND RESULTS

Complete information on the petrographic and mineralogical composition of the 34 samples selected for this study are given in Garzanti *et al.* (2015), which also includes petrographic and heavy-mineral data on several samples collected and studied by Fielding *et al.* (2017). Detrital zircons were identified on heavy-mineral separates by Automated Phase Mapping (APM) with a QEMSCAN® WellSite™ instrument (Vermeesch *et al.*, 2017). One of the advantages of the APM approach is that all zircons are picked, including murky grains easily discarded by visual inspection but invariably confirmed to be zircon by LAICPMS analysis. This workflow allowed us to calculate also the area of each dated zircon grain from the number of pixels registered as zircon by QEMSCAN®. Such grain-size information is however biased by the effect of variable polish depth during sample preparation: smaller grains below the level of polish are missed and larger grains may be preferentially polished away (Simmons, 2016 pp. 38-39).

U-Pb zircon ages were determined at the London Geochronology Centre using an Agilent 7700x LAICPMS (laser ablation-inductively coupled plasma-mass spectrometry) system, employing a

NewWave NWR193 Excimer Laser operated at 10 Hz with a 20 μm spot size and ~ 2.5 J/cm^2 fluence. No cathodo-luminesce (CL) imaging was done, and the laser spot was always placed "blindly" in the middle of zircon grains in order to treat all samples equally and avoid bias in intersample comparison. Data reduction was performed using GLITTER 4.4.2 software (Griffin *et al.*, 2008). We used ^{206}Pb/^{238}U and ^{207}Pb/^{206}Pb ages for zircons younger and older than 1100 Ma, respectively. No common Pb correction was applied (for further methodological information see supplementary material in Rittner *et al.*, 2016). Grains with > +5 / -15% age discordance were discarded, and 2413 concordant ages were obtained overall. The main age clusters observed in Nile sediments are referred to as the Neoproterozoic Pan African (Johnson *et al.*, 2011), mid-Mesoproterozoic Kibaran (Tack *et al.*, 2010), mid-Paleoproterozoic Ubendian, and late Neoarchean Aruan (Link *et al.*, 2010) thermal events (Fig. 2). The full geochronological dataset is provided in Appendix B.

The White Nile

The Kagera River, draining the Karagwe-Ankole Belt in Burundi and Rwanda (Fernandez-Alonso *et al.*, 2012), carries zircon grains with mainly Kibaran (peak at 1355 Ma), Ubendian (polymodal cluster around 2 Ga) and Aruan ages (peak at 2613 Ma) to Lake Victoria. The youngest ages are Pan-African and the oldest Mesoarchean or even Paleoarchean (Table 1).

Both Victoria and Albert Nile sands are largely derived from high-grade Archean gneisses of the Congo Craton in Uganda (Link *et al.*, 2010), as reflected by dominantly Aruan zircon ages (peak at 2583 Ma). The youngest ages are Pan-African and the oldest Mesoarchean. Paleoproterozoic ages occur in Victoria Nile sand but are minor in Albert Nile sand. These very same two samples were analysed also by Fielding *et al.* (2017) after collecting cathodo-luminescence images. Interlaboratory data comparison indicates similarly dominant Aruan ages, although Pan-African zircons are more common for the Victoria Nile than for the Albert Nile sample in this case (Table 1). Both datasets show a wide age gap between 1 and 2 Ga.

In South Sudan to the north, Aruan zircon ages are still common in Bahr el Jebel sand at Juba (peak at 2557), but a major polymodal Pan-African cluster appears (peaks around 650 Ma and 970 Ma, with a minor cluster around 840 Ma). In the Bor sample collected 160 km downstream, the Aruan peak is much smaller, and the Pan-African cluster predominant. Similar zircon-age spectra, with a dominant polymodal Pan-African cluster (major peak around 670 Ma) and an Aruan peak at 2583 Ma characterize sand of the Lol tributary, draining high-grade gneisses south of the political border with the Congo. Zircon grains carried by the Sobat tributary draining Neoproterozoic granitoid gneisses in southern Ethiopia yield dominant Pan-African ages, with a few Paleozoic and Aruan ages. Finally, zircon grains in White Nile sand between the Sudd marshes and the Gezira alluvial fan built by the Blue Nile (Williams & Adamson, 1982) display a dominant, broad and asymmetrical Pan-African cluster (peak around 620 Ma), with one Cretaceous, one Carboniferous, and few Aruan ages (Table 1). The single Oligocene age obtained by Fielding *et al.* (2017) in the White Nile sample collected farther north reveals mixing with Blue Nile sediments of the Gezira fan.

The Blue Nile and Atbara-Tekeze

Detrital zircons carried by all Ethiopian branches of the Nile, draining Neoproterozoic basement and the overlying Mesozoic strata capped by Oligocene continental flood basalts (Merla *et al.*, 1979; Gani *et al.*, 2009) are invariably dominated by a trimodal Neoproterozoic cluster. Blue Nile sand displays a major peak around 820 Ma, a subordinate one around 620 Ma, and scattered ages around 1000 Ma, Atbara sand a major peak around 620 Ma, a subordinate one at 800 Ma, and a minor one around 940 Ma. Oligocene ages (24 - 32 Ma) represent 2% of total U-Pb zircon ages in most samples (Fig. 3); the youngest zircon was found in Tekeze sand (11 Ma). Mesozoic and Paleozoic ages are also represented, together with a few Paleoproterozoic to Neoarchean ages. Blue Nile sand yielded a few Cretaceous and Jurassic zircons, Tekeze and Atbara sands more Paleoproterozoic and Archean zircons. From Blue Nile, Tekeze and Atbara samples collected in nearby sites, Fielding *et al.* (2017) obtained similar results, with somewhat richer Oligocene populations (Table 1).

The main Nile from Sudan to the Delta

The Nile River hardly receives any tributary sediment north of Atbara town and across the Sahara Desert. Zircon grains in Wadi Milk, draining the Saharan Metacraton and its Phanerozoic siliciclastic covers (Abdelsalam *et al.*, 2003), yielded a dominant polymodal Pan-African cluster (main peak at ~ 600 Ma with shoulder around 670 Ma, subordinate peak around 770 Ma with shoulder around 870 Ma and tail to 1020 Ma) together with a few Cretaceous, Paleozoic, mid-Paleoproterozoic, and late Neoarchean ages.

Main Nile sand collected in Nubia before the closure of the Merowe Dam is dominated by the broad polymodal cluster of Neoproterozoic zircons typical of Ethiopian branches (major peak around 770 Ma, subordinate one around 610 Ma), and yielded only one Oligocene age, a few Early Triassic and early Paleozoic ages, and minor mid-Paleoproterozoic to late Neoarchean ages. A slightly higher percentage of Oligocene zircons is reported by Fielding *et al.* (2017).

Detrital zircons from Wadi Qena, draining Neoproterozoic basement and cover rocks of the Red Sea Hills, also yielded a dominant asymmetric polymodal Pan-African cluster with prominent peak at ~ 610 Ma; the youngest age is Silurian whereas the oldest is late Neoarchean. Zircon ages obtained by Fielding *et al.* (2017) on sand of Wadi Hammamat, also draining the Red Sea Hills in southeastern Egypt, display a very similar distribution, dominated by an asymmetric polymodal Pan-African cluster with prominent peak at ~ 610 Ma and a few Oligocene and Cretaceous ages suggesting eolian contamination with both Nile and Saharan sand; mid-Paleoproterozoic and late Neoarchean ages also occur. Dune sand from the Western Desert of Egypt to the north, analysed by Fielding *et al.* (2018), yielded the same broad asymmetrical zircon-age cluster with peak at ~ 610 Ma. The youngest age is earliest Devonian. A mid-Paleoproterozoic cluster centered around 1950 Ma and a smaller late Neoarchean one also occur.

Main Nile sands collected near Cairo before closure of the Aswan High Dam and in the modern Delta are dominated by the polymodal and asymmetrical Pan-African cluster. The main peak is invariably around 600 Ma, the subordinate one around 800 Ma, and minor clusters occur around 1000 Ma. Oligocene ages represent 1% of total zircons. Mesozoic to Ordovician ages are few. A mid-Paleoproterozoic cluster and a few late Neoarchean ages are represented. The sample analysed in the lower Nile by Fielding *et al.* (2017) did not yield any zircon age younger than the Late Triassic.

POTENTIAL CONTROLS ON ZIRCON-AGE SPECTRA

Zircon, an ultradense mineral (density ~ 4.65 g/cm^3), is expected to be systematically concentrated in the fine tail of the size distribution of any sorted sediment deposited by a tractive current (Rubey, 1933; Garzanti *et al.*, 2008). Different source rocks may shed populations of zircon grains characterized by different age and different size, as found for instance in Amazon River sediments (Lawrence et al., 2011). Measuring the size of dated zircon grains, looking for size-age relationships, and checking for hydrodynamic fractionation may thus provide fundamental clues for provenance diagnoses based on detrital-zircon geochronological data.

Grain-size control

The mineralogical composition of Nile sediments depends strongly on grain size. As readily visible in the field, white fluvial bars of litho-feldspatho-quartzose sand supplied mainly from crystalline basement contrasts sharply with the dark-coloured silty sand of levee deposits, dominantly derived from volcanic rocks (Garzanti *et al.*, 2006, 2015). The intrasample and intersample mineralogical variability related to mixing of these two different detrital populations in different proportions is most evident in Blue Nile sand. We thus tested whether grain-size control was reflected in the distribution of zircon ages as well, and specifically whether volcanic-derived zircon grains yielding young Oligocene ages were preferentially smaller than Neoproterozoic grains derived from basement rocks. The relationship between grain size and U-Pb ages of 264 zircon grains from the 32-355 size window of Blue Nile sand sample 2964 collected just upstream of the Ethiopia/Sudan boundary, however, failed to reveal a clear grain-size dependence of zircon ages (Fig. 4).

Hydraulic-sorting control

All zircon grains need not display the same physical behaviour. Very old and U-rich zircons have undergone greater radiation damage and thus contain far more defects in their crystal lattice than young and U-poor zircons. The durability as well as the density of these metamictic grains may thus be reduced, and they could be preferentially leached chemically, destroyed mechanically, or removed selectively (Garzanti *et al.*, 2009). In order to test this latter possibility, we compared the age spectra of detrital zircons in Nile Delta beach and beach-placer sands affected by hydrodynamic processes to very different degrees, confident that all zircons including dark murky grains were properly identified by the adopted APM + LAICPMS analytical method in all of the samples. However, despite the extreme density sorting undergone by the Rosetta beach placer, where ultra-dense grains have been concentrated to the highest degree, its zircon-age spectrum is not notably different from that of "normal" Delta beach samples, and even includes a greater percentage of old zircon grains. Thus, no major effect of hydraulic sorting on zircon-age distribution was detected (Fig. 3).

BLIND VS. TARGETED DATING STRATEGIES

Some of our samples were previously analysed by Fielding *et al.* (2017) using a strategy notably different from ours. These authors: a) separated zircon grains by hand-picking prior to U-Pb analysis, taking care to reduce selection bias by choosing all grains identified by the operator as zircon in one field of view; b) subjected all the selected grains to cathodo-luminescence imaging; c) used this data to identify which grains were simple and which were complex; d) in the former case they used transmitted-light images to target laser spots to avoid domain boundaries, cracks, and inclusions, whereas in the latter case they targeted laser spots to sample distinct domains within the crystals, with the main aim to obtain meaningful ages and identify specific sediment sources. Instead, we spotted all grains objectively identified by Automated Phase Mapping as zircon in the heavy-mineral separate and next always placed the laser spot "blindly" in the middle of zircon grains. At the cost of losing detailed provenance information, this time-saving protocol represents the easiest way to ensure consistency among samples, which is a fundamental prerequisite in provenance studies where different age distributions are compared with each other like fingerprints. A possible effect of this simpler strategy could be a shift of the U-Pb age spectra towards older ages, because of the preferential sampling of old inherited zircon cores. Aiming for the grain interior also runs the risk of missing the potentially very informative young magmatic overgrowths that are found in the rims of multi-cycle zircon crystals. The risk of introducing spurious mixed ages (e.g., where spots penetrated different intragrain boundaries and growth zones or intersected common-Pb-bearing inclusions) is instead prevented, because such averaging produces discordant U-Pb compositions that are removed from the dataset (in the present case we have discarded grains with > +5 / -15% age discordance, as explained above).

Direct comparison of our results with those of Fielding *et al.* (2017) provides us with a unique opportunity to evaluate the different outcomes of our "blind-dating" versus their "targeted-dating" approach, and to discuss advantages and disadvantages involved in either strategy. If the young end of the age spectrum is not considered, then the zircon U-Pb age spectra of most of the eight couples of replicate samples from all major branches of the Nile catchment analysed by us with the APM+LAICPMS approach and by Fielding *et al.* (2017) after hand-picking and CL-imaging are barely distinguishable (Fig. 5). The lack of any marked selection bias is coherent with an internal consistency check of the Fielding *et al.* (2017) data, which revealed the preponderance of simple zircon grains of igneous origin in the trunk river and its main Ethiopian tributaries, where only a few grains include older, ~ 1 Ga cores (I. Millar, written comm. 2018). As a consequence, differences between the detrital-zircon U-Pb age distributions of grain interiors and edges are minor for most samples (Fig. 6). In favorable cases such as this, the simpler and quicker "blind" analytical protocol does not diminish our power to detect the presence of specific sediment sources.

The "blind-dating" and "targeted-dating" approaches, however, do produce a different outcome if a number of zircon grains display complex structure (Fig. 7). This is best shown by Victoria Nile and Albert Nile sands, where the very same samples WN17 = 3692 and WN16 = 3690 - collected jointly and only labeled differently by Y. Najman and E. Garzanti in 2007 - were analysed following different protocols. In the Albert Nile sample WN16 = 3690, the interior and edge of zircon grains yielded broadly similar age distributions. In the Victoria Nile sample, instead, Fielding *et al.* (2017) obtained a higher number of Neoproterozoic ages. Specifically, cathodo-luminescence images highlight two populations of zircon cores, aged as ~ 2.5 Ga and 800-900 Ma, and zircon rims aged as ~ 600 Ma occurring on both (whereas 800-900 Ma zircons do not occur as rims on Archaean cores; I. Millar, written comm., 2018), a level of detail obviously lost by the "blind" approach. Growth of Neoproterozoic zircon rims reflects a tectono-metamorphic event documented by kyanite-garnet schists exposed in the Victoria Nile catchment and yielding U-Th-Pb monazite ages of ~ 0.63 Ga (Appel *et al.*, 2005; Schenk *et al.*, 2007). Such a Pan-African rejuvenation was extensive throughout the Saharan Metacraton and affected NW Uganda as well, but only marginally the gneissic rocks drained by the Albert Nile (fig. 1 in Abdelsalam *et al.*, 2003).

Another major difference between the two datasets stems from the fact that Fielding *et al.* (2017) first discovered and next expressly targeted young Cenozoic grains to trace provenance from Ethiopian volcanic highlands (Fielding *et al.*, 2018). This effort led them to strongly emphasize the percentage of zircon grains with ages < 40 Ma, representing as much as 14.3% and 7.5% of detrital zircons in their dataset for the Blue Nile and Atbara samples, but only 2.4% for both rivers in our replicate samples (Fig. 5). Conversely, the "blind dating" approach allowed us to obtain an unbiased estimate of the age distribution in the interior of zircon grains.

TIME STRUCTURES OF SOURCE ROCKS

The age information extracted from the isotopic signature of a detrital component and condensed in one number may correspond to a single major magmatic or metamorphic event, but it may also reflect a superposition of successive events or mixing from different crystal domains in the same grain or from different sources in the case of bulk-sediment analyses. Different isotopic systems generally yield very different age numbers, and the comparison of the time-structure maps thus produced may lead us to reconstruct the polyphase geological evolution of a vast region.

In the case of the Nile catchment, the time-structure maps produced by U-Pb zircon-age and Sm-Nd fingerprinting display similar patterns overall, but they characterize the major geological domains with notably different age labels (Fig. 8). Sm-Nd t_{DM} model ages up to 1 Ga older than the age of source rocks characterize sediments sourced from the Karagwe-Ankole belt and Virunga volcanoes in Burundi and Rwanda. This reflects repeated reworking and re-melting of early Paleoproterozoic crust through the late Paleoproterozoic and Mesoproterozoic (Tack *et al.*, 2010), and contamination with Paleoproterozoic crust underlying the volcanoes (Rogers *et al.*, 1998). Instead, Sm-Nd t_{DM} model ages are only ~ 0.2 Ga older than U-Pb zircon ages for Ethiopian flood basalts underlain by Neoproterozoic crust. Another major difference between the two maps in Fig. 8 reflects the inability of U-Pb zircon age-spectra to differentiate clearly between ultimate provenance from the Saharan Metacraton plus cover strata versus Pan-African terranes exposed all along the Red Sea rift shoulder, both sources being characterized by a dominant multimodal cluster of Neoproterozoic ages.

ZIRCON AGES AND SEDIMENT BUDGETS

Zircon, widespread in recycled sands and ancient sandstones because of its durability, is the most commonly targeted mineral in detrital geochronology. U-Pb ages of detrital zircons, determined routinely at a reasonable cost, faithfully reflect the crystallization ages of exposed magmatic and metamorphic rocks. As any other technique, however, detrital-zircon geochronology has its own pitfalls. Source rocks that contain little zircon or none at all (e.g., mafic and ultramafic rocks, limestone, chert) remain in the shadow, whereas felsic igneous and metaigneous rocks rich in zircon crystals are obviously overrepresented ("fertility" bias; Moecher & Samson, 2006; Dickinson, 2008; Malusà *et al.*, 2013, 2016). Durability, which is on the one hand the principal reason why zircon is so precious in provenance research, may on the other hand represent a disadvantage, because grains may be recycled over and over from one sedimentary cycle to the next, with age-spectra remaining unchanged through time and space and therefore ceasing to represent useful provenance tracers (Thomas *et al.*, 2004; Dickinson *et al.*, 2009; Garzanti *et al.*, 2013a).

Hints for the calculation of a zircon budget

In all three major Nile branches (White Nile, Blue Nile, and Atbara), as well as in wadi sands from Nubia and the Red Sea Hills and in eolian sands of the Western Desert, U-Pb age spectra of detrital zircons are all alike, and invariably dominated by a multimodal Neoproterozoic cluster (Fig. 2). Such a similarity makes the calculation of a zircon provenance budget based on the comparison among age spectra hardly feasible. The problem can be tackled in reverse, by first estimating zircon concentration in the main contributing sources. Zircon concentration can be calculated from integrated petrographic, heavy-mineral, and geochemical data, under the assumption that zircon contains on average 465,000 ppm Zr and contributes between 60% and 80% of total Zr to sand derived largely from metamorphic basement (Garzanti *et al.*, 2010). In sand derived from continental flood basalts, volcanic rock fragments are the major contributor of Zr, and zircon grains released from the associated subordinate felsic products may contribute only 20% of total Zr, as calculated for Atbara sand (Padoan *et al.*, 2011). Under these assumptions, based on the integrated petrographic, heavy-mineral, and geochemical dataset in Garzanti *et al.* (2015), zircon concentration is estimated to be 0.02 - 0.05% in White Nile sand, and thus notably higher than in Blue Nile (0.01 - 0.02%) and Atbara sands (~ 0.01%).

Although petrographic and mineralogical data have long documented that the White Nile, Nubian widyan (plural of *wadi* = "dry valley"), and the Red Sea Hills in Egypt supply very little sediment to the main Nile (< 5%; Shukri, 1950 p. 521; Garzanti *et al.*, 2006), the low zircon concentration in Blue Nile and Atbara sands suggests that sources other than Ethiopian highlands may contribute significantly to the zircon budget. In particular, the slightly higher amount of Paleoproterozoic to Neoarchean ages observed in the Egyptian lower tract of the Nile and in the Delta points to additional zircon supply from the Red Sea Hills and/or Saharan Metacraton with its widespread cover strata of "Nubian" sandstones (Klitzsch & Squyres, 1990). Although dominant in the Albert Nile, these old grains are not derived from Uganda, because the Aruan trace is lost in the White Nile downstream of the Sudd. Among Ethiopian sources, only the Tekeze contributes a few zircons with Aruan ages, which remain very scarce in the main Nile across Sudan.

PROPAGATION OF DETRITAL SIGNALS IN A SEGMENTED RIVER SYSTEM

The transmission across large river basins of detrital signals triggered by tectonic, climatic or eustatic processes (Blum & Törnqvist, 2000; Castelltort & Van Den Driessche, 2003), the effect of temporary or permanent internal sediment storage (Wittman *et al.*, 2016), and time lags between erosion and deposition and consequent potential mismatches between terrestrial and marine records (Nie *et al.*, 2015) are widely debated issues in tectonic sedimentology (Leeder, 2011; Hinderer, 2012). Each big river on Earth is a sediment-routing system with its own peculiarities. Most have internal sediment sinks of various origin, but perhaps none as many and varied as the Nile, where they range from major Ugandan lakes (Victoria, Kyoga, George, Albert) variously related to rift tectonics and geomorphology, to the vast subsident Sudd and Machar marshlands of South Sudan, and to the artificial reservoirs created in Sudan and Egypt by man in the last hundred years (e.g., Roseires, Sennar, Khashm el Girba, Merowe, LakeNubia / Nasser). The Nile is unique in being controlled from the headwaters to the Delta by rift-related tectonic features (Adamson *et al.*, 1993), active since Cretaceous times (McHargue *et al.*, 1992) and cutting across old cratonic basement extensively remobilized during the Neoproterozoic orogeny (Abdelsalam *et al.*, 2002). From the study of the Nile River we learn that sediment transport in a long drainage system may be complex and very discontinuous. As a consequence, the transmission of provenance signals can be repeatedly blocked, regenerated or lost, get mixed or overwhelmed repeatedly along the course of the river, thus introducing major uncertainties in the calculation of sediment budgets.

Discontinuous propagation of the zircon-age provenance signal

The U-Pb age signature of zircon grains changes drastically and repeatedly along the White Nile in Uganda and South Sudan, whereas it remains remarkably homogeneous from downstream of the Sudd marshes to the Delta (Fig. 3). In Uganda, the upstream signal is lost in correspondence with any big lake, representing an effective barrier to sediment transport. And each time it is replaced by a different or even by a similar signal, depending on the age of zircons contained in the rocks and sedimentary deposits eroded downstream of the lake. The trimodal Kibaran + Ubendian + Aruan zircon-age spectrum characterizing Kagera sediments and inherited from source rocks exposed in rift highlands of Burundi and Rwanda cannot overstep Lake Victoria. The sharp unimodal Aruan peak, characterizing zircon grains both in the Victoria Nile downstream of Lake Kyoga and in the Albert Nile downstream of Lake Albert, combines with Neoproterozoic grains increasing progressively in frequency across the lowlands of South Sudan. The Aruan signal does not pass the Sudd marshes, and White Nile zircons in Sudan display the same Neoproterozoic polymodal cluster as wadi and eolian sand derived from the Saharan Metacraton and its sedimentary covers in Nubia (Wadi Milk, Western Desert dunes) or from the Red Sea Hills (Wadi Qena, Wadi Hammamat). This Neoproterozoic signal is similar to that of Blue Nile, Atbara and main Nile sediments all the way to the Delta except for its lack of Oligocene zircon ages (Fig. 2). The Saharan Metacraton - extensively remobilized during the Neoproterozoic - and its “Nubian” siliciclastic covers thus supply first-cycle and polycyclic detritus characterized by almost the same zircon-age signal as that of the Neoproterozoic Pan-African belt exposed all along the Red Sea rift shoulder from Ethiopia to Egypt. The rather homogeneous age-distribution shown by Nile zircons from Khartoum to the Delta retains virtually no memory of provenance signals (i.e., Kibaran, Ubendian, and especially Aruan ages) emitted in the vast White Nile basin upstream of the Sudd (Fig. 2).

Discontinuous propagation of other provenance signals

All provenance signals share the same fate as that of the zircon-age signal. As far as sand petrography and heavy minerals are concerned, the quartzose sand of the Kagera River containing staurolite and kyanite is stored in Lake Victoria. In the upper Victoria Nile downstream of Lake Victoria, feldspar-rich sand with epidote-dominated heavy-mineral suites is regenerated locally, only to be stored next in Lake Kyoga. In the lower Victoria Nile downstream of Lake Kyoga, quartzose sand with zircon-rich suites is contributed locally by the Kafu tributary, but it is soon overwhelmed by feldspatho-quartzose detritus with amphibole-dominated suites that is successively stored in Lake Albert. In the Albert Nile downstream of Lake Albert, quartzose sand with epidote, kyanite and amphibole reworked locally is soon overwhelmed by feldspatho-quartzose detritus with amphibole-dominated suites transported by the Bahr el Jebel and finally stored in the Sudd marshes. The White Nile downstream of the Sudd carries only a small amount of pure quartzose sand with epidote and amphibole recycled locally, which is overwhelmed at Khartoum by the sediment mass flushed from Ethiopia by the Blue Nile. The composition of Nile sediments from Khartoum to the Delta is strongly size-dependent, ranging from quartzo-feldspatho-lithic volcaniclastic for silty sand carried in suspension to litho-feldspatho-quartzose for coarser sand bedload.

Sr and Nd isotopes provide perhaps the clearest evidence of such a discontinuous transmission of provenance signals along the segmented White Nile sediment-routing system (fig. 17 in Garzanti *et al.*, 2015). The isotopic signatures of Kagera sediments (high $^{87}Sr/^{86}Sr$ ratio, negative $\varepsilon Nd_{(0)}$, and Paleoproterozoic Sm-Nd model age) are all lost in Lake Victoria. Victoria Nile and Albert Nile sediments are characterized by lower $^{87}Sr/^{86}Sr$ ratio, much more strongly negative $\varepsilon Nd_{(0)}$, and Mesoarchean to Paleoarchean Sm-Nd model ages. This fingerprint gets blurred progressively across South Sudan, where the $^{87}Sr/^{86}Sr$ ratio decreases further, $\varepsilon Nd_{(0)}$ becomes much less strongly negative, and Sm-Nd model ages are first Neoarchean, next Paleoproterozoic, and finally Mesoproterozoic (Fig. 9). The original isotopic signatures of Sobat River sediments sourced from Pan-African terranes in southern Ethiopia (low $^{87}Sr/^{86}Sr$ ratio, only slightly negative $\varepsilon Nd_{(0),}$ and Neoproterozoic Sm-Nd model age) change as well across the marshes, but in the opposite direction, ending up with the same $^{87}Sr/^{86}Sr$ ratio, moderately negative $\varepsilon Nd_{(0)}$, and Mesoproterozoic Sm-Nd model age as White Nile sediments. This indicates that even detritus derived from Ethiopia via the Sobat River is dumped in the marshes and replaced by local reworking within South Sudan lowlands.

The climatic imprint carried by clay minerals is also lost across the Sudd marshes (Fig. 9), where kaolinite-dominated muds transported from hot and humid Uganda are deposited and replaced by smectite-dominated muds reworked locally and carried by the White Nile downstream. This indicates that not even the finest sediment fraction can pass the marshlands. Smectite represents the dominant clay mineral from Ethiopia and Sudan to the Mediterranean sea floors (El-Attar & Jackson, 1973; Stanley & Wingerath, 1996).

The transmission of provenance signals is thus disrupted very effectively by long-lived natural sediment sinks (Fig. 9). Instead, only minor changes in sediment signatures are observed downstream of artificial reservoirs, even where the sediment flux is reduced drastically or stopped altogether. Sand samples collected before and after closure of the Aswan High Dam, which has effectively forced the displacement of the ultimate Nile sediment sink a thousand km inland from the Mediterranean Sea to the upstream end of Lake Nubia / Nasser, do not show marked systematic changes in petrographic, heavy-mineral, or isotopic signatures. This is ascribed to prompt regeneration of the original compositional fingerprints by reworking of channel and overbank sediments deposited downstream at earlier times. The effect of the Aswan High Dam on sediment composition, as observed after half a century, is limited to somewhat increased mixing proportions of Nile sediments with wind-blown quartz, as most evident in coarser sand fractions (Garzanti *et al.*, 2015), and to a marked local increase in wind-blown kaolinite in the clay fraction (Stanley &

Wingerath, 1996). These only minor compositional effects point to virtually negligible tributary sediment supply in Egypt, owing to arid climate in the narrow and mildly elevated Red Sea Hills, and reflect the main direction of prevailing winds, which blow roughly parallel to the Nile Valley rather than across it (Hereher, 2014).

At times in the past, however, the transmission of detrital signals could have been disrupted periodically also in the final tract of the lower Nile. During arid stages, water discharge decreased sharply and the trunk river may have been subdivided into a series of disconnected tracts. During the extremely dry conditions of Marine Isotope Stage 2, for instance, invasion of eolian dunes from the Western Desert is believed to have formed a series of lakes where late Paleolithic human populations of hunter-fisher-gatherers could find ideal conditions for subsistence (Vermeersch & Van Meer, 2015). Long rivers draining across polyhistory cratonic basements hosting recent or old rejuvenated rift sags (Adamson *et al.*, 1993; Salama, 1997), especially if flowing across desert areas and therefore depending on water reservoirs located in humid faraway source regions, are thus likely to be characterized by sediment-routing systems as segmented as those of heavily dammed rivers in the Anthropocene (e.g., Indus River; Garzanti *et al.*, 2005). This represents a major element of uncertainty to be taken into account in paleogeographic and paleoclimatic reconstructions based on the study of stratigraphic successions accumulated in the terminal sediment sink (e.g., Hinderer, 2012; Nie *et al.*, 2015).

SUMMARY

This geochronological study provides a complete coverage of the ultra-long Nile River catchment, from the equatorial sources in humid central Africa, across the hyperarid Sahara, and as far as the Mediterranean Sea (Fig. 1). It monitors where, how, and why a provenance signal is generated, transmitted, lost, recreated, or replaced along such a huge segmented sediment-routing system. It also discusses the advantages and disadvantages of "blind" versus "targeted" approaches to zircon-dating in provenance studies aimed at defining ages of source rocks or calculating sediment budgets.

Zircon grains in all Nile branches from Ethiopia and Sudan to the Delta yield a dominant polymodal cluster of Neoproterozoic U-Pb ages, reflecting accretion of the Arabian-Nubian Shield and rejuvenation of the Saharan Metacraton during the major polyphase "Pan-African" Orogeny (Fig. 2). Young zircons with Oligocene ages, occurring in Blue Nile and Tekeze-Atbara sands and traced as far as the Delta, provide a unique fingerprint of provenance from the Ethiopian volcanic plateau (Fielding et al., 2017, 2018). The very different signals emitted from equatorial rift highlands, including the trimodal Mesoproterozoic (Kibaran), Paleoproterozoic (Ubendian) and Neoarchean (Aruan) peaks characterizing Kagera sand, and the unimodal Aruan peak with subordinate Neoproterozoic ages characterizing Victoria Nile and Albert Nile sands, do not propagate beyond Lake Victoria and the Sudd marshes, respectively (Fig. 3). The same fate is shared by all provenance signals, independently of grain size (Fig. 9). Sand petrography, heavy-mineral assemblages, Rb-Sr and Sm-Nd isotopic ratios, and clay minerals indicate that all sediment fractions are dumped repeatedly and trapped efficiently in major Ugandan lakes first, in South Sudan marshlands next, and finally in artificial reservoirs built in Sudan and Egypt in the last century by man.

An exceptional opportunity to investigate the effect of selection bias on detrital-zircon U-Pb age spectra was offered by previous analyses of eight couples of replicate samples from all major branches of the Nile catchment following a different protocol. Fielding et al. (2017) used cathodo-luminescence images to guide the placement of the laser spot, whereas we consistently analysed “blindly” the interior of randomly selected zircon grains. In most cases, hardly any difference is observed in the age-spectra obtained on the same sample set when CL-imaging was used and when it was not (Fig. 5), which is explained by the fact that many zircons in Nile sands are simple igneous grains without complex zoning. Where complex zircon grains make up a considerable proportion of the sample under study, as in the Ugandan branches of the White Nile, our “blind-dating" strategy provided consistent results but failed to identify all details of the multi-step geological evolution of source rocks during Neoproterozoic orogenic events highlighted instead by the "targeted-dating" approach (Fig. 7). Another major difference is seen for the minor but provenance-diagnostic population of Oligocene zircons, which were specifically targeted by Fielding *et al.* (2017) to trace provenance from Ethiopian volcanic highlands and are consequently over-represented in their Blue Nile and Atbara spectra (Fig. 5).

Diverse detrital-geochronology techniques allow the definition of multiple "time structures" of source rocks (Fig. 8), and thus provide a fundamental additional dimension to the traditional interpretation of detrital modes, which cannot determine by themselves whether igneous or metamorphic rocks exposed in source terranes are young or old, and hence whether those terranes are active orogenic belts or ancient cratonic blocks.

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SUPPORTING INFORMATION

Supplementary data associated with this article can be found in the online version, at http://doi.____________. **Appendix A** includes information on sampling sites (Table A1), and the bulk-sand petrography (Table A2), heavy-mineral (Table A3), and geochemical (Table A4) datasets. **Appendix B** provides the complete U-Pb zircon geochronological dataset. The Google-Earth^{TM} map of sampling sites *Nilezircon.kmz* is also provided.

FIGURE CAPTIONS

Figure 1. The Nile River catchment. **A**) Location of samples selected for U-Pb detrital-zircon geochronological analysis (yellow circles = samples collected between 2002 and 2009 before closure of the Merowe Dam; orange circles = samples collected by the Egyptian Irrigation Department before construction of the Aswan High Dam; full information on sampling sites provided in Appendix Table A1 and Google-Earth™ map *Nilezircon.kmz*); R = Rwanda; B = Burundi; C.A.R. = Central Africa Republic. **B**) Rainfall map. Nile cataracts and major dams are shown, together with location of modern sands (white circles) analysed for U-Pb detrital zircon geochronology by Fielding *et al.* (2017). **C**) Water discharge (Sutcliffe & Parks, 1999) and sediment fluxes (Garzanti *et al.*, 2006). **D**) Geological map (redrawn from Asga-Unesco, 1963 and other sources cited in text).

Figure 2. U-Pb age spectra of detrital zircons (age vs. frequencies plotted as Kernel Density Estimates using the *provenance* package of Vermeesch *et al.*, 2016). Sediments carried by the Kagera River are dumped in Lake Victoria, where the Kibaran and Ubendian signals are lost. The Aruan signal is restored in the Victoria Nile, and once again in the Albert Nile downstream of Lake Albert, but it is then progressively lost across the Sudd marshes of South Sudan, where White Nile sand becomes dominated by the Pan-African signal. Polymodal Pan-African ages are dominant not only in Blue Nile and Atbara sediments derived from Ethiopia, but also in sediments of widyan draining the Saharan Metacraton and its siliciclastic covers in Nubia and the Red Sea Hills in Egypt. Zircons of Oligocene age are diagnostic of provenance from Ethiopian volcanic highlands.

Figure 3. Discontinuous downstream propagation of the zircon-age provenance signal. Note the stark contrast between age-spectra upstream and downstream of Lake Victoria in Uganda, and between upstream and downstream of the Sudd marshes in South Sudan. Spectra become

homogeneously dominated by Neoproterozoic ages from Khartoum to the Delta. The young population of Oligocene grains derives from the Ethiopian volcanic plateau drained by the Atbara and Blue Nile. In the Delta, similar spectra for the Rosetta magnetite placer and other beaches indicate minor effect of selective-entrainment processes on zircon-age distributions.

Figure 4. Grain-size information obtained during QEMSCAN® analysis (Simmons, 2016). **Upper panel**: U-Pb age versus circular equivalent diameter of zircon grains from Blue Nile sample 2964 (age color-code as in Fig. 3). Evidence for grain-size control is lacking, although it may be masked by bias introduced by variable polish depth during sample preparation. **Lower panel**: Size distribution of zircon grains (blue) versus that of the total heavy-mineral population (black).

Figure 5. Comparison of U-Pb zircon-age distributions obtained with different analytical protocols from eight couples of replicate sand samples. **Above in magenta**: CL-guided “targeted-dating strategy” (data from Fielding *et al.*, 2017); **below in blue**: “blind-dating strategy” (this study). The two methods yielded different results in the young end of the spectrum (yellow arrows) because grains of Oligocene age, specifically targeted as tracers of Ethiopian volcanic provenance by Fielding *et al.* (2017), are consequently over-represented in their dataset. WN17 = 3692 and WN16 = 3690 are the very same two samples collected in the Victoria and Albert Nile by Y. Najman and E. Garzanti in 2007. Each of the other six couples was collected in the same or in nearby localities by different operators in different years.

Figure 6. Overall consistency of U-Pb ages obtained targeting the grain interior (**above in magenta**) or the grain edges (**below in orange**) of detrital zircons. Most studied grains were in fact simple, with no xenocrystic cores or late overgrowths (all data after Fielding *et al.*, 2017). A notable exception - illustrated further in Fig. 7 - is the higher frequency of Neoproterozoic ages yielded by zircon rims in the Victoria Nile sample.

Figure 7. Notable differences in U-Pb zircon-age distributions are obtained with "blind" and "targeted" approaches for samples including numerous grains with complex age structure. This is the case of the White Nile in Uganda (data from subsamples WN17 and WN16 after Fielding *et al.*, 2017), where a higher frequency of Neoproterozoic (Npz) ages was obtained by the CL-guided strategy for the Victoria Nile sample, especially from zircon rims. This reflects the Pan-African rejuvenation event recorded extensively throughout the Saharan Metacraton as far as NW Uganda but only marginally by gneissic rocks in the Albert Nile catchment.

Figure 8. Different time-structure maps of source rocks in the Nile catchment based on detrital zircon geochronology (left) and Sm-Nd fingerprinting (right; Padoan *et al.*, 2011; Garzanti *et al.*, 2013b). Dominant Neoproterozoic U-Pb zircon ages characterize both Pan-African basement exposed along the Red Sea rift shoulder and drained by all Ethiopian rivers (Sobat, Blue Nile, Atbara and their tributaries) and the Saharan Metacraton with its siliciclastic covers (Abdelsalam *et al.*, 2003). Neogene Virunga volcanoes and Oligocene Ethiopian lavas yield detritus with late Mesoproterozoic and Permo-Triassic Sm-Nd model age, respectively, revealing interaction of rising magmas with Paleoproterozoic and Neoproterozoic basement rocks, respectively. Sample locations are shown; details of map contours are drawn according to the geological map (Fig. 1).

Figure 9. Repeated decoupling of provenance signals along the White Nile sediment-routing system. Detrital fingerprints of Kagera sand are lost in Lake Victoria. Sand derived from the Archean Congo-Tanzania craton is carried by the Victoria Nile to Lake Albert, and by the Albert Nile/Bahr el Jebel to the Sudd marshes. Sediments exiting the Sudd marshes have lost all provenance signals from headwater sources. Repeated trapping in natural sediment sinks explains the very minor sediment contribution of the White Nile to the main Nile downstream of Khartoum. Petrographic, heavy-mineral and isotopic data after Garzanti *et al.* (2015); clay-mineral data after

Buursink (1971), El-Attar & Jackson (1973), De Vivo *et al.* (1981), and Nyakairu & Koeberl (2001).

Table 1. Distribution of U-Pb zircon ages along the Nile sediment-routing system. ° Samples collected before closure of the Aswan High Dam; * data after Fielding *et al.* (2017).

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U-Pb age spectra of detrital zircons are monitored throughout the ultra-long Nile drainage basin

All provenance signals are disrupted repeatedly along this huge segmented sediment-routing system

"CL-guided" versus 'blind' strategies to zircon-dating are confronted, and selection bias discussed

Different time-structure maps of source areas are defined by detrital-zircon and Sm-Nd isotope data

Zircon-age distributions do not reveal any significant grain-size or hydraulic-sorting control

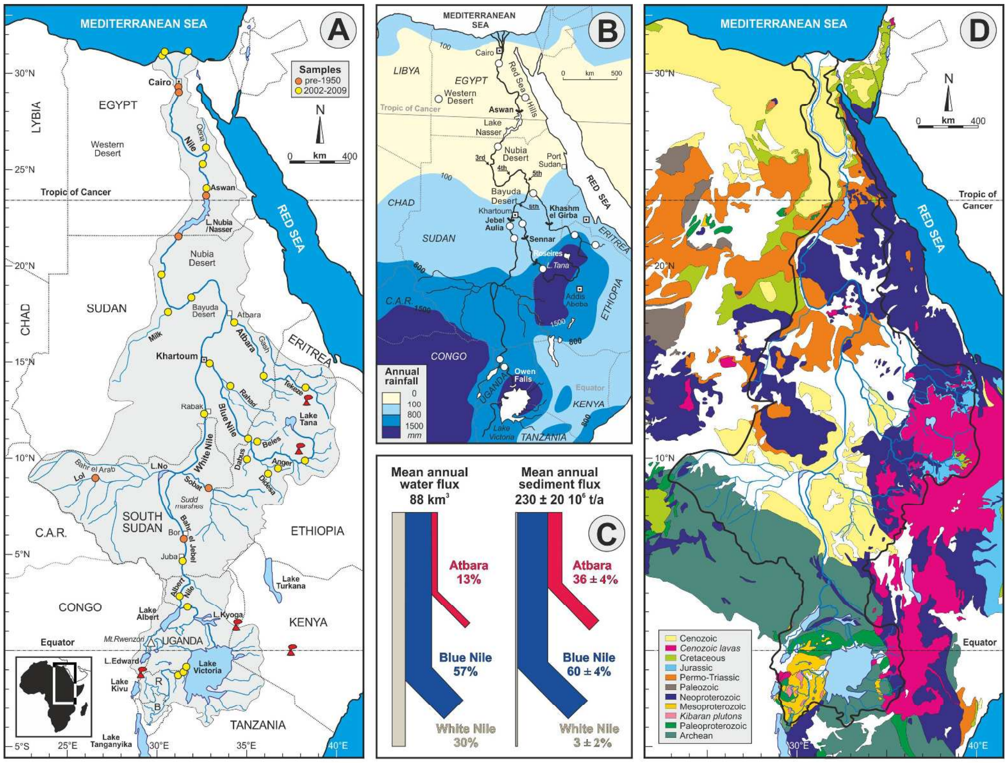

Figure 1 Nile zircon

Figure 1. The Nile River catchment. A) Location of samples selected for U-Pb detrital-zircon geochronological analysis (yellow circles = samples collected between 2002 and 2009 before closure of the Merowe Dam; orange circles = samples collected by the Egyptian Irrigation Department before construction of the Aswan High Dam; full information on sampling sites provided in Appendix Table A1 and Google-EarthTM map Nilezircon.kmz); R = Rwanda; B = Burundi; C.A.R. = Central Africa Republic. B) Rainfall map. Nile cataracts and major dams are shown, together with location of modern sands (white circles) analysed for U-Pb detrital zircon geochronology by Fielding et al. (2017). C) Water discharge (Sutcliffe & Parks, 1999) and sediment fluxes (Garzanti et al., 2006). D) Geological map (redrawn from Asga-Unesco, 1963 and other sources cited in text).

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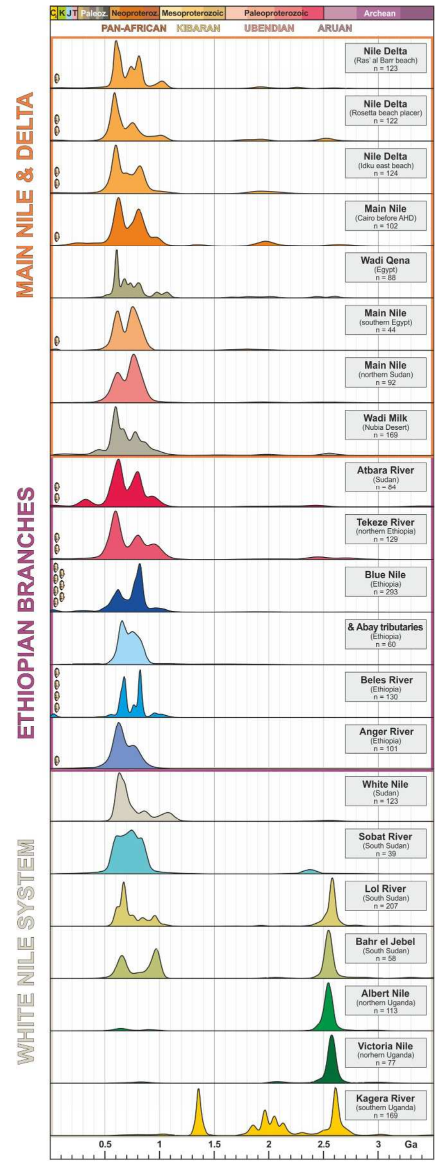

Figure 2 Nile zircon

Figure 2. U-Pb age spectra of detrital zircons (age vs. frequencies plotted as Kernel Density Estimates using the provenance package of Vermeesch et al., 2016). Sediments carried by the Kagera River are dumped in Lake Victoria, where the Kibaran and Ubendian signals are lost. The Aruan signal is restored in the Victoria Nile, and once again in the Albert Nile downstream of Lake Albert, but it is then progressively lost across the Sudd marshes of South Sudan, where White Nile sand becomes dominated by the Pan-African signal. Polymodal Pan-African ages are dominant not only in Blue Nile and Atbara sediments derived from Ethiopia, but also in sediments of widyan draining the Saharan Metacraton and its siliciclastic covers in Nubia and the Red Sea Hills in Egypt. Zircons of Oligocene age are diagnostic of provenance from Ethiopian volcanic highlands.

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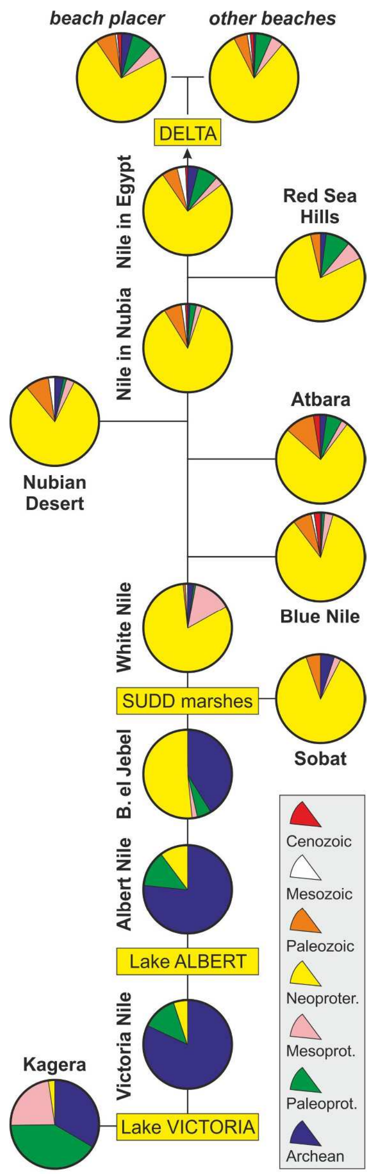

Figure 3. Discontinuous downstream propagation of the zircon-age provenance signal. Note the stark contrast between age-spectra upstream and downstream of Lake Victoria in Uganda, and between upstream and downstream of the Sudd marshes in South Sudan. Spectra become homogeneously dominated by Neoproterozoic ages from Khartoum to the Delta. The young population of Oligocene grains derives from the Ethiopian volcanic plateau drained by the Atbara and Blue Nile. In the Delta, similar spectra for the Rosetta magnetite placer and other beaches indicate minor effect of selective-entrainment processes on zircon-age distributions.

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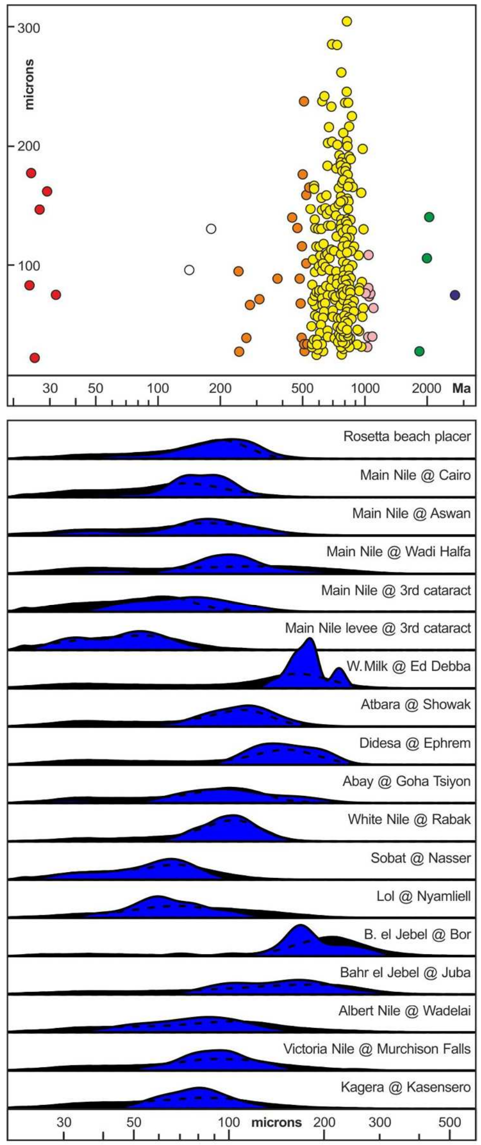

Figure 4 Nile zircon

Figure 4. Grain-size information obtained during QEMSCAN® analysis (Simmons, 2016). Upper panel: U-Pb age versus circular equivalent diameter of zircon grains from Blue Nile sample 2964 (age color-code as in Fig. 3). Evidence for grain-size control is lacking, although it may be masked by bias introduced by variable polish depth during sample preparation. Lower panel: Size distribution of zircon grains (blue) versus that of the total heavy-mineral population (black).

76x194mm (300 x 300 DPI)

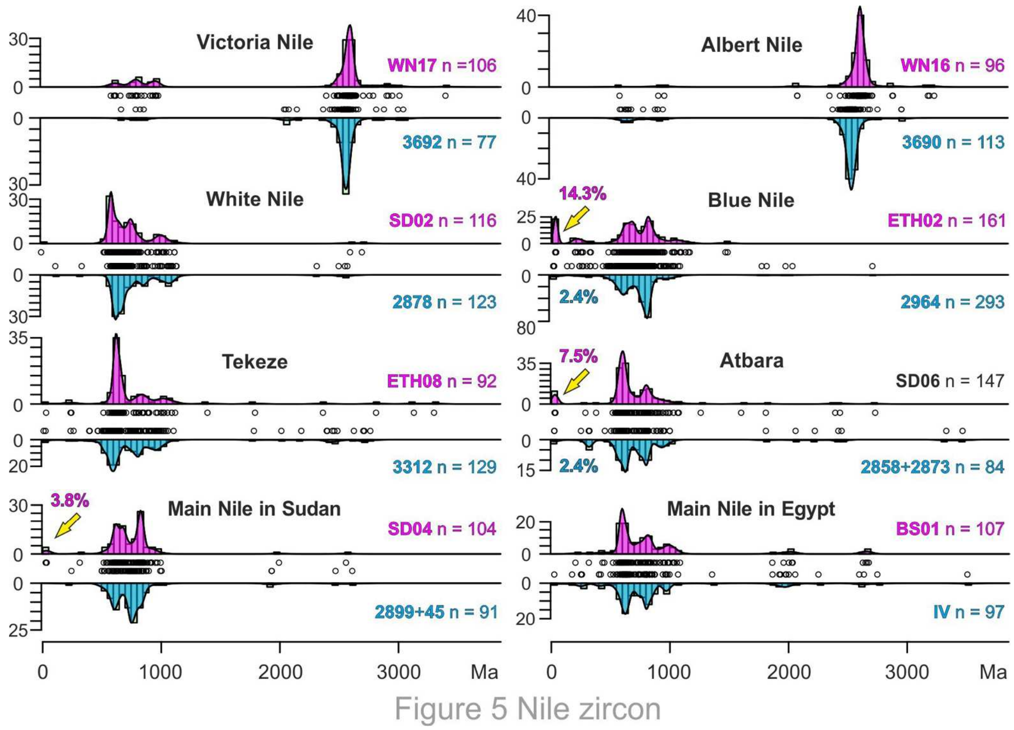

Figure 5. Comparison of U-Pb zircon-age distributions obtained with different analytical protocols from eight couples of replicate sand samples. Above in magenta: CL-guided "targeted-dating strategy" (data from Fielding et al., 2017); below in blue: "blind-dating strategy" (this study). The two methods yielded different results in the young end of the spectrum (yellow arrows) because grains of Oligocene age, specifically targeted as tracers of Ethiopian volcanic provenance by Fielding et al. (2017), are consequently over-represented in their dataset. WN17 = 3692 and WN16 = 3690 are the very same two samples collected in the Victoria and Albert Nile by Y. Najman and E. Garzanti in 2007. Each of the other six couples was collected in the same or in nearby localities by different operators in different years.

159x114mm (300 x 300 DPI)

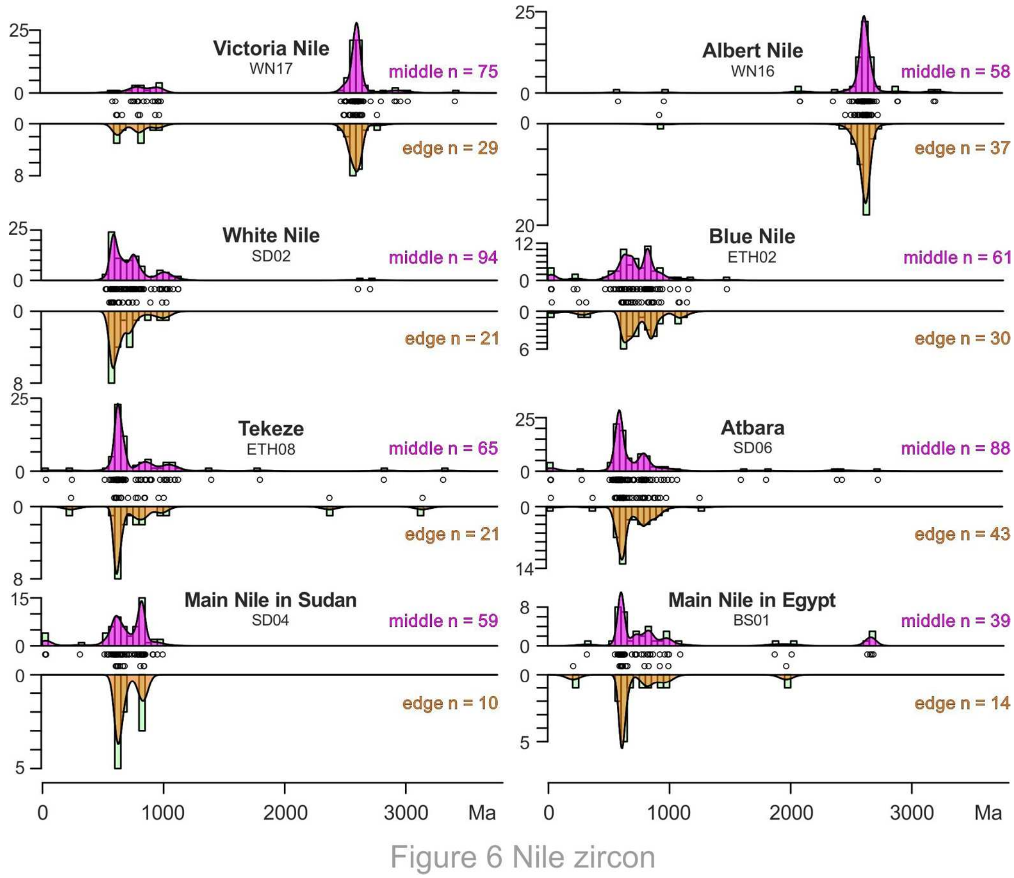

Figure 6. Overall consistency of U-Pb ages obtained targeting the grain interior (above in magenta) or the grain edges (below in orange) of detrital zircons. Most studied grains were in fact simple, with no xenocrystic cores or late overgrowths (all data after Fielding et al., 2017). A notable exception - illustrated further in Fig. 7 - is the higher frequency of Neoproterozoic ages yielded by zircon rims in the Victoria Nile sample.

160x139mm (300 x 300 DPI)

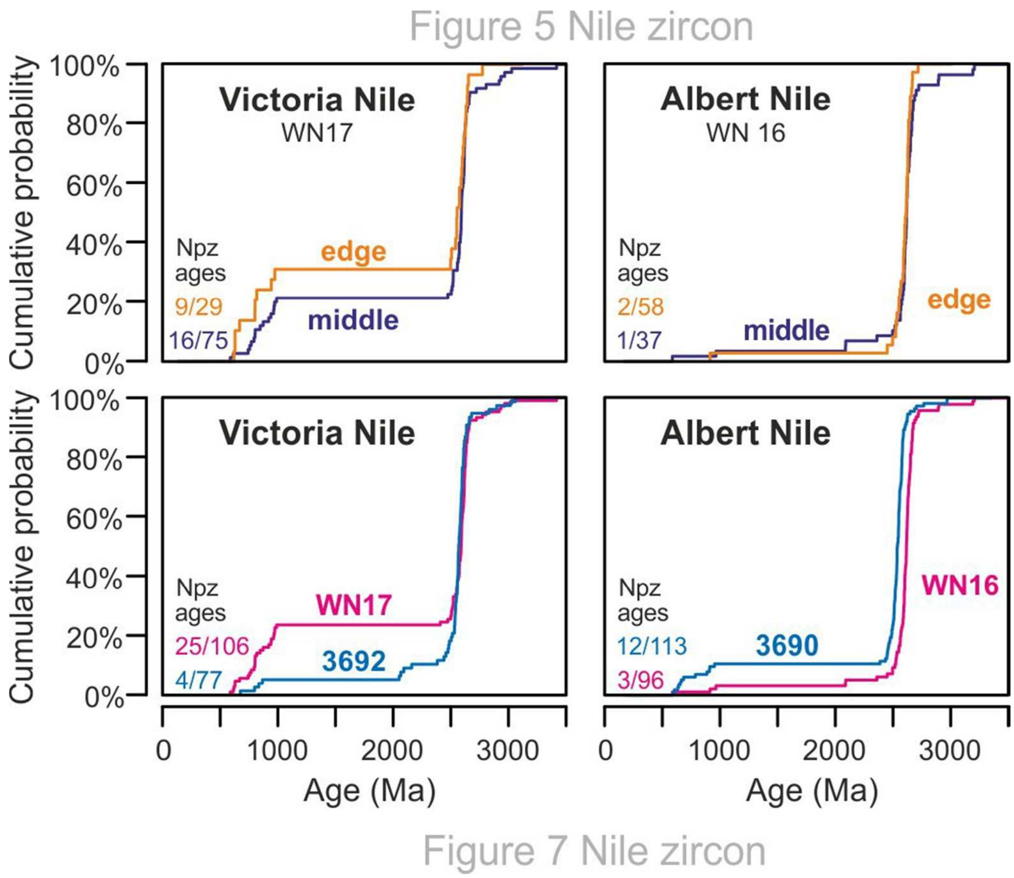

Figure 7. Notable differences in U-Pb zircon-age distributions are obtained with "blind" and "targeted" approaches for samples including numerous grains with complex age structure. This is the case of the White Nile in Uganda (data from subsamples WN17 and WN16 after Fielding et al., 2017), where a higher frequency of Neoproterozoic (Npz) ages was obtained by the CL-guided strategy for the Victoria Nile sample, especially from zircon rims. This reflects the Pan-African rejuvenation event recorded extensively throughout the Saharan Metacraton as far as NW Uganda but only marginally by gneissic rocks in the Albert Nile catchment.

88x76mm (300 x 300 DPI)

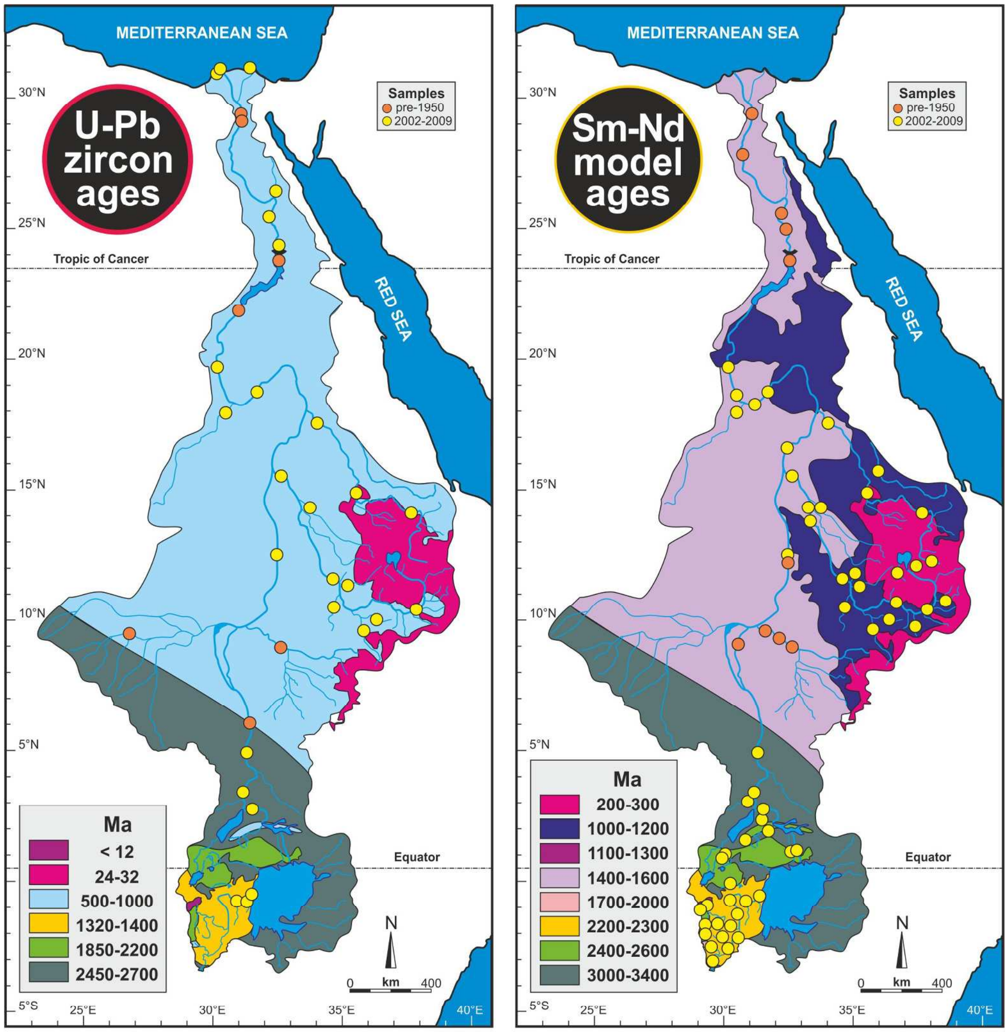

Figure 8 Nile zircon

Figure 8. Different time-structure maps of source rocks in the Nile catchment based on detrital zircon geochronology (left) and Sm-Nd fingerprinting (right; Padoan et al., 2011; Garzanti et al., 2013b). Dominant Neoproterozoic U-Pb zircon ages characterize both Pan-African basement exposed along the Red Sea rift shoulder and drained by all Ethiopian rivers (Sobat, Blue Nile, Atbara and their tributaries) and the Saharan Metacraton with its siliciclastic covers (Abdelsalam et al., 2003). Neogene Virunga volcanoes and Oligocene Ethiopian lavas yield detritus with late Mesoproterozoic and Permo-Triassic Sm-Nd model age, respectively, revealing interaction of rising magmas with Paleoproterozoic and Neoproterozoic basement rocks, respectively. Sample locations are shown; details of map contours are drawn according to the geological map (Fig. 1).

205x225mm (300 x 300 DPI)

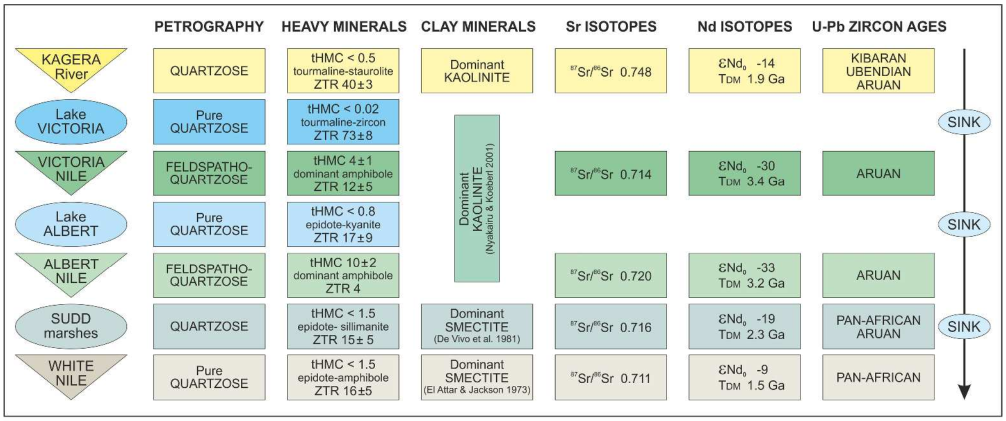

Figure 9 Nile zircon

Figure 9. Repeated decoupling of provenance signals along the White Nile sediment-routing system. Detrital fingerprints of Kagera sand are lost in Lake Victoria. Sand derived from the Archean Congo-Tanzania craton is carried by the Victoria Nile to Lake Albert, and by the Albert Nile/Bahr el Jebel to the Sudd marshes. Sediments exiting the Sudd marshes have lost all provenance signals from headwater sources. Repeated trapping in natural sediment sinks explains the very minor sediment contribution of the White Nile to the main Nile downstream of Khartoum. Petrographic, heavy-mineral and isotopic data after Garzanti et al. (2015); clay-mineral data after Buursink (1971), El-Attar & Jackson (1973), De Vivo et al. (1981), and Nyakairu & Koeberl (2001).

447x197mm (300 x 300 DPI)

Table 1

	n°ages	CENOZOIC		MESOZOIC		PALEOZOIC		NEOPROTEROZ.		MESOPROTEROZOIC				PALEOPROTEROZOIC								ARCHEAN						
										Stenian		Ectasian/Calymnian		Statherian		Orosirian		Rhyacian		Siderian		Neoarchean		Mesozrchean		Eo/Paleoarchean		
	Total	Ma	% time	Ma	% time	Ma	% time	Ma	% time																			
	3644	0-66	2%	66-252	5%	252-541	8%	541-1000	12%	1000-1200	5%	1200-1600	11%	1600-1800	5%	1800-2050	7%	2050-2300	7%	2300-2500	5%	2500-2800	8%	2800-3200	11%	3200-3800	16%	100.0%
Kagera River	169							663-966	2%	1034-1055	1%	1316-1444	22%	1761-1786	1%	1819-2048	24%	2056-2292	12%	2304-2470	4%	2509-2784	32%	3014-3037	1%	3489	0.6%	100.0%
Victoria Nile	77							675-867	5%									2053-2162	5%	2384-2488	8%	2504-2680	77%	2832-3060	5%			100.0%
Victoria Nile*	106							588-989	24%											2409-2498	3%	2721-2774	68%	2806-3028	5%	3417	0.9%	100.0%
Albert Nile	113							590-953	11%											2388-2499	13%	2502-2767	74%	2969-2970	2%			100.0%
Albert Nile*	97							587-965	3%									2088-2090	2%	2361-2497	4%	2517-2723	86%	2893-3193	4%	3206	1%	100.0%
Bahr el Jebel	58							551-991	52%	1008	2%							2065	2%	2463-2487	3%	2521-2685	34%	2868	2%	3297-3788	5%	100.0%
Lol River°	207							558-992	55%	1013-1060	2%			1679	0.5%	1926-1929	1%	2119	0.5%	2354-2494	4%	2500-2794	36%	2833-3191	1%			100.0%
Sobat River°	39					337-501	5%	553-924	87%	1059	3%											2520-2538	5%					100.0%
White Nile	123			119	1%	341	0.8%	558-988	81%	1003-1144	14%									2328	0.8%	2514-2587	2%					100.0%
White Nile*	116	0.4	0.9%			527-537	3%	557-993	87%	1021-1126	8%											2610-2710	2%					100.0%
Blue Nile	293	24-32	2%	142-247	1%	267-522	7%	542-984	84%	1000-1096	3%			1786	0.3%	1828-2046	1%					2722	0.3%					100.0%
Blue Nile*	245	24-32	9%	139-247	4%	258-529	4%	542-965	77%	1009-1159	4%	1460-1469	0.8%			1964	0.4%											100.0%
Anger River	101	31	1%			258-531	9%	552-991	85%	1021	1%			1779	1%	1916	1%					2992-3041	2%					100.0%
Beles River	130	29-31	3%			472-527	2%	551-997	92%	1011-1072	4%																	100.0%
& Abay tributaries	60					258-343	3%	565-995	92%			1374	2%	1601	2%	1922	2%											100.0%
Tekeze River	129	11-28	2%	239	1%	265-539	11%	546-994	72%	1005-1110	5%			1789	0.8%	2021	0.8%	2189	0.8%	2404-2495	4%	2634-2772	3%					100.0%
Tekeze River*	92	32	1%	239-517	3%			556-974	80%	1004-1123	9%	1396	1%	1798	1%					2372	1%			2821-3141	2%	3311	1%	100.0%
Atbara River	84	29-31	2%			255-533	11%	544-961	76%	1005-1006	2%					1818	1%	2069-2232	2%	2431-2458	2%					3343-3481	2%	100.0%
Atbara River*	147	27-34	7%			287-538	3%	542-997	84%	1031-1075	2%	1260	0.7%	1601	0.7%	1809	0.7%			2395-2435	1%	2732	0.7%					100.0%
Wadi Milk	136			103-137	2%	263-533	9%	549-982	82%	1020-1070	2%	1556	0.7%			1983-1984	1%					2539-2583	3%					100.0%
Nile in Nubia	135	24	0.7%	246-251	1%	447-534	7%	555-997	86%	1008-1163	2%					1938-1940	1%	2478	0.7%	2619	0.7%							100.0%
Nile in Nubia*	104	25-32	4%			312-535	3%	545-995	91%							1993.085	1%					2558.857	1%					100.0%
Wadi Qena	88					435-524	3%	543-982	78%	1029-1090	7%			1662-1787	2%	1836-2043	5%			2429-2461	2%	2591-2612	2%					100.0%
Western Desert*	217					417-522	2%	550-998	68%	1000-1131	14%	1441	0.5%	1686-1791	1%	1804-2045	10%	2051-2200	2%			2560-2687	2.8%					100.0%
Nile at Cairo°	102	25	1%	175-252	3%	259-524	6%	551-999	75%	1071	1%	1337-1359	2%			1870-2007	6%	2062-2258	2%			2603-2756	3%			3517	1%	100.0%
Nile at Cairo*	107			204	0.9%	317-521	4%	549-998	81%	1028-1088	6%					1868-2040	5%					2633-2683	3.8%					100.0%
Nile Delta	369	27-32	1%	109-240	1.1%	280-536	6%	544-975	79%	1003-1069	5%			1691-1783	0.5%	1803-2042	4%	2087-2260	1%	2364-2496	0.5%	2511-2663	2%					100.0%

APPENDIX A – APPENDIX TABLES CAPTIONS

"The zircon story of the Nile: time-structure maps of source rocks and discontinuous propagation of detrital signals"

by Eduardo Garzanti, Pieter Vermeesch, Martin Rittner, and Matthew Simmons

Table A1. Sample location. Sampling sites and provenance of the studied sediment samples (see also the Google Earth file *Nilezircon.kmz*). Provenance classification after Garzanti & Andò (2007a) and Garzanti *et al.* (2007).

Table A2. Sand petrography. GSZ = grain size. Q = quartz (Qp = polycrystalline); F = feldspars (KF = K-feldspar, including Mi = microcline; P = plagioclase); L= aphanitic lithic grains (Lv = volcanic; Lvf = felsic volcanic and subvolcanic; Lvm = mafic volcanic and subvolcanic; Ls = sedimentary; Lc = carbonate; Lp = shale/siltstone; Lch = chert; Lm = metamorphic; Lms = low-rank metasedimentary; Lmv = low-rank metavolcanic; Lmf = medium-rank and high-rank felsic metamorphic; Lmb = medium-rank and high-rank metabasite; Lu = ultramafic); ms = muscovite; bt = biotite; HM = heavy minerals; n.d. = not determined. The Metamorphic Indices MI and MI*, expressing the average rank of rock fragments in each sample, vary respectively from 0 (in detritus shed by exclusively sedimentary and volcanic cover rocks) or from 100 (in very-low-rank detritus shed by exclusively very low-grade metamorphic rocks) to 500 (in very-high-rank detritus shed by exclusively high-grade basement rocks; Garzanti & Vezzoli, 2003). Values in **bold** are weighted averages of multiple-window analyses.

Table A3. Heavy minerals. The ZTR index (sum of zircon, tourmaline and rutile over total transparent heavy minerals; Hubert, 1962) evaluates the “mineralogical stability” of the detrital assemblage (Garzanti, 2017). The HCI (Hornblende Colour Index) and MMI (Metasedimentary Minerals Index) vary from 0 in detritus from greenschist-facies to lowermost amphibolite-facies rocks yielding exclusively blue/green amphibole and chloritoid, to 100 in detritus from granulite-facies rocks yielding exclusively brown hornblende and sillimanite, and are used to estimate the average metamorphic grade of metaigneous and metasedimentary source rocks, respectively (Andò *et al.*, 2014). H wt%= weight percent of the heavy fraction (> 2.90 g/cm^3; Garzanti & Andò, 2007b);

HM = heavy minerals; n.d. = not determined. Values in **bold** are weighted averages of multiple-window analyses.

Table A4. Sand geochemistry. Chemical weathering indices are after Nesbitt & Young (1982; CIA), Garzanti *et al.* (2014a, 2014b; CIX), Harnois (1988; CIW), Fedo *et al.* (1995; PIA), Parker (1970, WIP); α^{Al} values calculated with reference to UCC (Gaillardet *et al.*, 1999) were normalized to immobile Al to avoid bias caused by hydraulic concentration of heavy minerals hosting Ti, REE, and Th (Garzanti *et al.*, 2013a, 2013b). La_N/Yb_N, La_N/Sm_N, Gd_N/Ho_N and Ho_N/Yb_N ratios are normalized to CI carbonaceous chondrites (McDonough & Sun, 1995). The Eu anomaly Eu/Eu* is the measured chondrite-normalized Eu value over the value that Eu would have in a linear extrapolation between chondrite-normalized values of Sm and Gd. The Ce anomaly Ce/Ce*, indicative of redox state, is the measured PAAS-normalized Ce value over the value that Ce would have in a linear extrapolation between PAAS-normalized values of La and Pr. MREE is the average of Eu, Gd, Tb and Dy normalized to PAAS, MREE* the average of LREE (La, Ce, Pr, Nd) and HREE (Er, Tm, Yb, Lu) values (Haley *et al.*, 2004). LOI = loss on ignition; D.L. = detection limit; n.d. = not determined. Elements analysed at ACME Laboratories by aqua regia digestion (a.r.d.) may be underestimated because of only partial leaching of refractory minerals (for further information on adopted procedures, geostandards used and precision for various elements of group 4A-4B see http://acmelab.com.). Values in **bold** are weighted averages of multiple-window analyses.

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Table A1. Sample location

Sample	River / Lake	Site	Latitude	Longitude	Altitude	Collected/ provided by	Country	Year	Main source rocks	Main provenance
WHITE NILESYSTEM										
3643S	Kagera	Kyaka	S 01°14'57"	E 31°25'07"	1150 m	E.Garzanti	Tanzania	2007	Karagwe-Ankole Belt	Continental Block
3641L,S	Kagera	Kasensero	S 00°56'23"	E 31°45'49"	1135 m	E.Garzanti	Uganda	2007	Karagwe-Ankole Belt	Continental Block
3642S	Lake Victoria	Kasensero	S 00°55'00"	E 31°45'44"	1135 m	E.Garzanti	Uganda	2007	Kagera delta	Continental Block
3692S /WN17	Victoria Nile	Murchison Falls	N 02°16'31"	E 31°40'36"	637 m	E.Garzanti	Uganda	2007	Uganda basements	DCB metamorphic
3690S/WN16	Albert Nile	Wadelai	N 02°43'25"	E 31°26'36"	620 m	E.Garzanti	Uganda	2007	Northwestern Uganda basement	DCB metamorphic
4052S	Bahr El Jebel	Juba	N 04°49'30"	E 31°37'	453 m	M.Khaled	South Sudan	2009	Uganda / South Sudan basements	DCB metamorphic
13	Bahr el Jebel	Bor	N 06°12'14"	E 31°33'09"	426 m	Fouad I University	South Sudan	before 1950	Uganda / South Sudan basements	DCB metamorphic
7	Lol	Nyamlell	N 09°09'12"	E 26°58'57"	440 m	Fouad I University	South Sudan	before 1950	South Sudan basement	DCB metamorphic
24	Sobat	Nasser	N 08°36'45"	E 33°04'20"	404 m	Fouad I University	South Sudan	before 1950	Ethiopian basement/S.Sudan lowlands	DCB metamorphic
2878L,S	White Nile	Rabak	N 13°10'26"	E 32°41'58"	385 m	E.Garzanti	Sudan	2003	Sudanese lowlands recycled	Recycled clastic
BLUE NILE SYSTEM										
2947L,S	Abay	Goha Tsiyon	N 10°04'22"	E 38°11'23"	1039 m	E.Garzanti	Ethiopia	2004	Mostly Ethiopian Traps	Anorogenic Volcanic
2975S	Anger	Tsige Maryam	N 09°26'01"	E 36°32'29"	1290 m	E.Garzanti	Ethiopia	2004	Mainly Ethiopian basement	DCB metamorphic
2976L,S	Didesa	Ephrem	N 09°01'51"	E 36°09'19"	1130 m	E.Garzanti	Ethiopia	2004	Mainly Ethiopian basement	DCB metamorphic
3295L,S	Dabus	Bambesi	N 09°45'52"	E 34°48'34"	1339 m	A.A.Abdel Megid	Ethiopia	2005	Mainly Ethiopian basement	DCB metamorphic
2970L,S	Beles	Enat Beles	N 11°07'56"	E 35°28'12"	605 m	E.Garzanti	Ethiopia	2004	Ethiopian Traps + basement	Anorogenic mixed
2964L,S	Blue Nile	Bambudi	N 11°07'11"	E 35°11'48"	519 m	E.Garzanti	Ethiopia	2004	Ethiopian Traps + basement	Anorogenic mixed
2876S	Rahad	Hufeira	N 14°06'08"	E 33°55'38"	415 m	E.Garzanti	Sudan	2003	Ethiopian Traps + basement	Anorogenic mixed
2843L,S	Blue Nile	Khartoum	N 15°36'53"	E 32°34'42"	379 m	E.Garzanti	Sudan	2003	Ethiopian Traps + basement	Anorogenic mixed
ATBARA SYSTEM										
3312L,S	Tekeze	Togo Ber	N 13°44'10"	E 38°11'35"	853 m	Fouad I University	Ethiopia	2005	Mostly Ethiopian Traps	Anorogenic Volcanic
2873L,S	Atbara	Showak	N 14°23'56"	E 35°52'52"	476 m	E.Garzanti	Sudan	2003	Mostly Ethiopian Traps	Anorogenic Volcanic
2858L,S	Atbara	Abu Ammar	N 17°37'11"	E 34°08'36"	356 m	E.Garzanti	Sudan	2003	Mostly Ethiopian Traps	Anorogenic Volcanic
MAIN NILE SYSTEM										
2852L,S	Nile	Karima	N 18°32'38"	E 31°51'22"	247 m	E.Garzanti	Sudan	2003	Ethiopian Traps + Continental Block	Anorogenic mixed
4735L	Nile	SD05	N 19°22'27"	E 33°22'52"	313 m	Y.Najman/L.Fiedling	Sudan	2013	Ethiopian Traps + Continental Block	Anorogenic mixed
2847S	Milk	Ed Debba	N 18°01'38"	E 30°56'44"	245 m	E.Garzanti	Sudan	2003	Mainly Nubian Sandstone	Undissected C. Block
2899L,S	Nile	3th cataract	N 19°40'	E 30°24'	226 m	M.Levi	Sudan	2003	Ethiopian Traps + Continental Block	Anorogenic mixed
4736L	Nile	SD04	N 21°20'47"	E 30°55'14"	183 m	Y.Najman/L.Fiedling	Sudan	2013	Ethiopian Traps + Continental Block	Anorogenic mixed
45	Nile	Wadi Halfa	N 21°49'34"	E 31°14'04"	180 m	Fouad I University	Sudan	before 1950	Ethiopian Traps + Continental Block	Anorogenic mixed
46	Nile	Aswan	N 24°04'	E 32°52'	90 m	Fouad I University	Egypt	before 1950	Ethiopian Traps + Continental Block	Anorogenic mixed
2408L	Nile	Aswan	N 24°04'	E 32°52'	90 m	A.A.Abdel Megid	Egypt	2003	Ethiopian Traps + Continental Block	Anorogenic mixed
2401B	Nile	Luxor	N 25°32'	E 32°38'	68 m	A.A.Abdel Megid	Egypt	2003	Ethiopian Traps + Continental Block	Anorogenic mixed
4726S	Umm Omeiyid	RSH3A	N 27°40'11"	E 32°34'34"	477 m	Y.Najman/L.Fiedling	Egypt	2013	Nubian Sandstone + Eocene limestone	Undissected C. Block
4727S	Qena	RSH5A	N 26°59'53"	E 32°44'56"	274 m	Y.Najman/L.Fiedling	Egypt	2013	Nubian Sandstone + Eocene limestone	Undissected C. Block
1989S	Qena	Qena	N 26°15'11"	E 32°45'19"	95 m	E.Garzanti	Egypt	2002	Mesozoic covers + RSH basement	Transitional C. Block
IV	Nile	Cairo Tora	N 29°56'37"	E 31°16'09"	15 m	Fouad I University	Egypt	before 1950	Ethiopian Traps + Continental Block	Anorogenic mixed
51	Nile	Cairo Ma'adi	N 29°57'18"	E 31°14'50"	15 m	Fouad I University	Egypt	before 1950	Ethiopian Traps + Continental Block	Anorogenic mixed
NILE DELTA										
3290S	beach	Idku east	N 31°24'16"	E 30°20'27"	0 m	A.A.Abdel Megid	Egypt	2005	Ethiopian Traps + Continental Block	Anorogenic mixed
3709P	beach placer	Rosetta	N 31°26'38"	E 30°21'29"	0 m	E.Garzanti	Egypt	2007	Ethiopian Traps + Continental Block	Anorogenic mixed
3289S	beach	Ras El Barr	N 31°29'23"	E 31°46'46	0 m	A.A.Abdel Megid	Egypt	2005	Ethiopian Traps + Continental Block	Anorogenic mixed
WESTERN DESERT										
4729E	*eolian dune*	WD19C	N 25°10'39"	E 27°24'43"	455 m	Y.Najman/L.Fiedling	Egypt	2013	Nubian Sandstone	Undissected C. Block
4730E	*eolian dune*	WD20C	N 26°14'39"	E 27°35'10"	232 m	Y.Najman/L.Fiedling	Egypt	2013	Nubian Sandstone	Undissected C. Block
4728E	*eolian dune*	WD03C	N 26°59'05"	E 25°14'05"	190 m	Y.Najman/L.Fiedling	Egypt	2013	Nubian Sandstone	Undissected C. Block

Table A2. Sand petrography

Sample	River / Lake	Site	Operator	GSZ (μm)	%weight class	coarser	Q	KF	P	Lvf	Lvm	Lc	Lp	Lch	Lms	Lmv	Lmf	Lmb	Lu	ms	bt	HM		MI*	MI	Qp/Q	MI/F	Q	F	L		P/F	Lm	Lv	Ls
WHITE NILE SYSTEM																																			
3643S	Kagera	Kyaka	G.Vezzoli	63-250	68%	31%	92.2	2.1	2.1	0.7	0.0	0.0	0.3	0.0	0.7	0.0	0.7	0.0	0.0	0.3	0.0	1.0	100.0	233	175	8	27	93	4	2	100.0	50	n.d.	n.d.	n.d.
3643S	Kagera	Kyaka	A.Resentini	250-1000	30%	0%	88.1	3.7	2.1	0.0	0.0	0.0	1.6	0.0	1.2	0.0	1.2	0.0	0.0	1.2	0.4	0.4	100.0	230	164	5	46	90	6	4	100.0	36	60	0	40
3641L	Kagera	Kasensero	G.Vezzoli	63-250	76%	18%	88.5	7.1	2.9	0.1	0.1	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.3	100.0	n.d.	n.d.	10	16	89	10	1	100.0	29	n.d.	n.d.	n.d.
3641S	Kagera	Kasensero	A.Resentini	250-1000	84%	5%	97.3	1.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	3	25	97	3	0	100.0	n.d.	n.d.	n.d.	n.d.
3642S	Lake Victoria	Kasensero	G.Vezzoli	250-1000	66%	3%	96.8	2.3	0.6	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	6	25	97	3	0	100.0	n.d.	n.d.	n.d.	n.d.
3692S /WN17	Victoria Nile	Murchison Falls	G.Vezzoli	63-250	79%	18%	70.3	8.2	7.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.9	6.7	5.8	100.0	n.d.	n.d.	4	10	81	18	1	100.0	48	n.d.	n.d.	n.d.
3692S /WN17	Victoria Nile	Murchison Falls	A.Resentini	250-1000	17%	1%	61.3	11.9	14.5	0.0	0.0	0.0	0.0	0.0	0.4	0.0	2.2	0.0	0.0	1.5	1.5	6.7	100.0	347	347	8	8	68	29	3	100.0	55	n.d.	n.d.	n.d.
3690S/WN16	Albert Nile	Wadelai	G.Vezzoli	63-250	60%	39%	52.9	14.1	13.2	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.3	0.0	0.5	2.3	15.6	100.0	363	363	10	14	65	33	2	100.0	48	n.d.	n.d.	n.d.
3690S/WN16	Albert Nile	Wadelai	A.Resentini	250-1000	35%	3%	66.3	11.4	11.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	3.7	0.0	0.0	0.5	0.5	5.5	100.0	300	300	24	19	71	24	5	100.0	49	100	0	0
4052S	Bahr El Jebel	Juba	G.Vezzoli	63-250	9%	90%	59.7	13.0	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.9	8.2	100.0	n.d.	n.d.	7	21	66	34	0	100.0	58	n.d.	n.d.	n.d.
4052S	Bahr El Jebel	Juba	G.Vezzoli	250-1000	72%	18%	64.7	12.8	19.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	100.0	413	330	26	11	66	33	0	100.0	61	n.d.	n.d.	n.d.
24	Sobat	Nasser	S.Andò	63-250	n.d.		37.0	10.9	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	100.0	n.d.	n.d.	0	0	38	62	0	100.0	82	n.d.	n.d.	n.d.
2878L	White Nile	Rabak	A.A.Megid	160	bulk		98.1	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	100.0	n.d.	n.d.	3	n.d.	98	2	0	100.0	n.d.	n.d.	n.d.	n.d.
2878S	White Nile	Rabak	A.A.Megid	378	bulk		95.5	2.3	0.8	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	100.0	n.d.	n.d.	8	n.d.	96	3	1	100.0	n.d.	n.d.	n.d.	n.d.
BLUE NILE SYSTEM																																			
2947L	Abay	Goha Tsiyon	M.Salvioni	135	bulk		26.0	0.0	5.3	2.2	52.0	6.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	8.0	100.0	n.d.	2	1	0	28	6	66	100.0	100	1	89	10
2947S	Abay	Goha Tsiyon	A.A.Megid	172	bulk		19.9	0.0	6.6	2.6	55.9	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	100.0	n.d.	0	13	0	22	7	71	100.0	100	0	92	8
2975S	Anger	Tsige Maryam	A.A.Megid	274	bulk		60.0	15.2	8.7	2.0	4.1	0.0	0.0	0.0	0.0	0.9	2.0	0.7	0.0	0.0	1.3	5.2	100.0	375	237	16	36	64	26	10	100.0	36	36	64	0
2976L	Didesa	Ephrem	M.Salvioni	186	bulk		71.6	4.3	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	12.8	100.0	n.d.	n.d.	3	36	85	15	0	100.0	65	n.d.	n.d.	n.d.
2976S	Didesa	Ephrem	A.A.Megid	418	bulk		56.8	9.7	18.7	0.9	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	10.5	100.0	500	265	29	26	64	32	4	100.0	66	n.d.	n.d.	n.d.
3295L	Dabus	Bambesi	M.Salvioni	131	bulk		56.4	2.0	11.9	0.0	3.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	5.9	16.8	100.0	257	180	6	15	73	18	9	100.0	86	57	43	0
3295S	Dabus	Bambesi	A.A.Megid	293	bulk		55.2	7.5	9.4	0.0	4.7	0.0	0.0	0.0	0.5	0.5	6.6	1.9	0.0	0.0	0.5	13.2	100.0	383	347	32	7	64	20	16	100.0	56	67	33	0
2970L	Beles	Enat Beles	M.Salvioni	156	bulk		55.1	4.3	11.1	0.0	7.7	0.0	0.0	0.0	0.0	0.5	0.7	0.2	0.0	0.7	1.2	18.4	100.0	355	144	6	0	69	19	12	100.0	72	16	84	0
2970S	Beles	Enat Beles	A.A.Megid	291	bulk		31.4	14.4	15.9	3.0	16.5	0.0	0.4	0.0	0.0	3.0	5.4	2.0	0.0	0.4	0.4	7.4	100.0	342	171	40	31	34	33	33	100.0	52	34	65	1
2964L	Blue Nile	Bambudi	A.A.Megid	69	bulk		14.2	1.3	21.9	1.3	48.1	3.4	0.0	0.0	0.0	5.6	0.9	0.0	0.0	0.4	0.4	2.6	100.0	167	27	3	0	15	24	61	100.0	94	11	83	6
2964S	Blue Nile	Bambudi	A.A.Megid	125-180	3.9%		25.0	1.4	8.4	0.4	27.0	0.7	0.0	0.0	0.0	0.3	0.3	0.7	0.0	0.0	0.0	35.8	100.0	338	28	6	6	39	15	46	100.0	86	5	93	2
2964S	Blue Nile	Bambudi	A.A.Megid	180-250	15.4%		38.8	3.7	8.4	4.5	30.9	0.0	0.0	0.0	0.0	0.7	0.5	0.2	0.0	0.7	0.0	11.7	100.0	343	21	11	13	44	14	42	100.0	69	4	96	0
2964S	Blue Nile	Bambudi	A.A.Megid	250-355	26.9%		51.3	5.3	8.9	2.4	20.9	0.0	0.0	0.0	0.0	0.7	1.2	0.2	0.0	0.2	0.2	8.9	100.0	388	73	12	18	57	16	28	100.0	63	8	92	0
2964S	Blue Nile	Bambudi	A.A.Megid	355-500	23.4%		58.7	8.9	16.6	2.1	5.3	0.0	0.0	0.0	0.0	0.4	1.8	1.1	0.0	0.0	0.0	5.2	100.0	394	187	28	25	62	27	11	100.0	65	31	69	0
2964S	Blue Nile	Bambudi	A.A.Megid	500-710	21.1%		62.9	12.2	18.7	0.5	1.0	0.0	0.0	0.0	0.0	0.4	2.9	0.4	0.0	0.2	0.2	0.7	100.0	353	305	34	21	64	31	5	100.0	60	71	29	0
2964S	Blue Nile	Bambudi	A.A.Megid	710-1000	6.7%		66.2	9.3	13.8	1.1	1.1	0.0	0.2	0.0	0.2	0.5	2.0	0.1	0.0	0.0	4.8	0.7	100.0	365	247	48	21	70	24	6	100.0	60	55	41	5
2964S	**Blue Nile**	**Bambudi**	**A.A.Megid**	**125-1000**	**97.5%**	**1.4%**	**53.6**	**7.5**	**13.1**	**2.1**	**13.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**	**1.6**	**0.5**	**0.0**	**0.2**	**0.4**	**7.2**	**100.0**	**359**	**130**	**20**	**19**	**58**	**22**	**20**	**100.0**	**64**	**14**	**85**	**0**
2964S	Blue Nile	Bambudi	A.A.Megid	364	bulk		59.1	11.0	9.1	1.4	9.6	0.4	0.4	0.0	0.0	1.5	1.1	1.5	0.0	0.2	0.2	4.5	100.0	356	130	35	26	62	21	17	100.0	45	26	69	5
2876S	Rahad	Hufeira	A.A.Megid	235	bulk		55.9	5.2	14.0	0.0	11.4	0.4	0.0	0.0	0.9	0.4	0.4	0.0	0.0	0.0	0.0	11.4	100.0	n.d.	63	9	19	63	22	15	100.0	73	13	84	3
2843L	Blue Nile	Khartoum	A.A.Megid	72	bulk		24.6	1.0	11.8	7.5	40.3	0.3	0.0	0.0	0.3	1.7	0.2	0.8	0.0	0.0	1.0	10.4	100.0	250	23	4	3	28	14	58	100.0	92	6	93	1
2843S	Blue Nile	Khartoum	A.A.Megid	125-180	3.0%		21.7	2.8	3.4	0.0	8.4	0.0	0.0	0.0	0.0	0.6	0.2	1.1	0.0	0.0	0.3	61.5	100.0	315	89	9	23	57	16	27	100.0	55	18	82	0
2843S	Blue Nile	Khartoum	A.A.Megid	180-250	16.9%		50.6	8.4	10.6	0.6	13.1	0.0	0.0	0.0	0.0	0.0	1.1	0.8	0.0	0.0	0.0	14.8	100.0	342	98	11	22	59	22	18	100.0	56	12	88	0
2843S	Blue Nile	Khartoum	A.A.Megid	250-355	41.3%		64.5	6.8	17.2	0.8	2.9	0.0	0.0	0.0	0.0	0.7	1.2	1.5	0.0	0.2	0.5	3.7	100.0	376	247	12	18	67	25	7	100.0	72	48	52	0
2843S	Blue Nile	Khartoum	A.A.Megid	355-500	28.2%		71.6	9.4	13.3	0.3	1.2	0.0	0.0	0.0	0.0	1.4	1.1	0.4	0.0	0.0	0.0	1.4	100.0	327	225	23	18	73	23	4	100.0	59	67	33	0
2843S	Blue Nile	Khartoum	A.A.Megid	500-710	3.5%		72.5	12.2	7.3	0.7	1.4	0.0	0.3	0.0	0.0	0.0	0.7	0.0	0.0	0.0	4.5	0.3	100.0	n.d.	118	27	36	76	21	3	100.0	38	n.d.	n.d.	n.d.
2843S	**Blue Nile**	**Khartoum**	**A.A.Megid**	**125-710**	**93.0%**	**4.9%**	**63.1**	**7.9**	**14.0**	**0.6**	**4.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.8**	**1.1**	**1.0**	**0.0**	**0.1**	**0.4**	**6.8**	**100.0**	**334**	**118**	**12**	**22**	**68**	**24**	**8**	**100.0**	**64**	**36**	**64**	**0**
2843S	Blue Nile	Khartoum	A.A.Megid	277	bulk		65.1	12.3	15.1	1.1	1.1	0.4	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	1.1	2.1	100.0	291	229	20	35	67	28	4	100.0	55	42	50	8
ATBARA SYSTEM																																			
3312L	Tekeze	Togo Ber	A.A.Megid	83	bulk		17.4	2.4	21.9	2.7	42.1	0.7	0.0	0.0	0.7	2.1	2.8	0.3	0.0	0.2	0.5	6.3	100.0	294	38	8	2	19	26	55	100.0	90	11	87	1
3312S	Tekeze	Togo Ber	A.A.Megid	120	bulk		28.1	4.0	12.2	6.2	29.8	0.3	0.0	0.0	1.0	1.3	5.1	0.8	0.0	0.7	2.6	7.9	100.0	322	65	10	6	32	18	50	100.0	76	19	81	1
2873L	Atbara	Showak	A.A.Megid	90	bulk		18.5	1.8	12.5	3.3	51.2	0.0	0.0	0.0	0.0	0.7	1.1	1.4	0.0	0.0	0.7	8.9	100.0	300	25	12	8	20	16	64	100.0	88	6	94	0
2873S	Atbara	Showak	A.A.Megid	125-180	34.8%		12.6	1.0	5.8	0.9	24.4	0.0	0.0	0.0	0.0	1.6	0.0	2.6	0.0	0.0	0.0	51.1	100.0	262	34	5	0	26	14	60	100.0	86	14	86	0
2873S	Atbara	Showak	A.A.Megid	180-250	36.3%		33.0	0.0	5.5	0.3	33.4	0.3	0.0	0.0	0.0	1.0	0.2	1.9	0.0	0.2	0.5	23.7	100.0	256	18	4	0	44	7	49	100.0	100	8	91	1
2873S	Atbara	Showak	A.A.Megid	250-355	7.5%		47.8	2.4	7.8	3.3	25.9	0.0	0.0	0.0	1.4	0.3	1.0	2.7	0.0	0.0	0.0	7.5	100.0	295	57	9	5	52	11	37	100.0	77	16	84	0
2873S	**Atbara**	**Showak**	**A.A.Megid**	**125-355**	**78.7%**	**3.9%**	**25.4**	**0.7**	**5.9**	**0.8**	**28.7**	**0.2**	**0.0**	**0.0**	**0.1**	**1.2**	**0.2**	**2.3**	**0.0**	**0.1**	**0.2**	**34.3**	**100.0**	**262**	**34**	**5**	**0**	**39**	**10**	**51**	**100.0**	**90**	**11**	**88**	**0**
2873S	Atbara	Showak	A.A.Megid	157	bulk		25.6	1.6	5.5	1.1	28.5	1.0	0.0	0.0	0.3	2.3	0.5	2.8	0.0	0.2	0.5	30.2	100.0	276	55	10	7	37	10	53	100.0	77	16	81	3
2858L	Atbara	Abu Ammar	A.A.Megid	77	bulk		25.3	0.7	19.8	0.7	41.0	0.0	0.0	0.0	1.0	5.2	0.0	0.0	0.0	0.3	1.0	4.9	100.0	161	30	16	4	27	22	51	100.0	97	13	87	0
2858S	Atbara	Abu Ammar	A.A.Megid	107	bulk		24.8	1.1	23.4	1.1	36.0	0.4	0.0	0.0	0.7	1.1	1.4	0.7	0.0	0.4	1.1	7.9	100.0	300	38	13	4	27	27	46	100.0	96	10	90	1
MAIN NILE																																			
4735L	Nile	SD05	G.Vezzoli	100	bulk		25.3	2.1	16.8	0.0	18.9	1.1	0.5	0.0	0.3	0.0	0.8	0.3	0.0	0.0	1.6	32.3	100.0	314	27	8	3	38	29	33	100.0	89	6	87	7
2847S	Milk	Ed Debba	A.A.Megid	318	bulk		95.0	3.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	13	38	95	5	0	100.0	31	n.d.	n.d.	n.d.
2852L	Nile	Karima	A.A.Megid	96	bulk		21.7	3.5	15.0	6.0	37.4	2.6	0.2	0.0	0.3	2.1	1.9	1.2	0.0	0.0	0.7	7.3	100.0	271	51	8	11	24	20	56	100.0	81	11	84	5
2852S	Nile	Karima	A.A.Megid	125-180	3.2%		22.2	1.8	13.1	4.8	36.7	0.0	1.1	0.0	0.0	1.8	1.1	0.7	0.0	0.5	1.6	14.5	100.0	312	43	5	4	27	18	55	100.0	88	8	90	2
2852S	Nile	Karima	A.A.Megid	180-250	21.1%		42.0	4.2	9.4	1.3	19.5	0.0	0.0	0.0	0.0	2.0	0.5	2.8	0.0	0.0	0.0	18.2	100.0	281	63	12	19	51	17	32	100.0	69	20	80	0
2852S	Nile	Karima	A.A.Megid	250-355	68.0%		60.5	5.3	11.6	1.7	16.2	0.0	0.0	0.0	0.0	1.0	1.2	0.5	0.0	0.0	0.0	2.0	100.0	314	62	14	5	62	17	21	100.0	69	13	87	0
2852S	Nile	Karima	A.A.Megid	355-500	4.3%		69.2	9.8	9.8	2.5	5.7	0.0	0.0	0.3	0.0	0.3	0.3	0.0	0.0	0.0	1.0	1.0	100.0	300	56	16	33	71	20	9	100.0	50	7	89	4
2852S	**Nile**	**Karima**	**A.A.Megid**	**125-500**	**96.7%**	**0.6%**	**55.6**	**5.2**	**11.1**	**1.7**	**17.2**	**0.0**	**0.0**	**0.0**	**0.0**	**1.2**	**1.0**	**1.0**	**0.0**	**0.0**	**0.1**	**5.9**	**100.0**	**306**	**59**	**13**	**12**	**59**	**17**	**24**	**100.0**	**68**	**14**	**85**	**0**
2852S	Nile	Karima	A.A.Megid	264	bulk		54.1	6.5	15.8	0.4	15.3	0.0	0.3	0.0	0.3	1.0	1.2	1.5	0.0	0.0	0.3	3.1	100.0	347	100	12	16	56	23	21	100.0	71	20	78	2
2899L	Nile	3rd cataract	A.A.Megid	75	bulk		19.2	3.7	15.5	1.8	49.8	0.5	0.0	0.0	0.0	0.9	2.7	0.0	0.0	0.5	1.8	3.7	100.0	350	46	18	0	20	20	59	100.0	81	7	93	1
2899S	Nile	3rd cataract	A.A.Megid	125-180	5.8%		40.0	3.7	16.9	3.0	19.0	0.0	0.0	0.0	0.3	1.0	3.2	0.5	0.0	0.0	0.3	11.9	100.0	320	76	8	7	46	24	31	100.0	82	19	81	0
2899S	Nile	3rd cataract	A.A.Megid	180-250	19.2%		47.1	6.4	10.8	0.7	17.9	0.0	0.0	0.0	0.3	1.7	1.0	1.4	0.0	0.0	0.0	12.5	100.0	261	59	10	24	54	20	26	100.0	63	19	81	0
2899S	Nile	3rd cataract	A.A.Megid	250-355	58.4%		69.6	7.8	16.0	1.6	3.5	0.0	0.0	0.0	0.0	0.7	0.3	-0.3	0.0	0.0	0.0	0.7	100.0	292	125	11	12	70	24	6	100.0	67	12	88	0
2899S	Nile	3rd cataract	A.A.Megid	355-500	7.8%		75.5	10.1	7.7	3.1	1.8	0.0	0.3	0.0	0.3	0.0	0.5	0.2	0.0	0.0	0.3	0.0	100.0	357	114	22	24	76	18	6	100.0	43	17	78	6
2899S	**Nile**	**3rd cataract**	**A.A.Megid**	**80-500**	**91.2%**	**3.7%**	**63.5**	**7.5**	**14.3**	**1.6**	**7.4**	**0.0**	**0.0**	**0.0**	**0.1**	**0.9**	**0.7**	**0.1**	**0.0**	**0.0**	**0.1**	**3.8**	**100.0**	**306**	**95**	**11**	**18**	**66**	**23**	**11**	**100.0**	**66**	**16**	**83**	**0**
2899S	Nile	3rd cataract	A.A.Megid	242	bulk		61.3	5.7	12.4	0.8	11.2	0.0	0.0	0.0	0.0	0.7	0.0	1.4	0.0	0.0	0.0	6.4	100.0	344	76	17	17	66	19	15	100.0	69	15	85	0
4736L	Nile	SD04	G.Vezzoli	80	bulk		34.0	5.4	26.1	2.1	15.5	1.1	0.8	0.0	1.1	0.8	0.5	0.3	0.0	0.0	1.9	10.3	100.0	230	29	10	5	39	36	25	100.0	83	12	79	9
46	Nile	Aswan	G.Vezzoli	120	bulk		47.9	6.6	12.3	0.4	14.9	0.6	0.3	0.0	0.3	0.9	1.9	0.1	0.3	0.0	1.2	12.3	100.0	287	75	12	11	55	22	23	100.0	65	17	78	5
2408L	Nile	Aswan	A.A.Megid	70	bulk		38.0	3.3	11.1	1.5	25.4	1.3	5.4	0.4	0.4	1.5	4.1	0.0	0.0	0.0	0.0	7.7	100.0	325	76	7	0	41	16	43	100.0	77	15	68	18
2401B	Nile	Luxor	A.A.Megid	340	bulk		62.6	7.5	13.2	2.2	8.8	0.2	0.2	0.4	0.4	0.7	0.7	0.0	0.0	0.0	0.0	3.2	100.0	250	48	10	15	65	21	14	100.0	64	13	82	5
4726S	Umm Omeiyid	RSH3A	G.Vezzoli	220	bulk		61.0	2.5	1.8	0.6	0.0	27.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.1	100.0	n.d.	n.d.	4	0	63	4	33	100.0	43	0	2	98
4727S	Qena	RSH5A	G.Vezzoli	260	bulk		78.5	1.8	2.9	1.4	0.4	13.2	1.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3	100.0	n.d.	0	10	7	79	5	17	100.0	63	2	11	88
1989S	Qena	Qena	A.A.Megid	450	bulk		50.6	10.6	13.3	1.1	1.6	13.1	1.3	7.2	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.4	100.0	286	114	16	0	51	24	25	100.0	56	3	11	86
51	Nile	Cairo Ma'adi	G.Vezzoli	125	bulk		47.0	7.5	9.0	0.7	18.7	1.2	0.3	0.0	0.3	0.6	0.6	0.3	0.0	0.3	1.4	12.2	100.0	333	46	10	12	55	19	26	100.0	54	8	86	6
3290S	Delta beach	Idku east	G.Vezzoli	80-106	2.1%		16.3	0.9	3.3	0.0	5.4	0.9	0.0	0.0	0.0	0.0	0.2	1.1	0.0	0.0	0.0	72.0	100.0	n.d.	62	4	0	58	15	27	100.0	79	16	72	12
3290S	Delta beach	Idku east	G.Vezzoli	106-125	2.7%		33.2	3.3	6.9	0.0	9.1	0.0	0.0	0.0	0.0	0.3	0.3	0.9	0.0	0.0	0.0	45.9	100.0	375	79	8	7	61	19	20	100.0	68	14	86	0
3290S	Delta beach	Idku east	G.Vezzoli	125-150	8.3%		47.4	2.7	9.1	0.6	8.7	0.3	0.0	0.0	0.0	0.6	1.2	1.5	0.0	0.3	0.0	27.5	100.0	300	84	6	3	66	16	18	100.0	77	26	72	2
3290S	Delta beach	Idku east	G.Vezzoli	150-180	22.2%		67.2	4.1	5.8	0.6	6.4	0.3	0.0	0.0	0.3	0.3	0.0	0.3	0.0	0.0	0.0	14.8	100.0	220	39	9	9	79	12	10	100.0	59	11	86	4
3290S	Delta beach	Idku east	G.Vezzoli	180-212	38.4%		80.1	4.9	5.8	0.3	4.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.3	0.0	3.4	100.0	214	71	7	6	83	11	6	100.0	54	22	78	0
3290S	Delta beach	Idku east	G.Vezzoli	212-250	18.5%		87.6	5.0	5.3	0.0	0.9	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.6	100.0	n.d.	157	9	9	88	10	1	100.0	51	n.d.	n.d.	n.d.
3290S	Delta beach	Idku east	G.Vezzoli	250-300	4.8%		90.9	4.0	4.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	100.0	n.d.	n.d.	9	15	91	8	1	100.0	52	n.d.	n.d.	n.d.
3290S	Delta beach	Idku east	G.Vezzoli	300-355	1.3%		91.1	3.6	4.2	0.0	0.3	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	8	30	91	8	1	100.0	54	n.d.	n.d.	n.d.
3290S	**Delta beach**	**Idku east**	**G.Vezzoli**	**80-355**	**98.3%**	**1.1%**	**73.9**	**4.4**	**5.9**	**0.3**	**4.3**	**0.1**	**0.0**	**0.0**	**0.4**	**0.2**	**0.4**	**0.2**	**0.0**	**0.2**	**0.0**	**9.9**	**100.0**	**260**	**75**	**8**	**8**	**82**	**11**	**7**	**100.0**	**57**	**20**	**79**	**2**
3709P	Delta beach placer	Rosetta	G.Vezzoli	180-212	5.7%		11.8	0.4	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	85.2	100.0	280	233	6	n.d.	79	8	13	100.0	67	80	20	0
3709P	Delta beach placer	Rosetta	G.Vezzoli	212-250	1.8%		37.4	1.2	1.8	0.0	1.2	0.0	0.0	0.0	0.0	0.3	0.0	1.2	0.0	0.0	0.0	57.0	100.0	373	273	1	0	87	7	6	100.0	60	56	44	0
3709P	Delta beach placer	Rosetta	G.Vezzoli	250-300	0.6%		67.6	1.8	4.1	0.0	2.7	0.6	0.0	0.0	0.0	0.6	0.0	0.9	0.0	0.0	0.0	21.8	100.0	356	178	7	5	86	8	6	100.0	70	31	56	13
3709P	Delta beach placer	Rosetta	G.Vezzoli	300-355	0.1%		67.8	1.8	3.0	0.0	1.2	0.0	0.0	0.0	0.0	0.3	0.6	0.6	0.0	0.0	0.0	24.8	100.0	279	217	10	29	90	6	4	100.0	63	n.d.	n.d.	n.d.
3709P	**Delta beach placer**	**Rosetta**	**G.Vezzoli**	**180-355**	**8.1%**	**0.0%**	**21.9**	**0.7**	**1.2**	**0.0**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**1.4**	**0.0**	**0.0**	**0.0**	**73.9**	**100.0**	**318**	**225**	**7**	**5**	**84**	**7**	**9**	**100.0**	**65**	**66**	**32**	**2**
WESTERN DESERT																																			
4729E	*eolian dune*	WD19C	G.Vezzoli	140	> 95		95.8	2.9	0.8	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	5	21	96	4	1	100.0	n.d.	n.d.	n.d.	n.d.
4730E	*eolian dune*	WD20C	G.Vezzoli	150	> 95		95.1	2.7	1.9	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	n.d.	n.d.	5	6	95	5	0	100.0	41	n.d.	n.d.	n.d.
4728E	*eolian dune*	WD03C	G.Vezzoli	206	> 95		97.3	0.8	0.8	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	100.0	n.d.	0	6	20	98	2	1	100.0	n.d.	n.d.	n.d.	n.d.

Table A3. Heavy minerals

Sample	River/Lake/Desert	Site	Operator	Grain size		Class	%weight		zircon	tourmaline	rutile	Ti Oxides	titanite	apatite	monazite	epidote	garnet	chloritoid	staurolite	andalusite	kyanite	sillimanite	hornblende	other amphiboles	clinopyroxene	orthopyroxene	olivine	spinel	others		ZTR	HCI	MMI	H wt%	transparent HM	opaque HM	altered grains	chlorite	biotite	carbonates	light minerals	
				(μm)	(Φ)	(μm)	class	coarser																																		
WHITE NILE SYSTEM																																										
3643S	Kagera	Kyaka	M.Padoan	188	2.4	63-250	68%	31%	14.1	25.4	2.4	16.6	1.0	0.0	0.5	3.9	0.0	0.0	21.0	0.0	8.8	0.5	4.4	0.5	0.0	0.0	0.0	0.0	1.0	100.0	42	39	45	1.7	30%	43%	25%	0%	1%	0%	0%	100%
3641L	Kagera	Kasensero	M.Padoan	148	2.8	63-250	76%	18%	2.9	37.0	2.1	23.0	1.2	0.0	0.0	6.6	0.0	0.0	16.9	0.0	4.5	0.0	4.9	0.4	0.0	0.0	0.0	0.0	0.4	100.0	42	0	41	1.0	35%	27%	37%	0%	0%	0%	0%	100%
3641S	Kagera	Kasensero	M.Padoan	439	1.2	63-250	8%	89%	4.5	27.4	4.9	25.6	0.4	0.0	0.4	6.3	0.0	0.4	15.7	0.4	11.2	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	37	6	47	1.4	37%	31%	30%	0%	1%	0%	2%	100%
3642S	Lake Victoria	Kasensero	M.Padoan	342	1.5	63-250	31%	69%	0.5	27.4	1.9	8.7	0.0	0.0	0.5	1.9	0.0	0.5	31.3	0.0	20.2	0.0	6.7	0.5	0.0	0.0	0.0	0.0	0.0	100.0	30	18	47	0.9	35%	27%	38%	0%	0%	0%	1%	100%
3692S	Victoria Nile	Murchison Falls	M.Padoan	157	2.7	63-250	79%	18%	6.1	0.4	4.8	0.0	0.4	0.0	1.7	21.8	3.9	0.0	0.0	0.0	2.2	2.2	47.2	9.2	0.0	0.0	0.0	0.0	0.0	100.0	11	15	85	7.4	71%	19%	3%	0%	6%	0%	1%	100%
3690B	Albert Nile	Wadelai	M.Padoan	219	2.2	63-250	60%	39%	3.0	0.0	0.9	0.0	2.1	0.0	0.9	12.4	9.0	0.0	0.0	0.0	1.3	2.6	56.8	9.8	1.3	0.0	0.0	0.0	0.0	100.0	4	31	91	17.8	79%	15%	5%	0%	0%	0%	1%	100%
4052S	Bahr El Jebel	Juba	M.Padoan	551	0.9	63-250	9%	90%	2.4	1.0	0.0	0.0	0.0	0.0	0.0	36.5	2.4	0.0	0.0	0.0	0.0	1.9	50.5	5.3	0.0	0.0	0.0	0.0	0.0	100.0	3	11	100	10.8	72%	14%	13%	0%	2%	0%	0%	100%
7	Lol	Nyamlell	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	11.9	0.0	6.4	0.0	6.4	0.0	0.0	36.6	2.0	0.0	0.0	0.0	1.5	10.4	22.3	1.0	1.5	0.0	0.0	0.0	0.0	100.0	18	6	94	n.d.	44%	40%	11%	0%	0%	0%	5%	100%
13	Bahr el Jebel	Bor	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	7.1	0.0	11.8	0.0	3.8	0.5	0.0	26.9	17.0	0.0	0.5	0.0	3.3	10.8	15.1	1.4	0.0	0.5	0.0	0.5	0.9	100.0	19	1	87	n.d.	32%	68%	0%	0%	0%	0%	0%	100%
24	Sobat	Nasser	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	10.3	0.0	3.9	0.0	2.9	1.0	0.0	32.4	12.3	0.0	0.0	0.0	0.0	4.9	25.5	4.4	1.5	0.5	0.0	0.5	0.0	100.0	14	6	100	n.d.	51%	29%	5%	0%	0%	0%	15%	100%
24	Sobat	Nasser	S.Andò	40	4.6	63-250	33%	0%	0.0	0.5	0.0	0.0	2.0	0.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	1.5	61.7	6.5	1.5	0.0	0.0	0.0	0.0	100.0	0	2	n.d.	8.8	77%	3%	19%	0%	0%	0%	1%	100%
2878L	White Nile	Rabak	A.A.Megid			40-63	1%	98%	5.6	0.0	3.7	0.0	2.8	0.0	0.0	38.0	1.9	0.0	0.9	0.0	4.6	15.7	23.1	3.7	0.0	0.0	0.0	0.0	0.0	100.0	9	0	87	2.6	64%	29%	4%	0%	1%	0%	3%	100%
2878L	White Nile	Rabak	A.A.Megid			63-80	2%	95%	9.0	0.0	8.1	0.0	6.3	0.0	0.0	51.4	7.2	0.0	0.9	0.0	0.0	0.0	14.4	1.8	0.9	0.0	0.0	0.0	0.0	100.0	17	0	n.d.	4.5	55%	41%	4%	0%	0%	0%	0%	100%
2878L	White Nile	Rabak	A.A.Megid			80-125	13%	73%	7.0	1.9	6.3	0.0	1.3	0.0	0.0	42.4	6.3	0.0	2.5	0.0	5.7	0.6	23.4	2.5	0.0	0.0	0.0	0.0	0.0	100.0	15	5	54	2.0	59%	36%	6%	0%	0%	0%	0%	100%
2878L	White Nile	Rabak	A.A.Megid			125-180	33%	21%	6.0	8.5	2.6	0.0	2.6	0.0	0.0	45.3	11.1	0.0	1.7	0.0	4.3	0.0	16.2	0.9	0.0	0.0	0.0	0.0	0.9	100.0	17	9	50	0.2	59%	25%	15%	1%	0%	0%	0%	100%
2878L	White Nile	Rabak	A.A.Megid	157	2.7	40-180	48%	21%	7.0	2.6	5.8	0.0	2.5	0.0	0.0	43.9	7.1	0.0	2.1	0.0	4.3	1.5	20.5	2.2	0.2	0.0	0.0	0.0	0.1	100.0	15	5	n.d.	0.7	59%	33%	7%	0%	0%	0%	1%	100%
2878S	White Nile	Rabak	A.A.Megid			180-250	15%	58%	1.8	7.1	3.5	0.0	0.0	0.0	0.0	26.5	15.9	0.0	10.6	0.0	8.0	0.0	24.8	1.8	0.0	0.0	0.0	0.0	0.0	100.0	12	5	50	0.1	39%	21%	39%	0%	1%	0%	0%	100%
2878S	White Nile	Rabak	A.A.Megid			250-355	9%	45%	0.0	15.4	2.6	0.0	0.0	0.0	0.0	15.4	17.9	0.0	7.7	0.0	7.7	0.0	12.8	2.6	12.8	0.0	0.0	5.1	0.0	100.0	18	n.d.	50	0.1	21%	15%	63%	1%	0%	0%	1%	100%
2878S	White Nile	Rabak	A.A.Megid	378	1.4	180-355	24%	45%	1.2	9.9	3.2	0.0	0.0	0.0	0.0	22.7	16.6	0.0	9.6	0.0	7.9	0.0	20.7	2.0	4.4	0.0	0.0	1.7	0.0	100.0	14	3	n.d.	0.1	30%	18%	51%	0%	1%	0%	1%	100%
BLUE NILE SYSTEM																																										
2947S	Abay	Goha Tsiyon	A.A.Megid			40-63	1%	97%	1.0	0.0	1.9	0.0	0.0	0.0	0.0	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.3	0.0	1.0	0.0	0.0	100.0	3	n.d.	n.d.	23.8	35%	57%	7%	0%	0%	0%	0%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid			63-80	2%	95%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.1	0.0	2.9	0.0	0.0	100.0	0	n.d.	n.d.	31.7	37%	52%	9%	0%	0%	0%	1%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid			80-125	12%	83%	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	94.2	0.0	2.9	0.0	0.0	100.0	1	n.d.	n.d.	44.7	41%	44%	15%	0%	0%	0%	0%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid			125-180	33%	50%	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.5	0.6	5.2	0.0	0.0	100.0	1	n.d.	n.d.	22.1	59%	13%	27%	0%	1%	0%	0%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid			180-250	32%	18%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	89.4	1.9	7.7	0.0	0.0	100.0	0	n.d.	n.d.	10.8	47%	6%	46%	0%	0%	0%	0%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid			250-355	16%	2%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	93.4	3.3	3.3	0.0	0.0	100.0	0	n.d.	n.d.	5.9	40%	11%	48%	0%	0%	0%	1%	100%
2947S	Abay	Goha Tsiyon	A.A.Megid	172	2.5	40-355	96%	2%	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	92.9	0.9	5.1	0.0	0.0	100.0	1	n.d.	n.d.	18.9	43%	31%	25%	0%	0%	0%	0%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			40-63	1%	98%	4.0	0.0	2.5	0.0	2.5	0.0	0.0	21.5	1.0	0.0	0.0	0.0	0.0	0.0	48.0	20.0	0.5	0.0	0.0	0.0	0.0	100.0	7	13	n.d.	9.2	67%	22%	9%	0%	0%	0%	1%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			63-80	2%	96%	2.9	0.0	0.5	0.0	2.5	0.0	0.0	19.1	1.0	0.0	0.0	0.0	0.0	0.0	55.4	17.2	1.5	0.0	0.0	0.0	0.0	100.0	3	12	n.d.	9.5	68%	21%	10%	0%	0%	0%	1%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			80-125	6%	91%	1.0	0.0	1.0	0.0	0.0	0.0	0.0	16.7	0.5	0.0	0.0	0.0	0.0	0.0	66.7	13.2	1.0	0.0	0.0	0.0	0.0	100.0	2	12	n.d.	7.7	72%	17%	10%	0%	0%	0%	0%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			125-180	9%	81%	1.0	0.0	0.0	0.5	1.0	0.0	0.0	12.9	0.5	0.0	0.0	0.0	1.0	0.0	69.4	11.0	1.4	1.4	0.0	0.0	0.0	100.0	1	21	n.d.	7.0	68%	19%	12%	0%	0%	0%	1%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			180-250	17%	65%	0.0	0.0	0.5	1.0	0.0	0.0	0.0	13.8	1.0	0.0	0.0	0.0	0.0	0.0	73.4	7.4	2.0	1.0	0.0	0.0	0.0	100.0	0	16	n.d.	5.0	76%	8%	15%	0%	0%	0%	1%	100%
2975S	Anger	Tsige Maryam	M.Galbusera			250-355	29%	36%	0.0	0.0	0.0	0.0	1.5	0.0	0.0	10.9	1.5	0.0	0.0	0.0	0.0	0.0	75.7	5.4	2.5	2.5	0.0	0.0	0.0	100.0	0	18	n.d.	3.9	71%	5%	22%	0%	0%	0%	2%	100%
2975S	Anger	Tsige Maryam	M.Galbusera	274	1.9	40-355	64%	36%	0.6	0.0	0.4	0.4	0.9	0.0	0.0	13.5	1.0	0.0	0.0	0.0	0.2	0.0	70.9	9.0	1.8	1.4	0.0	0.0	0.0	100.0	1	17	n.d.	5.2	70%	15%	13%	0%	0%	0%	1%	100%
2976L	Didesa	Ephrem	M.Galbusera			40-63	1%	98%	3.4	0.0	0.0	0.0	6.3	0.0	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.0	60.4	4.8	1.0	0.0	0.0	0.0	0.0	100.0	3	2	n.d.	24.6	60%	31%	7%	0%	1%	0%	1%	100%
2976L	Didesa	Ephrem	M.Galbusera			63-80	3%	95%	1.5	0.0	0.0	0.0	5.0	0.0	0.0	20.3	1.0	0.0	0.0	0.0	0.0	0.0	67.8	3.5	1.0	0.0	0.0	0.0	0.0	100.0	1	3	n.d.	20.5	66%	23%	10%	0%	0%	0%	1%	100%
2976L	Didesa	Ephrem	M.Galbusera			80-125	15%	80%	1.5	0.0	1.0	0.5	4.4	0.5	0.0	17.5	1.5	0.0	0.0	0.0	0.0	0.0	69.9	1.9	1.5	0.0	0.0	0.0	0.0	100.0	2	1	n.d.	21.5	66%	19%	12%	0%	0%	0%	2%	100%
2976L	Didesa	Ephrem	M.Galbusera			125-180	28%	53%	0.0	0.0	0.0	0.0	2.9	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	78.6	1.9	1.5	0.0	0.0	0.0	0.0	100.0	0	1	n.d.	13.1	76%	14%	9%	0%	0%	0%	1%	100%
2976L	Didesa	Ephrem	M.Galbusera			180-250	27%	25%	0.0	0.0	0.0	0.0	2.0	0.5	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	80.9	1.5	1.5	0.0	0.0	0.0	0.0	100.0	0	2	n.d.	8.5	73%	7%	19%	0%	0%	0%	1%	100%
2976L	Didesa	Ephrem	M.Galbusera	186	2.4	40-250	74%	25%	0.6	0.0	0.3	0.1	3.3	0.3	0.0	16.0	0.5	0.0	0.0	0.0	0.0	0.0	75.5	2.0	1.4	0.0	0.0	0.0	0.0	100.0	1	2	n.d.	13.6	68%	19%	12%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera			63-80	0%	100%	2.9	0.0	0.5	0.0	7.3	0.5	0.0	21.4	0.5	0.0	0.0	0.0	0.0	0.0	65.5	1.5	0.0	0.0	0.0	0.0	0.0	100.0	3	4	n.d.	21.4	63%	35%	2%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera			80-125	2%	97%	2.8	0.0	0.9	0.0	2.3	0.0	0.0	18.9	0.9	0.0	0.0	0.0	0.0	0.0	71.4	2.8	0.0	0.0	0.0	0.0	0.0	100.0	4	3	n.d.	36.1	63%	33%	3%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera			125-180	6%	91%	1.0	0.0	1.5	0.0	3.9	0.5	0.0	14.1	1.5	0.0	0.0	0.0	0.0	0.0	76.1	1.5	0.0	0.0	0.0	0.0	0.0	100.0	2	3	n.d.	32.3	63%	32%	3%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera			180-250	11%	81%	0.0	0.0	0.5	0.0	4.4	0.0	0.0	12.1	2.9	0.0	0.0	0.0	0.0	0.0	78.6	0.5	0.5	0.5	0.0	0.0	0.0	100.0	0	6	n.d.	19.7	70%	25%	5%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera			250-355	22%	59%	0.5	0.0	1.5	0.0	2.5	0.0	0.0	10.9	0.5	0.0	0.0	0.0	0.0	0.0	82.7	0.0	1.5	0.0	0.0	0.0	0.0	100.0	2	5	n.d.	9.0	75%	17%	7%	0%	0%	0%	1%	100%
2976S	Didesa	Ephrem	M.Galbusera	418	1.3	63-355	41%	59%	0.7	0.0	1.1	0.0	3.5	0.1	0.0	13.0	1.6	0.0	0.0	0.0	0.0	0.0	78.4	0.8	0.6	0.2	0.0	0.0	0.0	100.0	2	4	n.d.	16.7	67%	28%	4%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera			40-63	7%	89%	0.5	0.0	0.0	0.0	0.5	0.0	0.0	74.2	0.0	0.0	0.0	0.0	0.0	0.0	22.5	2.4	0.0	0.0	0.0	0.0	0.0	100.0	0	2	n.d.	13.2	79%	13%	7%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera			63-80	8%	81%	0.0	0.0	0.0	0.0	0.5	0.0	0.0	66.3	0.5	0.0	0.5	0.0	0.0	0.0	29.8	2.4	0.0	0.0	0.0	0.0	0.0	100.0	0	6	n.d.	15.6	79%	10%	10%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera			80-125	25%	56%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	37.1	2.9	0.0	0.0	0.0	0.0	0.0	100.0	0	11	n.d.	12.0	80%	6%	13%	0%	0%	0%	0%	100%
3295L	Dabus	Bambesi	M.Galbusera			125-180	28%	28%	0.0	1.0	0.0	0.0	0.5	0.0	0.0	46.8	0.0	0.0	0.0	0.0	0.0	0.0	47.3	4.4	0.0	0.0	0.0	0.0	0.0	100.0	1	11	n.d.	6.8	74%	3%	22%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera			180-250	17%	10%	0.0	1.0	0.0	0.0	1.0	0.5	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0	48.1	5.8	0.0	0.0	0.0	0.0	0.0	100.0	1	7	n.d.	4.4	66%	4%	29%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera	131	2.9	40-250	86%	10%	0.1	0.3	0.0	0.0	0.3	0.0	0.0	58.3	0.1	0.0	0.1	0.0	0.0	0.0	37.5	3.3	0.0	0.0	0.0	0.0	0.0	100.0	0	9	n.d.	9.2	76%	7%	16%	0%	0%	0%	1%	100%
3295L	Dabus	Bambesi	M.Galbusera	119	3.1	63-250	79%	10%	0.0	1.0	0.0	0.0	1.4	0.0	0.0	61.2	0.0	0.0	0.0	0.0	0.0	0.0	33.0	3.3	0.0	0.0	0.0	0.0	0.0	100.0	1	7	n.d.	21.2	79%	9%	11%	0%	0%	0%	1%	100%
3295S	Dabus	Bambesi	M.Galbusera			63-80	1%	98%	0.5	0.9	0.9	0.0	1.4	0.5	0.0	72.5	0.0	0.0	0.0	0.0	0.0	0.0	20.9	1.4	0.0	0.9	0.0	0.0	0.0	100.0	2	5	n.d.	24.7	71%	22%	6%	0%	0%	0%	1%	100%
3295S	Dabus	Bambesi	M.Galbusera			80-125	6%	92%	0.5	0.0	0.9	0.0	2.7	0.5	0.0	62.6	0.0	0.0	0.0	0.0	0.0	0.0	30.6	2.3	0.0	0.0	0.0	0.0	0.0	100.0	1	14	n.d.	21.7	71%	20%	8%	0%	0%	0%	1%	100%
3295S	Dabus	Bambesi	M.Galbusera			125-180	11%	81%	0.5	0.0	1.0	0.0	1.5	0.0	0.0	58.8	0.0	0.0	0.0	0.0	0.0	0.0	37.3	0.5	0.0	0.5	0.0	0.0	0.0	100.0	1	10	n.d.	16.7	69%	14%	17%	0%	0%	0%	0%	100%
3295S	Dabus	Bambesi	M.Galbusera			180-250	17%	64%	0.0	0.5	0.0	0.0	0.0	0.0	0.0	40.7	0.5	0.0	0.0	0.0	0.0	0.0	56.9	1.5	0.0	0.0	0.0	0.0	0.0	100.0	0	14	n.d.	15.0	69%	13%	17%	0%	0%	0%	1%	100%
3295S	Dabus	Bambesi	M.Galbusera			250-355	23%	41%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0	53.1	0.5	0.0	0.0	0.0	0.0	0.0	100.0	0	11	n.d.	11.4	72%	8%	19%	0%	0%	0%	1%	100%
3295S	Dabus	Bambesi	M.Galbusera	293	1.8	63-355	58%	41%	0.2	0.2	0.4	0.0	0.8	0.1	0.0	50.8	0.1	0.0	0.0	0.0	0.0	0.0	46.3	1.1	0.0	0.1	0.0	0.0	0.0	100.0	1	12	n.d.	14.8	72%	14%	13%	0%	0%	0%	1%	100%
2970L	Beles	Enat Beles	M.Galbusera			40-63	4%	94%	0.5	0.5	0.5	0.0	2.9	0.0	0.0	45.2	3.3	0.0	1.9	0.0	0.0	0.0	16.7	8.6	20.0	0.0	0.0	0.0	0.0	100.0	1	6	n.d.	23.3	64%	31%	5%	0%	0%	0%	1%	100%
2970L	Beles	Enat Beles	M.Galbusera			63-80	6%	89%	0.5	0.0	0.5	0.0	3.3	0.0	0.0	38.9	4.3	0.0	1.9	0.0	0.0	0.0	20.4	8.1	22.3	0.0	0.0	0.0	0.0	100.0	1	5	n.d.	23.2	71%	22%	6%	0%	0%	0%	1%	100%
2970L	Beles	Enat Beles	M.Galbusera			80-125	18%	70%	0.0	0.0	1.0	0.0	2.9	0.0	0.0	38.5	3.4	0.0	1.0	0.0	0.0	0.0	26.0	6.7	20.7	0.0	0.0	0.0	0.0	100.0	1	2	n.d.	23.0	71%	19%	9%	0%	0%	0%	1%	100%
2970L	Beles	Enat Beles	M.Galbusera			125-180	26%	45%	0.0	0.0	0.5	0.0	1.9	0.0	0.0	20.8	1.9	0.0	0.0	0.0	0.0	0.0	34.3	3.4	36.7	0.5	0.0	0.0	0.0	100.0	0	4	n.d.	18.6	73%	10%	15%	0%	0%	0%	2%	100%
2970L	Beles	Enat Beles	M.Galbusera			180-250	28%	17%	0.0	0.0	0.5	0.0	1.0	0.0	0.0	18.9	2.0	0.0	0.0	0.0	0.0	0.0	37.8	2.0	37.8	0.0	0.0	0.0	0.0	100.0	0	7	n.d.	12.2	74%	8%	17%	0%	0%	0%	1%	100%
2970L	Beles	Enat Beles	M.Galbusera	156	2.7	40-250	82%	17%	0.1	0.0	0.6	0.0	2.2	0.0	0.0	28.3	2.6	0.0	0.5	0.0	0.0	0.0	30.5	4.7	30.2	0.2	0.0	0.0	0.0	100.0	1	4	n.d.	18.0	71%	18%	10%	0%	0%	0%	1%	100%
2970S	Beles	Enat Beles	M.Galbusera			63-80	1%	98%	1.0	0.0	1.5	0.0	3.4	0.0	0.0	36.0	4.4	0.0	1.0	0.0	0.0	0.0	19.7	4.4	28.6	0.0	0.0	0.0	0.0	100.0	2	6	n.d.	30.4	65%	30%	4%	0%	1%	0%	1%	100%
2970S	Beles	Enat Beles	M.Galbusera			80-125	5%	92%	1.0	0.0	1.0	0.0	2.9	0.0	0.0	31.0	3.8	0.0	1.4	0.0	0.0	0.0	25.7	3.8	29.5	0.0	0.0	0.0	0.0	100.0	2	8	n.d.	29.2	67%	23%	8%	0%	0%	0%	2%	100%
2970S	Beles	Enat Beles	M.Galbusera			125-180	11%	81%	1.0	0.0	0.5	0.0	2.9	0.0	0.0	24.9	2.9	0.0	1.4	0.0	0.0	0.0	28.7	3.3	34.4	0.0	0.0	0.0	0.0	100.0	1	9	n.d.	20.7	73%	17%	9%	0%	0%	0%	1%	100%
2970S	Beles	Enat Beles	M.Galbusera			180-250	20%	62%	0.0	0.0	0.8	0.0	0.4	0.0	0.0	25.2	4.6	0.0	1.7	0.0	0.0	0.0	31.9	2.1	33.2	0.0	0.0	0.0	0.0	100.0	1	10	n.d.	14.9	72%	12%	14%	0%	1%	0%	2%	100%
2970S	Beles	Enat Beles	M.Galbusera			250-355	26%	36%	0.0	0.0	0.4	0.0	0.0	0.0	0.0	18.8	3.8	0.0	0.4	0.0	0.0	0.0	41.0	1.3	34.3	0.0	0.0	0.0	0.0	100.0	0	10	n.d.	10.1	72%	9%	16%	0%	1%	0%	2%	100%
2970S	Beles	Enat Beles	M.Galbusera	291	1.8	63-355	63%	36%	0.4	0.0	0.7	0.0	1.4	0.0	0.0	24.6	3.8	0.0	1.2	0.0	0.0	0.0	32.3	2.5	33.1	0.0	0.0	0.0	0.0	100.0	1	10	n.d.	15.4	70%	18%	10%	0%	0%	0%	1%	100%
2964L	Blue Nile	Bambudi	A.A.Megid			40-63	15%	64%	0.0	0.0	0.9	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	87.9	0.0	0.0	0.0	0.0	100.0	1	n.d.	n.d.	13.1	66%	26%	7%	0%	1%	1%	0%	100%
2964L	Blue Nile	Bambudi	A.A.Megid			63-80	16%	48%	0.8	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	7.9	1.6	78.6	0.8	0.0	0.0	0.0	100.0	1	20	n.d.	8.4	67%	21%	11%	1%	1%	0%	1%	100%
2964L	Blue Nile	Bambudi	A.A.Megid			80-125	32%	16%	0.0	0.7	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	86.8	0.7	0.7	0.0	0.0	100.0	1	0	n.d.	7.5	66%	26%	8%	0%	0%	0%	0%	100%
2964L	Blue Nile	Bambudi	A.A.Megid			125-180	13%	3%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.9	0.0	0.0	0.0	19.3	2.6	68.4	0.0	2.6	0.0	0.0	100.0	0	3	n.d.	3.1	57%	10%	32%	0%	1%	0%	0%	100%
2964L	Blue Nile	Bambudi	A.A.Megid			180-250	2%	1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.8	0.0	0.0	0.0	0.0	0.0	41.4	4.5	46.6	0.0	0.0	0.0	0.0	100.0	0	4	n.d.	5.2	43%	9%	41%	0%	4%	1%	2%	100%
2964L	Blue Nile	Bambudi	A.A.Megid	69	3.9	40-250	79%	1%	0.2	0.2	0.3	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.1	0.0	0.0	0.0	7.2	0.6	83.5	0.4	0.4	0.0	0.0	100.0	1	6	n.d.	8.0	59%	18%	20%	0%	1%	0%	1%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			63-80	0%	99%	6.3	0.0	1.6	0.0	0.8	0.0	1.6	21.4	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.8	46.8	0.8	0.8	0.0	0.0	100.0	8	3	n.d.	66.0	30%	68%	3%	0%	0%	0%	0%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			80-125	1%	98%	2.9	0.0	2.2	0.0	1.5	0.0	0.0	14.7	0.7	0.0	0.0	0.0	0.0	0.0	14.0	1.5	60.3	0.0	2.2	0.0	0.0	100.0	5	0	n.d.	61.9	40%	52%	4%	0%	1%	0%	3%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			125-180	6%	93%	0.6	0.0	0.0	0.0	0.0	0.0	0.0	11.3	1.9	0.0	0.0	0.0	0.0	0.0	22.6	0.6	57.2	1.9	3.8	0.0	0.0	100.0	1	12	n.d.	40.8	71%	25%	4%	0%	0%	0%	0%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			180-250	15%	77%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	1.6	0.0	0.0	0.0	0.0	0.0	23.0	0.0	59.8	0.8	0.8	0.0	0.0	100.0	0	2	n.d.	16.0	64%	16%	19%	1%	0%	1%	0%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			250-355	27%	51%	0.6	0.0	0.0	0.0	0.0	0.0	0.0	15.7	1.7	0.0	0.6	0.0	0.0	0.0	37.6	2.2	40.4	0.0	1.1	0.0	0.0	100.0	1	6	n.d.	9.7	66%	17%	16%	0%	1%	0%	1%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			355-500	24%	27%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9	1.9	0.0	0.0	0.0	0.0	0.0	57.1	1.0	18.1	0.0	0.0	0.0	0.0	100.0	0	3	n.d.	4.3	66%	9%	23%	0%	1%	0%	1%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			500-710	21%	6%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	1.6	0.0	0.0	0.0	0.0	0.0	45.4	0.5	25.1	0.0	0.0	0.0	0.0	100.0	0	3	n.d.	1.7	59%	5%	34%	0%	1%	0%	1%	100%
2964S	Blue Nile	Bambudi	A.A.Megid			710-1000	6%	1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.3	0.0	0.0	0.0	0.0	0.0	0.0	45.7	0.0	26.1	0.0	0.0	0.0	0.0	100.0	0	10	n.d.	1.3	59%	5%	33%	0%	3%	0%	0%	100%
2964S	Blue Nile	Bambudi	A.A.Megid	357	1.5	63-1000	100%	1%	0.5	0.0	0.1	0.0	0.1	0.0	0.0	15.4	1.7	0.0	0.2	0.0	0.0	0.0	31.4	1.0	47.6	0.7	1.5	0.0	0.0	100.0	1	6	n.d.	9.7	57%	25%	17%	0%	1%	0%	1%	100%
2876S	Rahad	Hufeira	A.A.Megid			40-63	2%	96%	2.9	0.0	1.9	0.0	1.9	0.0	0.0	36.2	2.9	0.0	0.0	0.0	0.0	0.0	25.7	1.9	26.7	0.0	0.0	0.0	0.0	100.0	5	5	n.d.	18.1	66%	29%	4%	0%	0%	0%	1%	100%
2876S	Rahad	Hufeira	A.A.Megid			63-80	4%	92%	1.9	0.0	1.0	0.0	0.0	0.0	0.0	51.9	1.0	0.0	0.0	0.0	0.0	0.0	35.6	1.9	6.7	0.0	0.0	0.0	0.0	100.0	3	0	n.d.	19.3	64%	34%	1%	0%	0%	0%	1%	100%
2876S	Rahad	Hufeira	A.A.Megid			80-125	19%	73%	2.0	1.0	0.0	0.0	0.0	0.0	0.0	32.7	2.0	0.0	0.0	0.0	0.0	0.0	40.6	2.0	19.8	0.0	0.0	0.0	0.0	100.0	3	0	n.d.	20.4	88%	10%	1%	0%	0%	0%	1%	100%
2876S	Rahad	Hufeira	A.A.Megid			125-180	37%	36%	0.0	0.0	0.0	0.0	0.9	0.0	0.0	31.1	0.0	0.0	0.0	0.0	0.0	0.0	46.2	1.9	18.9	0.0	0.9	0.0	0.0	100.0	0	3	n.d.	4.9	91%	8%	2%	0%	0%	0%	0%	100%
2876S	Rahad	Hufeira	A.A.Megid			180-250	8%	28%	0.9	0.0	3.5	0.0	3.5	0.0	0.0	33.0	1.7	0.0	0.0	0.0	0.0	0.0	35.7	5.2	15.7	0.0	0.9	0.0	0.0	100.0	4	19	n.d.	5.3	77%	20%	2%	0%	0%	0%	1%	100%
2876S	Rahad	Hufeira	A.A.Megid			250-355	5%	24%	0.0	0.0	1.7	0.0	0.8	0.0	0.0	38.8	0.8	0.0	0.0	0.0	0.0	0.0	44.6	0.0	13.2	0.0	0.0	0.0	0.0	100.0	2	0	n.d.	0.5	83%	14%	3%	0%	0%	0%	0%	100%
2876S	Rahad	Hufeira	A.A.Megid	235	2.1	40-355	74%	24%	1.4	0.5	0.3	0.0	0.5	0.0	0.0	34.0	1.4	0.0	0.0	0.0	0.0	0.0	40.8	2.1	18.5	0.0	0.3	0.0	0.0	100.0	2	2	n.d.	9.8	78%	19%	2%	0%	0%	0%	1%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			40-63	33%	55%	0.0	0.0	0.0	0.0	2.0	0.0	0.0	10.7	0.7	0.0	0.0	0.0	0.7	0.0	5.3	1.3	78.0	0.0	1.3	0.0	0.0	100.0	0	n.d.	n.d.	30.4	48%	29%	20%	0%	1%	0%	2%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			63-80	31%	24%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	9.3	1.9	81.5	0.9	1.9	0.0	0.0	100.0	0	20	n.d.	14.2	57%	14%	28%	0%	1%	0%	0%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			80-125	11%	2%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	20.0	2.1	73.7	0.0	0.0	0.0	0.0	100.0	0	11	n.d.	1.3	35%	5%	57%	0%	1%	0%	2%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			125-180	11%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	27.8	3.7	53.7	0.0	0.9	0.0	0.0	100.0	0	3	n.d.	5.5	50%	6%	43%	0%	0%	0%	0%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			180-250	1%	0%	0.0	0.0	0.0	0.0	0.9	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	42.6	0.9	34.8	0.0	0.9	0.0	0.0	100.0	0	3	n.d.	0.7	46%	5%	45%	0%	2%	0%	1%	100%
2882L	Blue Nile	Rufaa'	A.A.Megid			250-355	0%	0%	0.0	0.0	0.0	0.0	3.2	0.0	0.0	29.0	3.2	0.0	0.0	0.0	0.0	0.0	51.6	3.2	9.7	0.0	0.0	0.0	0.0	100.0	0	0	n.d.	1.2	43%	10%	43%	0%	3%	0%	1%	100%
2882L	Blue Nile	Rufaa	A.A.Megid	61	4.0	40-355	88%	0%	0.0	0.0	0.0	0.0	1.2	0.0	0.0	8.8	0.4	0.0	0.0	0.0	0.4	0.0	8.0	1.6	77.7	0.3	1.5	0.0	0.0	100.0	0	9	n.d.	17.3	47%	12%	39%	0%	1%	0%	1%	100%
2882S	Blue Nile	Rufaa'	A.A.Megid			180-250	1%	99%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.9	0.0	0.0	0.0	0.0	0.0	56.9	1.7	14.7	0.9	0.0	0.0	0.0	100.0	0	12	n.d.	17.5	88%	6%	5%	0%	0%	2%	0%	100%
2882S	Blue Nile	Rufaa'	A.A.Megid			250-355	7%	92%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.1	1.9	0.0	0.0	0.0	0.0	0.0	47.6	1.0	17.5	1.9	0.0	0.0	0.0	100.0	0	7	n.d.	12.8	70%	5%	24%	1%	0%	0%	0%	100%
2882S	Blue Nile	Rufaa'	A.A.Megid			355-500	36%	56%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	1.3	0.0	0.7	0.0	0.0	0.0	49.7	0.0	13.7	1.3	1.3	0.0	0.0	100.0	0	7	n.d.	2.6	71%	1%	29%	0%	0%	0%	0%	100%
2882S	Blue Nile	Rufaa'	A.A.Megid			500-710	33%	23%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.2	2.2	0.0	0.0	0.0	0.0	0.0	44.9	0.0	14.6	0.0	0.0	0.0	0.0	100.0	0	5	n.d.	0.8	45%	7%	46%	2%	0%	0%	0%	100%
2882S	Blue Nile	Rufaa'	A.A.Megid			710-1000	14%	9%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	40.0	0.0	0.0	0.0	0.0	100.0	0	n.d.	n.d.	0.8	16%	13%	66%	5%	0%	0%	0%	100%
2882S	Blue Nile	Rufaa	A.A.Megid	559	0.8	180-1000	91%	9%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5	1.6	0.0	0.3	0.0	0.0	0.0	48.4	0.5	15.7	1.4	0.6	0.0	0.0	100.0	0	8	n.d.	2.6	58%	7%	34%	1%	0%	0%	0%	100%
38	Blue Nile	Soba	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	0.5	0.0	0.5	0.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	23.9	2.4	53.1	0.0	0.5	1.0	0.0	100.0	1	4	n.d.	n.d.	72%	8%	10%	0%	1%	2%	8%	100%
2843L	Blue Nile	Khartoum	A.A.Megid			40-63	24%	65%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	7.5	2.8	84.9	0.0	0.9	0.0	0.0	100.0	0	n.d.	n.d.	19.1	55%	34%	12%	0%	0%	0%	0%	100%
2843L	Blue Nile	Khartoum	A.A.Megid			63-80	22%	43%	0.0	0.0	0.0	0.0	0.0	1.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	16.8	0.0	72.3	0.0	0.0	0.0	0.0	100.0	0	16	n.d.	13.4	53%	20%	28%	0%	0%	0%	0%	100%
2843L	Blue Nile	Khartoum	A.A.Megid			80-125	29%	14%	0.6	0.0	0.0	0.0	1.8	0.0	0.0	18.8	0.6	0.0	0.0	0.0	0.0	0.0	25.5	0.0	52.7	0.0	0.0	0.0	0.0	100.0	1	6	n.d.	9.1	63%	8%	27%	0%	1%	0%	1%	100%
2843L	Blue Nile	Khartoum	A.A.Megid			125-180	11%	3%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	0.9	0.0	0.0	0.0	0.0	0.0	43.5	4.3	26.1	0.0	0.9	0.0	0.0	100.0	0	4	n.d.	7.3	68%	5%	27%	0%	0%	0%	0%	100%
2843L	Blue Nile	Khartoum	A.A.Megid			180-250	2%	0%	0.9	0.0	0.0	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0	0.0	0.0	0.0	69.4	0.9	9.3	0.0	0.0	0.0	0.0	100.0	1	5	n.d.	3.5	59%	3%	37%	0%	1%	0%	0%	100%
2843L	Blue Nile	Khartoum	A.A.Megid	72	3.8	40-250	88%	0%	0.2	0.0	0.0	0.0	0.5	0.3	0.0	11.6	0.3	0.0	0.0	0.0	0.0	0.0	18.8	1.4	66.5	0.0	0.4	0.0	0.0	100.0	0	7	n.d.	12.5	60%	14%	26%	0%	0%	0%	0%	100%
2843S	Blue Nile	Khartoum	A.A.Megid			63-80	1%	94%	0.9	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	2.8	73.4	0.0	0.0	0.0	0.0	100.0	1	0	n.d.	3.9	66%	13%	19%	0%	0%	0%	1%	100%
2843S	Blue Nile	Khartoum	A.A.Megid			80-125	1%	93%	2.8	0.0	0.9	0.0	0.0	0.0	0.0	20.4	1.9	0.0	0.0	0.0	0.9	0.0	30.6	1.9	40.7	0.0	0.0	0.0	0.0	100.0	4	0	n.d.	18.0	43%	50%	6%	0%	0%	0%	1%	100%
2843S	Blue Nile	Khartoum	A.A.Megid			125-180	3%	90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.9	1.7	0.0	0.0	0.0	0.0	0.0	46.2	1.7	25.6	0.9	0.0	0.0	0.0	100.0	0	4	n.d.	32.1	60%	25%	15%	0%	0%	1%	0%	100%
2843S	Blue Nile	Khartoum	A.A.Megid			180-250	17%	74%	0.0	0.0	1.0	0.0	0.0	0.0	0.0	22.9	1.9	0.0	0.0	0.0	0.0	0.0	47.6	1.0	25.7	0.0	0.0	0.0	0.0	100.0	1	5	n.d.	14.6	67%	13%	18%	0%	0%	1%	1%	100%
2843S	Blue Nile	Khartoum	A.A.Megid			250-355	41%	32%	0.0	0.0	0.0	0.0	0.8	0.0	0.0	19.3	4.2	0.0	0.0	0.0	0.0	0.0	58.8	1.7	15.1	0.0	0.0	0.0	0.0	100.0	0	6	n.d.	4.9	77%	3%	18%	0%	0%	0%	2%	100%
2843S	Blue Nile	Khartoum	A.A.Megid	277	1.9	63-355	63%	32%	0.1	0.0	0.4	0.0	0.3	0.0	0.0	21.5	2.8	0.0	0.0	0.0	0.0	0.0	51.3	1.4	22.1	0.1	0.0	0.0	0.0	100.0	0	5	n.d.	9.0	62%	21%	15%	0%	0%	0%	1%	100%
ATBARA																																										
3312L	Tekeze	Togo Ber	M.Galbusera			40-63	21%	70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.9	91.7	0.0	1.0	0.0	0.0	100.0	0	n.d.	n.d.	26.0	65%	23%	8%	0%	0%	0%	3%	100%
3312L	Tekeze	Togo Ber	M.Galbusera			63-80	18%	52%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	87.2	0.5	2.7	0.0	0.0	100.0	0	n.d.	n.d.	15.3	66%	15%	15%	0%	0%	0%	4%	100%
3312L	Tekeze	Togo Ber	M.Galbusera			80-125	38%	14%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.5	89.7	0.0	2.9	0.0	0.0	100.0	0	n.d.	n.d.	10.5	67%	10%	17%	0%	0%	0%	6%	100%
3312L	Tekeze	Togo Ber	M.Galbusera			125-180	7%	7%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.5	86.9	0.0	2.9	0.0	0.0	100.0	0	n.d.	n.d.	5.9	69%	14%	14%	0%	0%	0%	2%	100%
3312L	Tekeze	Togo Ber	M.Galbusera			180-250	2%	5%	0.0	0.0	0.5	0.0	0.0	0.0	0.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.5	92.9	0.0	0.5	0.0	0.0	100.0	1	n.d.	n.d.	5.9	57%	10%	27%	3%	0%	0%	4%	100%
3312L	Tekeze	Togo Ber	M.Galbusera	83	3.6	40-250	86%	5%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.1	89.9	0.1	2.1	0.0	0.0	100.0	0	0	n.d.	14.8	69%	18%	13%	0%	0%	0%	1%	100%
3312S	Tekeze	Togo Ber	M.Galbusera			63-80	10%	82%	0.4	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0	6.3	1.8	73.5	0.0	8.1	0.0	0.0	100.0	0	21	n.d.	49.0	53%	19%	16%	0%	0%	0%	12%	100%
3312S	Tekeze	Togo Ber	M.Galbusera			80-125	33%	49%	0.0	0.5	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	80.2	0.0	8.7	0.0	0.0	100.0	0	n.d.	n.d.	31.0	62%	10%	22%	0%	0%	0%	6%	100%
3312S	Tekeze	Togo Ber	M.Galbusera			125-180	33%	16%	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	91.8	0.0	4.3	0.0	0.0	100.0	1	n.d.	n.d.	21.2	67%	5%	25%	0%	0%	0%	3%	100%
3312S	Tekeze	Togo Ber	M.Galbusera			180-250	13%	3%	0.0	1.5	0.0	0.0	0.0	0.0	0.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	86.7	0.0	8.9	0.0	0.0	100.0	1	n.d.	n.d.	16.4	70%	0%	28%	1%	0%	0%	1%	100%
3312S	Tekeze	Togo Ber	M.Galbusera			250-355	3%	1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.5	85.1	0.0	9.5	0.0	0.0	100.0	0	n.d.	n.d.	13.9	51%	3%	45%	1%	0%	0%	2%	100%
3312S	Tekeze	Togo Ber	A.A.Megid	120	3.1	63-355	92%	1%	0.1	0.6	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.3	83.1	0.0	7.3	0.0	0.0	100.0	1	7	n.d.	26.9	61%	8%	27%	0%	0%	0%	5%	100%
2873L	Atbara	Showak	A.A.Megid			40-63	10%	80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.8	83.0	0.0	3.6	0.0	0.0	100.0	0	n.d.	n.d.	24.1	57%	22%	19%	0%	0%	0%	2%	100%
2873L	Atbara	Showak	A.A.Megid			63-80	15%	65%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	84.6	0.0	1.9	0.0	0.0	100.0	0	n.d.	n.d.	21.4	58%	26%	15%	0%	0%	0%	1%	100%
2873L	Atbara	Showak	A.A.Megid			80-125	38%	28%	0.0	0.0	0.6	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	84.4	0.0	2.5	0.0	0.0	100.0	1	n.d.	n.d.	17.3	57%	12%	30%	1%	0%	0%	0%	100%
2873L	Atbara	Showak	A.A.Megid			125-180	23%	5%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	90.5	0.0	1.0	0.0	0.0	100.0	0	n.d.	n.d.	5.5	56%	4%	38%	1%	0%	0%	1%	100%
2873L	Atbara	Showak	A.A.Megid			180-250	3%	1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	72.0	0.0	8.4	0.0	0.0	100.0	0	n.d.	n.d.	1.1	40%	6%	54%	0%	0%	0%	0%	100%
2873L	Atbara	Showak	A.A.Megid	90	3.5	40-250	89%	1%	0.0	0.0	0.3	0.0	0.0	0.0	0.0	9.2	0.0	0.0	0.2	0.0	0.0	0.0	2.8	0.3	84.8	0.0	2.4	0.0	0.0	100.0	0	0	n.d.	15.1	54%	14%	31%	0%	0%	0%	1%	100%
2873S	Atbara	Showak	A.A.Megid			63-80	3%	94%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	80.0	0.9	1.7	0.0	0.0	100.0	0	n.d.	n.d.	43.9	50%	37%	13%	0%	0%	0%	0%	100%

2873S	Atbara	Showak	A.A.Megid			80-125	16%	78%	0.9	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.9	0.0	0.0	0.0	0.0	0.0	2.8	1.9	82.4	0.0	3.7	0.0	0.0	100.0	1	n.d.	n.d.	64.2	34%	43%	9%	2%	1%	0%	11%	100%
2873S	Atbara	Showak	A.A.Megid			125-180	38%	41%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.6	0.0	0.0	0.0	0.0	0.0	1.8	0.0	73.3	1.8	8.5	0.0	0.0	100.0	0	n.d.	n.d.	55.3	55%	23%	23%	0%	0%	0%	0%	100%
2873S	Atbara	Showak	A.A.Megid			180-250	34%	7%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	82.9	1.0	4.8	0.0	0.0	100.0	0	n.d.	n.d.	21.5	56%	4%	39%	1%	0%	0%	0%	100%
2873S	Atbara	Showak	A.A.Megid			250-355	7%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	89.1	0.0	3.0	0.0	0.0	100.0	0	n.d.	n.d.	7.7	40%	12%	48%	0%	0%	0%	0%	100%
2873S	Atbara	Showak	A.A.Megid	155	2.7	63-355	96%	0%	0.2	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.5	0.0	0.0	0.0	0.0	0.0	2.6	0.3	77.6	1.3	6.5	0.0	0.0	100.0	0	0	n.d.	41.3	47%	24%	26%	1%	0%	0%	2%	100%
2858L	Atbara	Abu Ammar	A.A.Megid			40-63	12%	77%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.9	84.1	0.9	0.9	0.0	0.0	100.0	0	n.d.	n.d.	43.6	68%	22%	10%	0%	0%	0%	0%	100%
2858L	Atbara	Abu Ammar	A.A.Megid			63-80	22%	55%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.8	80.0	0.9	0.0	0.0	0.0	100.0	0	n.d.	n.d.	22.8	66%	14%	19%	1%	0%	0%	0%	100%
2858L	Atbara	Abu Ammar	A.A.Megid			80-125	48%	8%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	0.6	0.0	0.0	0.0	0.0	0.0	6.4	0.0	81.4	0.0	0.6	0.0	0.0	100.0	0	3	n.d.	7.8	55%	12%	33%	0%	0%	0%	0%	100%
2858L	Atbara	Abu Ammar	A.A.Megid			125-180	7%	0%	0.0	0.0	0.0	0.0	1.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0	6.7	3.8	76.2	0.0	0.0	0.0	0.0	100.0	0	n.d.	n.d.	0.5	53%	6%	35%	1%	4%	0%	1%	100%
2858L	Atbara	Abu Ammar	A.A.Megid	77	3.7	40-180	89%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.2	0.0	0.0	0.0	0.0	0.0	4.8	1.0	81.8	0.7	0.5	0.0	0.0	100.0	0	1	n.d.	15.6	61%	14%	24%	0%	1%	0%	0%	100%
2858S	Atbara	Abu Ammar	A.A.Megid			63-80	5%	86%	0.0	1.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	80.0	1.0	1.0	0.0	0.0	100.0	1	n.d.	n.d.	46.3	70%	22%	8%	0%	0%	0%	0%	100%
2858S	Atbara	Abu Ammar	A.A.Megid			80-125	56%	30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.3	79.9	0.0	3.9	0.0	0.0	100.0	0	n.d.	n.d.	25.9	70%	8%	21%	0%	0%	0%	0%	100%
2858S	Atbara	Abu Ammar	A.A.Megid			125-180	30%	1%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	75.2	0.0	1.8	0.0	0.0	100.0	0	8	n.d.	4.1	60%	2%	37%	1%	0%	0%	0%	100%
2858S	Atbara	Abu Ammar	A.A.Megid			180-250	1%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0	10.8	3.1	75.4	0.0	1.5	0.0	0.0	100.0	0	0	n.d.	2.0	56%	14%	26%	0%	2%	0%	1%	100%
2858S	Atbara	Abu Ammar	A.A.Megid	107	3.2	63-250	91%	0%	0.0	0.1	0.0	0.0	0.0	0.0	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0	4.4	1.0	79.6	0.1	3.4	0.0	0.0	100.0	0	1	n.d.	19.8	64%	12%	23%	0%	1%	0%	0%	100%
MAIN NILE SYSTEM																																										
4735L	Nile	SD05	M.Padoan	n.d.	n.d.	15-500	99%	0%	0.0	0.0	0.0	0.0	0.4	0.9	0.0	11.6	0.4	0.0	0.0	0.0	0.0	0.0	16.1	2.2	68.3	0.0	0.0	0.0	0.0	100.0	0	7	n.d.	27.9	60%	20%	18%	0%	0%	0%	1%	100%
2852L	Nile	Karima	A.A.Megid			40-63	7%	93%	0.9	0.0	0.0	0.0	0.0	0.0	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.9	67.3	0.0	0.0	0.0	0.0	100.0	1	n.d.	n.d.	43.0	67%	27%	5%	1%	0%	0%	1%	100%
2852L	Nile	Karima	A.A.Megid			63-80	20%	73%	0.0	0.0	1.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	0.0	5.8	1.0	69.2	0.0	1.9	0.0	0.0	100.0	1	n.d.	n.d.	30.9	76%	10%	14%	0%	0%	0%	0%	100%
2852L	Nile	Karima	A.A.Megid			80-125	62%	11%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.6	0.0	0.0	0.0	0.0	0.0	16.0	1.3	69.2	0.0	1.3	0.0	0.0	100.0	0	5	n.d.	12.7	67%	7%	25%	0%	0%	0%	0%	100%
2852L	Nile	Karima	A.A.Megid			125-180	11%	0%	1.0	1.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	3.0	53.0	1.0	1.0	0.0	0.0	100.0	2	3	n.d.	1.7	58%	3%	37%	0%	2%	0%	0%	100%
2852L	Nile	Karima	A.A.Megid			180-250	0%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	62.5	0.0	0.0	0.0	0.0	100.0	0	n.d.	n.d.	1.9	19%	14%	9%	0%	47%	0%	12%	100%
2852L	Nile	Karima	A.A.Megid	96	3.4	40-250	99%	0%	0.1	0.0	0.4	0.0	0.0	0.0	0.0	17.3	0.3	0.0	0.0	0.0	0.0	0.0	10.6	1.1	68.8	0.0	1.3	0.0	0.0	100.0	1	4	n.d.	17.2	58%	14%	18%	0%	8%	0%	2%	100%
2852S	Nile	Karima	A.A.Megid			63-80	1%	99%	0.9	0.0	0.0	0.0	0.0	0.0	0.0	16.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.8	76.8	0.0	0.9	0.0	0.0	100.0	1	n.d.	n.d.	30.4	61%	33%	7%	0%	0%	0%	0%	100%
2852S	Nile	Karima	A.A.Megid			80-125	2%	97%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.9	0.0	0.0	0.0	0.0	0.0	17.8	0.9	68.2	0.0	1.9	0.0	0.0	100.0	0	14	n.d.	18.7	73%	12%	13%	1%	0%	0%	1%	100%
2852S	Nile	Karima	A.A.Megid			125-180	4%	93%	1.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	1.9	0.0	0.0	0.0	0.0	0.0	19.4	1.9	58.3	0.0	3.9	0.0	0.0	100.0	1	5	n.d.	33.6	66%	29%	5%	0%	0%	0%	0%	100%
2852S	Nile	Karima	A.A.Megid			180-250	20%	74%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5	1.8	0.0	0.0	0.0	0.0	0.0	12.6	0.0	66.7	0.9	4.5	0.0	0.0	100.0	0	7	n.d.	26.9	77%	9%	13%	1%	0%	0%	0%	100%
2852S	Nile	Karima	A.A.Megid			250-355	71%	3%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	0.6	0.0	0.0	0.0	0.0	0.0	24.5	1.2	52.8	0.0	2.5	0.0	0.0	100.0	0	11	n.d.	5.1	77%	4%	18%	0%	0%	0%	0%	100%
2852S	Nile	Karima	A.A.Megid	263	1.9	63-355	97%	3%	0.1	0.0	0.0	0.0	0.0	0.0	0.0	15.2	1.3	0.0	0.0	0.0	0.0	0.0	17.6	0.7	61.0	0.4	3.6	0.0	0.0	100.0	0	9	n.d.	11.0	71%	17%	11%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			40-63	2%	97%	5.8	0.0	3.9	0.0	2.9	0.0	0.0	32.0	4.9	0.0	1.0	0.0	0.0	0.0	28.2	3.9	17.5	0.0	0.0	0.0	0.0	100.0	10	21	n.d.	6.5	59%	27%	14%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			63-80	3%	94%	2.9	1.0	5.7	0.0	0.0	0.0	0.0	31.4	2.9	0.0	1.0	0.0	0.0	0.0	40.0	4.8	10.5	0.0	0.0	0.0	0.0	100.0	10	14	n.d.	7.4	54%	22%	24%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			80-125	11%	83%	10.3	4.7	3.7	0.0	0.0	0.0	0.0	26.2	1.9	0.0	3.7	0.0	0.9	0.0	35.5	2.8	9.3	0.9	0.0	0.0	0.0	100.0	19	11	n.d.	3.2	41%	26%	33%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			125-180	4%	79%	7.9	3.0	10.9	0.0	0.0	1.0	0.0	25.7	6.9	0.0	7.9	0.0	2.0	0.0	21.8	0.0	11.9	0.0	0.0	0.0	1.0	100.0	22	9	50	2.8	31%	48%	20%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			180-250	9%	70%	8.6	10.2	1.6	0.0	0.8	0.0	0.0	21.1	14.8	0.0	10.9	0.0	0.0	0.0	20.3	0.8	10.9	0.0	0.0	0.0	0.0	100.0	20	15	50	0.7	22%	36%	43%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid			250-355	18%	53%	0.0	13.4	3.0	0.0	3.0	0.0	0.0	11.9	25.4	0.0	22.4	1.5	3.0	1.5	10.4	1.5	3.0	0.0	0.0	0.0	0.0	100.0	16	n.d.	53	0.1	16%	30%	53%	0%	0%	0%	0%	100%
2847S	Milk	Ed Debba	A.A.Megid	318	1.7	40-355	46%	53%	6.8	2.7	4.9	0.0	0.6	0.1	0.0	28.6	3.8	0.0	3.1	0.0	0.5	0.0	33.8	3.3	11.4	0.4	0.0	0.0	0.1	100.0	14	13	n.d.	1.9	37%	31%	31%	0%	0%	0%	0%	100%
2899L	Nile	3rd cataract	A.A.Megid			40-63	18%	66%	1.0	0.0	1.9	0.0	0.0	0.0	0.0	13.6	0.0	0.0	1.0	0.0	0.0	0.0	3.9	0.0	77.7	1.0	0.0	0.0	0.0	100.0	3	n.d.	n.d.	17.2	67%	21%	11%	0%	0%	0%	1%	100%
2899L	Nile	3rd cataract	A.A.Megid			63-80	18%	51%	0.0	0.0	0.0	0.0	0.0	0.9	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	12.7	5.5	71.8	0.0	0.0	0.0	0.0	100.0	0	5	n.d.	10.4	68%	13%	19%	0%	0%	0%	1%	100%
2899L	Nile	3rd cataract	A.A.Megid			80-125	31%	20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	0.6	0.0	0.0	0.0	0.0	0.0	14.4	1.9	64.4	0.6	0.0	0.0	0.0	100.0	0	3	n.d.	5.3	63%	12%	25%	0%	0%	0%	0%	100%
2899L	Nile	3rd cataract	A.A.Megid			125-180	9%	8%	0.0	0.9	0.0	0.0	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	13.1	0.9	70.1	1.9	0.0	0.0	0.0	100.0	1	21	n.d.	5.5	64%	28%	8%	0%	0%	0%	0%	100%
2899L	Nile	3rd cataract	A.A.Megid			180-250	4%	4%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.1	0.0	0.0	0.0	0.0	0.0	39.8	3.4	48.9	1.1	1.1	0.0	0.0	100.0	0	4	n.d.	1.8	68%	4%	17%	3%	4%	1%	3%	100%
2899L	Nile	3rd cataract	A.A.Megid	72	3.8	40-250	80%	4%	0.4	0.1	0.8	0.0	0.0	0.2	0.0	13.3	0.2	0.0	0.4	0.0	0.0	0.0	9.8	2.0	72.0	0.7	0.0	0.0	0.0	100.0	1	5	n.d.	8.9	66%	15%	16%	1%	1%	0%	1%	100%
2899S	Nile	3rd cataract	A.A.Megid			63-80	1%	49%	0.0	0.0	0.9	0.0	0.0	0.0	0.0	22.8	0.9	0.0	0.0	0.0	0.0	0.0	6.1	0.9	68.4	0.0	0.0	0.0	0.0	100.0	1	n.d.	n.d.	17.6	68%	17%	15%	0%	0%	0%	0%	100%
2899S	Nile	3rd cataract	A.A.Megid			80-125	5%	18%	0.0	0.0	0.0	0.0	0.9	0.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	16.4	0.0	66.4	0.0	0.9	0.0	0.0	100.0	0	4	n.d.	16.1	71%	13%	16%	0%	0%	0%	0%	100%
2899S	Nile	3rd cataract	A.A.Megid			125-180	7%	9%	0.9	0.0	0.0	0.0	1.8	0.0	0.0	16.4	0.9	0.0	0.0	0.0	0.0	0.0	17.3	0.0	61.8	0.0	0.9	0.0	0.0	100.0	1	0	n.d.	23.7	62%	27%	10%	0%	0%	1%	0%	100%
2899S	Nile	3rd cataract	A.A.Megid			180-250	22%	5%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	0.0	0.0	0.9	0.0	0.9	0.0	16.5	0.9	59.1	0.9	1.7	0.0	0.0	100.0	0	9	n.d.	15.4	79%	6%	14%	1%	0%	0%	1%	100%
2899S	Nile	3rd cataract	A.A.Megid			250-355	58%	2%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.8	1.9	0.0	0.0	0.0	0.0	0.0	25.3	0.0	53.9	0.0	0.0	0.0	0.0	100.0	0	8	n.d.	1.7	67%	4%	27%	0%	0%	0%	1%	100%
2899S	Nile	3rd cataract	A.A.Megid	236	2.1	63-355	94%	2%	0.2	0.0	0.0	0.0	0.5	0.0	0.0	18.2	0.5	0.0	0.5	0.0	0.5	0.0	17.7	0.5	59.9	0.5	1.2	0.0	0.0	100.0	0	6	n.d.	7.7	69%	14%	16%	0%	0%	0%	0%	100%
4736L	Nile	SD04	M.Padoan	n.d.	n.d.	15-500	99%	0%	0.9	0.0	0.0	0.0	0.0	0.5	0.0	19.4	0.0	0.0	0.0	0.0	0.9	0.0	22.3	0.9	54.5	0.0	0.0	0.5	0.0	100.0	1	6	n.d.	15.5	65%	11%	24%	0%	0%	0%	0%	100%
45	Nile	Wadi Halfa	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	0.9	0.0	0.0	0.0	1.8	1.4	0.0	14.3	1.4	0.0	0.0	0.0	0.0	0.0	29.5	4.1	45.6	0.0	0.5	0.0	0.5	100.0	1	11	n.d.	n.d.	58%	20%	9%	1%	2%	1%	9%	100%
46	Nile	Aswan	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	0.0	0.0	0.0	0.0	0.5	1.5	0.0	30.0	1.5	0.0	1.5	0.0	0.0	0.0	33.5	1.5	28.1	1.5	0.5	0.0	0.0	100.0	0	8	n.d.	n.d.	86%	4%	3%	0%	0%	1%	6%	100%
46	Nile	Aswan	S.Andò	132	2.9	63-250	93%	5%	0.0	0.0	0.0	0.5	1.4	0.5	0.0	8.7	1.0	0.0	0.0	0.0	0.0	0.0	12.5	1.4	73.1	0.0	1.0	0.0	0.0	100.0	0	9	n.d.	13.2	86%	10%	3%	0%	0%	0%	1%	100%
IV	Nile	Cairo Tora	S.Andò	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	0.0	0.5	0.0	0.0	0.5	0.0	31.3	0.9	0.0	0.0	0.0	0.0	0.0	17.5	0.5	47.4	0.0	0.0	0.0	0.0	100.0	2	7	n.d.	n.d.	41%	21%	12%	0%	1%	0%	26%	100%
51	Nile	Cairo Ma'adi	S.Andò	122	3.0	63-250	87%	6%	0.0	0.0	0.0	0.9	0.5	0.5	0.0	10.4	0.9	0.0	0.0	0.5	0.0	0.0	10.0	0.9	74.4	0.5	0.5	0.0	0.0	100.0	0	0	n.d.	18.1	88%	10%	2%	0%	0%	0%	1%	100%
2408L	Nile	Aswan	A.A.Megid	73	3.8	63-250	79%	0%	0.0	1.0	0.5	0.0	1.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0	15.8	1.5	67.3	0.5	0.0	0.0	0.0	100.0	1	5	n.d.	12.2	70%	17%	12%	0%	0%	0%	0%	100%
2401B	Nile	Luxor	A.A.Megid	262	1.9	63-250	43%	57%	1.0	0.0	0.5	0.0	0.0	0.0	0.5	19.1	1.0	0.0	0.0	0.0	0.5	0.0	20.6	1.0	53.6	0.5	1.9	0.0	0.0	100.0	1	9	n.d.	18.8	74%	21%	3%	0%	1%	0%	1%	100.0%
4726S	Umm Omeiyid	RSH3A	M.Padoan	220	2.2	15-500	88%	7%	15.4	2.8	9.8	0.3	1.4	2.4	0.0	35.0	1.4	0.0	1.0	0.0	1.7	0.3	16.1	0.0	11.2	0.7	0.0	0.3	0.0	100.0	28	19	56	8.7	15%	24%	59%	0%	1%	0%	0%	100%
4727S	Qena	RSH5A	M.Padoan	260	1.9	15-500	68%	30%	9.5	2.7	5.0	0.0	2.3	2.7	0.0	35.7	2.7	0.5	0.9	0.0	1.4	0.0	20.4	0.0	14.5	0.9	0.0	0.9	0.0	100.0	17	11	42	4.1	22%	18%	54%	0%	2%	0%	4%	100%
1989S	Qena	Qena	A.A.Megid	223	2.2	63-250	35%	52%	0.5	1.9	0.9	0.0	0.5	0.0	0.0	31.3	1.9	0.0	0.5	0.0	0.5	0.0	41.7	4.7	14.7	0.9	0.0	0.0	0.0	100.0	3	7	n.d.	1.5	33%	6%	57%	0%	0%	0%	4%	100%
3290S	Delta beach	Idku east	M.Galbusera			63-75	0%	99%	10.1	0.0	3.2	0.0	2.3	0.9	0.0	25.8	2.8	0.0	0.0	0.0	0.0	0.0	5.5	3.2	46.1	0.0	0.0	0.0	0.0	100.0	13	14	n.d.	83.1	33%	66%	1%	0%	0%	0%	0%	100%
3290S	Delta beach	Idku east	M.Galbusera			75-80	0%	99%	3.2	0.0	1.9	0.0	1.9	0.9	0.0	25.5	4.2	0.0	0.0	0.0	0.0	0.0	9.3	2.8	50.5	0.0	0.0	0.0	0.0	100.0	5	17	n.d.	77.1	45%	52%	2%	0%	0%	0%	1%	100%
3290S	Delta beach	Idku east	M.Galbusera			80-106	2%	94%	0.9	0.4	0.4	0.0	1.7	0.4	0.0	21.3	3.4	0.0	0.0	0.0	0.4	0.0	17.9	3.8	49.4	0.0	0.0	0.0	0.0	100.0	2	25	n.d.	85.2	67%	26%	5%	0%	0%	0%	1%	100%
3290S	Delta beach	Idku east	M.Galbusera			106-125	3%	89%	0.0	0.0	0.4	0.0	0.9	0.4	0.0	23.7	2.6	0.0	0.0	0.0	0.0	0.0	19.8	4.3	47.4	0.4	0.0	0.0	0.0	100.0	0	12	n.d.	64.7	88%	6%	4%	0%	0%	0%	2%	100%
3290S	Delta beach	Idku east	M.Galbusera			125-150	8%	78%	0.0	0.5	0.0	0.0	0.9	0.5	0.0	27.1	1.4	0.0	0.0	0.0	0.0	0.0	21.6	4.6	42.7	0.9	0.0	0.0	0.0	100.0	0	17	n.d.	27.5	84%	4%	12%	0%	0%	0%	0%	100%
3290S	Delta beach	Idku east	M.Galbusera			150-180	22%	59%	0.0	0.0	0.0	0.0	1.4	0.5	0.0	19.2	0.5	0.0	0.0	0.0	0.0	0.0	32.7	7.2	37.0	1.4	0.0	0.0	0.0	100.0	0	10	n.d.	10.6	80%	3%	16%	0%	0%	0%	1%	100%
3290S	Delta beach	Idku east	M.Galbusera			180-212	38%	17%	0.0	0.0	0.0	0.0	0.9	0.0	0.0	18.1	0.5	0.0	0.0	0.0	0.0	0.0	37.7	9.3	32.6	0.9	0.0	0.0	0.0	100.0	0	5	n.d.	3.5	80%	1%	17%	0%	0%	0%	1%	100%
3290S	Delta beach	Idku east	M.Galbusera			212-250	18%	4%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.4	0.5	0.0	0.0	0.0	0.0	0.0	51.9	8.7	19.9	0.5	0.0	0.0	0.0	100.0	0	7	n.d.	0.7	74%	1%	22%	0%	1%	0%	2%	100%
3290S	Delta beach	Idku east	M.Galbusera			250-300	5%	0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	1.9	0.0	0.0	0.0	0.0	0.0	55.0	4.7	21.3	0.0	0.0	0.0	0.0	100.0	0	7	n.d.	0.9	68%	2%	25%	0%	0%	0%	6%	100%
3290S	Delta beach	Idku east	M.Galbusera	175	2.5	63-300	98%	0%	0.0	0.0	0.0	0.0	0.8	0.2	0.0	19.4	0.7	0.0	0.0	0.0	0.0	0.0	37.5	7.8	32.5	0.9	0.0	0.0	0.0	100.0	0	7	n.d.	10.1	78%	3%	17%	0%	0%	0%	1%	100%
3709P	Delta beach placer	Rosetta	S.Andò			53-63	0%	99.9%	77.9	0.0	1.0	0.0	1.9	0.0	3.8	4.8	0.0	0.0	0.5	0.0	0.0	0.0	1.9	0.0	7.7	0.0	0.0	0.0	0.5	100.0	79	n.d.	n.d.	98.4	47%	53%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			63-75	1%	99.0%	82.0	0.0	5.7	0.0	3.3	0.0	5.7	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.0	100.0	88	n.d.	n.d.	99.7	30%	70%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			75-80	2%	97.4%	78.6	0.0	7.5	0.0	2.5	0.0	6.5	1.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	100.0	86	n.d.	n.d.	99.9	20%	80%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			80-106	23%	74.4%	67.5	0.0	6.3	0.5	2.4	0.0	2.9	2.9	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	100.0	74	n.d.	n.d.	100.0	15%	85%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			106-125	27%	47.0%	31.5	0.0	7.9	2.0	4.4	0.5	1.0	9.4	17.7	0.0	1.0	0.0	0.0	0.0	3.0	0.0	21.7	0.0	0.0	0.0	0.0	100.0	39	n.d.	n.d.	99.8	16%	84%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			125-150	24%	23.1%	5.5	1.0	5.0	1.0	4.5	0.5	0.0	15.5	15.0	0.0	2.5	0.0	0.5	0.0	10.0	0.0	38.5	0.5	0.0	0.0	0.0	100.0	12	0	50	98.9	32%	68%	0%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			150-180	15%	8.1%	1.0	1.0	1.0	0.5	2.9	1.4	0.0	16.4	11.1	0.0	5.8	0.0	0.5	0.0	14.5	0.0	43.5	0.5	0.0	0.0	0.0	100.0	3	10	50	90.7	59%	40%	1%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			180-212	6%	2.5%	0.0	0.0	0.0	0.5	1.4	0.5	0.0	20.8	14.5	0.0	3.4	0.0	1.9	0.0	21.3	0.0	35.3	0.5	0.0	0.0	0.0	100.0	0	3	50	65.7	75%	21%	4%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò			212-250	2%	0.7%	0.0	1.4	0.0	0.0	1.4	0.0	0.0	20.1	13.4	0.0	5.3	0.0	1.4	0.0	18.2	1.0	36.8	0.5	0.0	0.5	0.0	100.0	1	8	50	38.8	82%	11%	6%	0%	0%	0%	0%	100%
3709P	Delta beach placer	Rosetta	S.Andò	125	3.0	53-250	99%	1%	15.4	0.6	3.5	0.8	3.2	0.7	0.6	14.1	13.2	0.0	3.1	0.0	0.6	0.0	10.9	0.0	32.9	0.4	0.0	0.0	0.0	100.0	19	5	n.d.	95.2	31%	68%	1%	0%	0%	0%	0%	100%
WESTERN DESERT																																										
4729E	*eolian dune*	WD19C	M.Padoan	n.d.	n.d.	> 95	n.d.	0%	20.0	12.4	7.1	0.5	1.4	2.9	1.4	30.5	8.1	0.0	3.8	0.0	1.4	0.0	9.0	0.0	1.4	0.0	0.0	0.0	0.0	100.0	40	33	50	0.3	37%	10%	46%	0%	1%	0%	5%	100%
4730E	*eolian dune*	WD20C	M.Padoan	n.d.	n.d.	> 95	n.d.	0%	25.2	9.8	4.7	0.5	1.9	0.9	0.0	27.1	16.8	0.0	3.7	0.0	0.0	0.5	5.6	0.0	2.3	0.0	0.0	0.9	0.0	100.0	40	14	56	0.3	42%	23%	34%	0%	0%	0%	1%	100%
4728E	*eolian dune*	WD03C	M.Padoan	n.d.	n.d.	95-500	n.d.	11%	21.2	11.5	15.2	0.5	1.4	0.9	0.0	19.4	6.5	0.0	3.7	0.0	2.3	0.0	10.6	0.5	5.5	0.9	0.0	0.0	0.0	100.0	48	29	50	0.7	39%	31%	28%	1%	1%	0%	0%	100%

Table A4. Sand geochemistry

Sample	River / Lake	Site	Laboratory	Class	class	coarser	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	LOI	
				(μm)	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	
WHITE NILE SYSTEM						D.L.	0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	
3643S	Kagera	Kyaka	ACME	63-2000	98%	0%	92.1	1.2	1.5	0.0	0.1	0.1	0.3	0.5	0.03	0.02	4.1	99.9
3641S	Kagera	Kasensero	ACME	63-2000	97%	0%	94.9	0.9	1.0	0.0	0.0	0.1	0.2	0.5	0.02	<0.01	2.4	99.9
3692S	Victoria Nile	Murchison Falls	ACME	63-2000	97%	0%	80.7	8.4	2.8	0.8	1.9	2.0	1.0	1.0	0.05	0.04	1.2	99.8
3690B	Albert Nile	Wadelai	ACME	63-2000	100%	0%	79.0	8.8	3.3	1.0	2.4	1.8	1.5	1.1	0.06	0.06	0.6	99.8
4052S	Bahr El Jebel	Juba	ACME	63-2000	95%	5%	81.2	9.6	1.5	0.2	1.9	2.3	1.7	0.3	0.04	0.03	1.2	99.9
2878S	White Nile	Rabak	ACME	<125	26%	74%	88.5	4.5	1.2	0.2	1.2	1.0	1.1	1.0	0.09	0.05	0.9	99.7
BLUE NILE SYSTEM																		
2975S	Anger	Tsige Maryam	ACME	63-2000	98%	0%	82.5	7.1	3.2	0.6	1.0	1.0	1.6	0.5	0.07	0.04	2.2	99.8
2976S	Didesa	Ephrem	ACME	63-2000	100%	0%	78.3	7.8	5.0	0.7	1.6	1.3	2.2	1.8	0.07	0.10	1.0	99.8
3295S	Dabus	Bambesi	ACME	63-2000	99%	0%	73.9	9.1	6.5	1.1	2.2	1.0	1.0	1.3	0.11	0.18	3.6	99.9
2970S	Beles	Enat Beles	ACME	63-2000	99%	0%	69.6	11.2	6.6	1.9	3.0	1.7	2.5	1.1	0.10	0.10	2.0	99.8
2964S	Blue Nile	Bambudi	ACME	125-180	6%	93%	47.7	8.2	18.0	4.9	9.3	1.4	0.8	5.6	0.23	0.27	3.0	99.4
2964S	Blue Nile	Bambudi	ACME	180-250	15%	77%	64.4	8.4	8.7	3.2	7.1	1.6	1.0	2.5	0.18	0.16	2.6	99.8
2964S	Blue Nile	Bambudi	ACME	250-355	27%	51%	75.5	8.3	4.6	1.6	3.7	1.7	1.3	0.9	0.12	0.09	2.1	99.8
2964S	Blue Nile	Bambudi	ACME	355-500	24%	27%	81.3	8.4	2.3	0.8	2.0	1.8	1.9	0.3	0.06	0.04	1.1	99.9
2964S	Blue Nile	Bambudi	ACME	500-710	21%	6%	85.4	7.3	1.3	0.4	1.3	1.6	1.8	0.2	0.05	0.02	0.6	99.9
2964S	Blue Nile	Bambudi	ACME	710-1000	6%	1%	85.4	6.8	1.0	0.3	1.0	1.5	2.0	0.1	0.05	0.01	1.6	99.7
2964S	Blue Nile	Bambudi	ACME	63-2000	100%	0%	75.9	7.6	5.4	1.6	3.6	1.4	1.3	1.3	0.08	0.09	1.5	99.8
2964S	Blue Nile	Bambudi	ACME	125-1000	98%	1%	**76.5**	**8.0**	**4.4**	**1.5**	**3.4**	**1.6**	**1.5**	**1.0**	**0.10**	**0.08**	**1.6**	99.8
ATBARA																		
3312S	Tekeze	Togo Ber	ACME	63-2000	93%	0%	62.7	9.7	8.2	4.1	6.0	1.6	1.2	2.0	0.18	0.12	3.9	99.7
2873S	Atbara	Showak	ACME	88-125	15%	79%	18.6	5.4	39.6	6.5	6.5	0.7	0.3	18.7	0.15	0.46	1.6	98.4
2873S	Atbara	Showak	ACME	125-180	36%	44%	43.1	6.0	19.7	9.5	10.4	0.9	0.4	7.4	0.17	0.26	1.6	99.4
2873S	Atbara	Showak	ACME	180-250	35%	8%	63.3	7.4	8.2	5.9	8.2	1.3	0.6	1.8	0.17	0.11	2.7	99.7
2873S	Atbara	Showak	ACME	63-2000	96%	0%	52.9	6.2	16.4	6.7	7.9	1.0	0.5	6.2	0.14	0.20	1.3	99.4
2873S	Atbara	Showak	ACME	**88-250**	**87%**	**8%**	**47.0**	**6.5**	**18.6**	**7.5**	**8.8**	**1.0**	**0.5**	**7.1**	**0.17**	**0.23**	**2.1**	99.3
MAIN NILE SYSTEM																		
2847S	Wadi Milk	Ed Debba	ACME	63-2000	97%	0%	96.3	1.2	1.3	0.1	0.1	0.1	0.3	0.2	0.02	0.01	0.3	100.0
2899S	Nile	3rd cataract	ACME	180-250	22%	66%	72.5	8.2	5.1	2.9	5.2	1.6	1.0	1.0	0.11	0.08	2.1	99.7
2899S	Nile	3rd cataract	ACME	250-350	58%	8%	85.5	6.1	1.3	0.5	1.6	1.3	1.3	0.2	0.05	0.01	1.8	99.8
2899S	Nile	3rd cataract	ACME	63-2000	98%	0%	80.1	6.8	3.9	1.5	2.9	1.3	1.1	0.8	0.07	0.05	1.4	99.8
2899S	Nile	3rd cataract	ACME	**180-350**	**80%**	**8%**	**82.1**	**6.7**	**2.3**	**1.2**	**2.6**	**1.4**	**1.2**	**0.4**	**0.07**	**0.03**	**1.9**	99.8

Sample	Rb	Cs	Be	Sr	Ba	Sc	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Th	U	Zr	Hf	V	Nb	Ta	Cr	Mo	W	Co	Ni	Ni	Cu
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
WHITE NILE SYSTEM	0.1	0.1	1	0.5	1	1	0.1	0.1	0.1	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.2	0.1	0.1	0.1	8	0.1	0.1	14	0.1	0.5	0.2	0.1	20	0.1
3643S	13	0.5	<1	11	78	1	13	18	39	4	16	2.8	0.5	2.4	0.4	2.1	0.4	1.3	0.2	1.4	0.2	5	1.2	178	5	13	10	0.7	14	0.2	0.7	2	2	<20	4
3641S	8	0.3	<1	11	77	1	10	10	19	2	7	1.3	0.3	1.3	0.2	1.5	0.4	1.0	0.2	1.0	0.2	2	2.0	78	2	11	9	0.6	21	<0.1	1.0	1	1	<20	4
3692S	20	0.2	<1	303	442	6	14	17	33	4	15	2.7	0.6	2.5	0.4	2.2	0.5	1.4	0.2	1.4	0.2	6	1.1	447	12	44	12	0.9	55	0.2	<0.5	6	8	<20	5
3690B	27	<0.1	<1	269	563	8	17	35	65	7	27	4.5	0.9	3.8	0.6	2.9	0.6	1.7	0.3	1.8	0.3	15	1.8	800	21	53	12	0.8	82	0.1	0.9	8	5	<20	3
4052S	32	0.1	1	409	659	3	7	15	40	3	13	2.4	0.6	1.9	0.3	1.4	0.2	0.7	0.1	0.7	0.1	6	0.8	156	4	22	4	0.3	34	0.2	0.8	4	4	<20	4
2878S	18	0.2	<1	168	435	3	18	18	37	4	15	2.6	0.5	2.3	0.5	2.3	0.5	1.8	0.3	2.1	0.3	8	1.7	876	21	31	12	0.8	89	0.1	7.1	3	2	<10	2
BLUE NILE SYSTEM																																			
2975S	32	0.5	1	194	482	6	11	14	29	3	12	2.4	0.6	2.1	0.3	1.9	0.4	1.1	0.2	1.1	0.2	3	1.0	133	4	54	9	0.5	62	0.9	0.5	8	10	28	7
2976S	48	0.4	<1	215	640	8	23	24	50	6	21	4.3	0.6	3.7	0.6	3.4	0.7	2.1	0.3	2.4	0.4	14	2.5	301	9	97	20	2.4	55	0.3	0.9	10	8	<20	6
3295S	22	0.6	1	239	451	14	16	13	31	4	15	3.0	0.9	3.1	0.5	2.7	0.6	1.7	0.3	1.6	0.3	2	1.1	163	4	120	10	0.5	82	0.5	1.0	29	16	34	18
2970S	59	0.7	1	328	822	13	16	12	26	3	12	2.6	0.8	2.5	0.5	2.6	0.6	1.6	0.3	1.6	0.3	3	1.4	172	5	127	10	0.8	205	0.4	1.4	23	36	42	17
2964S	17	0.5	<1	270	326	30	32	25	57	7	29	6.0	1.6	5.5	1.0	5.2	1.0	3.3	0.5	3.0	0.5	4	1.2	832	21	415	27	2.6	597	1.0	1.4	37	39	n.d.	21
2964S	20	0.4	1	289	352	20	24	18	42	5	21	4.9	1.4	4.4	0.8	3.9	0.8	2.4	0.4	2.1	0.3	3	0.9	201	5	186	16	1.2	239	0.4	0.9	23	22	n.d.	15
2964S	26	0.4	1	270	423	11	16	14	32	4	16	3.0	0.9	2.6	0.5	2.8	0.6	1.6	0.2	1.5	0.2	2	0.7	100	3	86	10	0.7	75	0.3	0.3	13	14	n.d.	10
2964S	37	0.4	1	283	583	5	9	8	17	2	8	1.7	0.4	1.3	0.2	1.6	0.3	0.9	0.1	0.9	0.1	1	0.6	62	2	37	5	0.4	27	0.2	0.2	7	9	n.d.	6
2964S	38	0.4	1	240	562	3	5	4	9	1	4	0.9	0.3	0.8	0.2	0.9	0.2	0.5	0.1	0.6	0.1	1	0.5	54	2	21	2	0.2	14	0.2	4.8	4	6	n.d.	5
2964S	42	0.5	<1	204	554	1	4	3	7	1	3	0.7	0.2	0.6	0.1	0.5	0.1	0.4	0.0	0.4	0.1	1	0.4	87	3	16	3	0.4	7	0.2	0.6	3	4	n.d.	4
2964S	30	0.3	1	267	483	11	14	12	25	3	12	2.8	0.8	2.6	0.4	2.3	0.5	1.5	0.2	1.3	0.2	3	1.3	213	6	121	12	0.8	144	0.2	0.5	15	15	24	10
2964S	**31**	**0.4**	**1**	**265**	**484**	**10**	**13**	**11**	**25**	**3**	**12**	**2.5**	**0.7**	**2.2**	**0.4**	**2.2**	**0.4**	**1.4**	**0.2**	**1.3**	**0.2**	**2**	**0.7**	**133**	**3**	**88**	**8**	**0.7**	**98**	**0.3**	**1.4**	**12**	**13**	n.d.	**9**
ATBARA																																			
3312S	26	0.5	<1	382	380	19	20	17	37	5	22	4.7	1.5	4.5	0.7	3.8	0.7	2.0	0.3	1.6	0.3	2	0.8	170	5	218	17	0.9	349	0.5	0.7	30	79	111	40
2873S	7	0.2	<1	148	138	42	49	61	132	15	53	10.9	1.7	8.3	1.6	8.1	1.7	5.5	0.8	5.6	0.9	27	5.0	3204	79	1726	75	7.3	5066	0.5	2.3	97	127	n.d.	66
2873S	8	0.2	2	227	136	44	27	17	41	6	26	6.4	1.7	5.6	1.0	5.6	0.9	2.8	0.4	2.2	0.4	3	1.0	423	11	641	33	2.8	1701	0.7	0.7	59	139	n.d.	36
2873S	12	0.3	<1	298	225	26	21	14	37	5	22	5.2	1.5	4.6	0.9	4.0	0.7	2.1	0.3	1.7	0.2	2	0.6	148	5	211	13	1.0	390	0.4	0.6	32	70	n.d.	24
2873S	10	0.2	0	244	161	34	25	22	48	6	26	5.9	1.4	5.4	0.9	4.6	0.9	2.6	0.4	2.5	0.4	8	1.5	743	19	554	32	2.1	1546	0.6	1.3	50	102	188	35
2873S	**9**	**0.2**	**1**	**242**	**172**	**36**	**28**	**24**	**56**	**7**	**29**	**6.7**	**1.6**	**5.7**	**1.1**	**5.4**	**1.0**	**3.0**	**0.4**	**2.6**	**0.4**	**7**	**1.5**	**802**	**20**	**658**	**32**	**2.9**	**1763**	**0.5**	**0.9**	**55**	**109**	n.d.	**37**
MAIN NILE SYSTEM																																			
2847S	8	0.2	<1	28	120	1	6	6	11	1	6	1.1	0.3	0.9	0.2	0.9	0.2	0.6	0.1	0.6	0.1	1	0.5	161	5	29	3	0.2	21	<0.1	0.5	2	3	<20	2
2899S	17	0.1	<1	282	369	17	19	13	30	4	15	3.7	1.2	3.3	0.7	3.4	0.6	1.7	0.3	1.7	0.2	3	0.6	173	5	125	8	0.6	271	0.1	0.4	17	24	n.d.	10
2899S	24	0.1	<1	231	436	2	8	8	16	2	8	1.6	0.5	1.4	0.2	1.4	0.3	0.9	0.1	0.6	0.1	1	0.3	92	3	29	3	0.1	26	0.1	0.4	6	8	n.d.	4
2899S	22	0.3	1	285	415	9	12	12	23	4	14	2.9	0.8	2.8	0.4	2.3	0.5	1.2	0.2	1.1	0.2	2	0.6	151	4	78	8	0.5	144	<0.1	<0.5	13	18	65	8
2899S	**22**	**0.1**	**0**	**244**	**418**	**6**	**10**	**9**	**20**	**2**	**10**	**2.1**	**0.7**	**1.9**	**0.3**	**2.0**	**0.4**	**1.1**	**0.2**	**0.9**	**0.1**	**2**	**0.4**	**113**	**3**	**54**	**4**	**0.3**	**91**	**0.1**	**0.4**	**9**	**12**	n.d.	**5**

Sample	Ag	Au	Zn	Cd	Hg	Ga	Tl	Sn	Pb	As	Sb	Bi	Se	TOT/C	TOT/S	CIA	CIX	CIW	PIA	WIP	$\alpha^{Al}Mg$	$\alpha^{Al}Ca$	$\alpha^{Al}Na$	$\alpha^{Al}K$	$\alpha^{Al}Rb$	$\alpha^{Al}Cs$	$\alpha^{Al}Be$	$\alpha^{Al}Sr$	$\alpha^{Al}Ba$	La_N/Yb_N	La_N/Sm_N	Gd_N/Ho_N	Ho_N/Yb_N	Eu/Eu*	Ce/Ce*	MREE/ MREE*
	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	wt%	wt%																					
WHITE NILE SYSTEM	0.1	0.5	1	0.1	0.01	0.5	0.1	1	0.1	0.5	0.1	0.1	0.5	0.02	0.02																					
3643S	<0.1	1.0	67	<0.1	<0.01	2	<0.1	2	3	1	<0.1	<0.1	<0.5	0.1	0.02	71	72	91	87	3	4	6	4	0.7	0.6	0.7	n.d.	2.2	0.6	9.0	4.1	1.5	0.9	0.55	1.00	0.98
3641S	<0.1	0.5	580	<0.1	<0.01	2	<0.1	<1	8	<0.5	<0.1	<0.1	<0.5	0.1	0.02	71	71	89	85	3	7	7	3	0.8	0.7	0.9	n.d.	1.7	0.4	7.0	5.0	1.0	1.1	0.64	0.92	0.95
3692S	<0.1	<0.5	39	<0.1	<0.01	9	<0.1	<1	2	<0.5	<0.1	<0.1	<0.5	0.2	<0.02	52	66	56	53	34	2	1	1	1.7	2.7	12.4	n.d.	0.6	0.7	8.3	3.9	1.5	1.0	0.74	0.93	1.11
3690B	<0.1	<0.5	50	<0.1	<0.01	9	<0.1	<1	2	<0.5	<0.1	<0.1	<0.5	0.1	0.02	50	65	55	50	39	1	1	1	1.2	2.0	n.d.	n.d.	0.7	0.6	13.4	4.8	1.8	1.0	0.68	0.94	1.03
4052S	<0.1	<0.5	19	<0.1	<0.01	9	<0.1	<1	3	<0.5	<0.1	<0.1	<0.5	0.2	<0.02	52	63	57	52	41	6	1	1	1.1	1.9	28.4	1.5	0.5	0.6	14.7	3.8	2.2	1.1	0.79	1.32	1.18
2878S	<0.1	1.2	7	<0.1	<0.01	5	<0.1	1	3	<0.5	<0.1	<0.1	<0.5	0.1	<0.01	48	62	55	48	21	3	1	1	0.8	1.6	6.7	n.d.	0.6	0.4	6.0	4.3	1.2	0.7	0.64	1.02	0.89
BLUE NILE SYSTEM																																				
2975S	<0.1	<0.5	42	<0.1	<0.01	7	<0.1	<1	3	<0.5	<0.1	<0.1	<0.5	0.2	<0.02	58	68	68	62	27	2	2	2	0.9	1.4	4.2	1.1	0.8	0.6	8.0	3.5	1.5	1.0	0.79	1.00	1.19
2976S	<0.1	0.8	36	<0.1	<0.01	9	<0.1	<1	3	<0.5	<0.1	<0.1	<0.5	0.1	<0.02	52	64	62	53	36	2	1	1	0.7	1.0	5.7	n.d.	0.8	0.5	7.0	3.5	1.5	0.9	0.49	0.97	1.00
3295S	<0.1	0.9	78	<0.1	<0.01	11	<0.1	<1	4	<0.5	<0.1	<0.1	<0.5	0.2	<0.02	59	77	63	60	25	1	1	2	1.9	2.6	4.5	1.4	0.8	0.8	5.5	2.7	1.4	1.1	0.94	1.05	1.37
2970S	<0.1	0.7	57	<0.1	<0.01	14	<0.1	<1	3	<0.5	<0.1	<0.1	<0.5	0.1	<0.02	51	67	58	51	50	1	1	2	0.9	1.2	4.8	1.7	0.8	0.5	5.1	2.9	1.3	1.0	0.94	1.01	1.30
2964S	<0.1	1.9	58	<0.1	0.02	14	<0.1	<1	4	<0.5	1.0	<0.1	<0.5	0.6	0.03	30	73	31	28	55	0.3	0.2	1	2.2	3.0	5.1	n.d.	0.7	1.0	5.5	2.6	1.5	1.0	0.87	1.02	1.33
2964S	<0.1	1.5	31	<0.1	<0.01	12	<0.1	<1	2	1	0.1	<0.1	<0.5	0.5	<0.01	34	70	36	33	49	0.4	0.3	1	1.8	2.7	6.2	1.3	0.6	0.9	5.9	2.3	1.4	1.2	0.94	1.02	1.54
2964S	<0.1	2.0	19	<0.1	<0.01	10	<0.1	<1	1	1	<0.1	<0.1	<0.5	0.2	<0.01	44	67	48	43	40	0.8	0.6	1	1.3	2.0	6.1	1.3	0.7	0.8	6.2	2.8	1.3	1.1	0.99	1.07	1.41
2964S	<0.1	0.6	11	<0.1	<0.01	9	<0.1	<1	1	<0.5	<0.1	<0.1	<0.5	0.0	<0.01	50	63	57	50	39	1.7	1.1	1	0.9	1.4	6.2	1.3	0.7	0.6	5.9	3.0	1.2	0.9	0.83	0.96	1.24
2964S	<0.1	1.0	9	<0.1	<0.01	7	<0.1	<1	1	<0.5	<0.1	<0.1	<0.5	0.0	<0.01	52	61	60	52	34	2.9	1.4	1	0.8	1.2	5.4	1.1	0.7	0.5	5.0	2.8	1.3	0.8	1.08	0.95	1.35
2964S	<0.1	<0.5	11	<0.1	<0.01	5	<0.1	<1	1	<0.5	0.5	<0.1	<0.5	0.2	<0.01	52	60	62	53	34	3.5	1.7	1	0.7	1.0	3.8	n.d.	0.7	0.5	6.5	3.0	1.6	0.9	1.14	0.99	1.46
2964S	<0.1	0.7	149	<0.1	<0.01	10	<0.1	1	3	<0.5	<0.1	<0.1	<0.5	0.2	<0.02	43	66	47	41	38	0.7	0.5	1	1.1	1.6	7.4	1.2	0.6	0.6	6.1	2.7	1.5	1.1	0.93	0.90	1.37
2964S	**<0.1**	**1**	**18**	**<0.1**	**<0.01**	**9**	**<0.1**	**<1**	**1**	**<0.5**	**<0.1**	**<0.1**	**<0.5**	**0.2**	**<0.02**	**44**	**65**	**48**	**43**	**40**	**0.8**	**0.6**	**1**	**1.1**	**1.7**	**5.8**	**1.3**	**0.7**	**0.6**	**5.9**	**2.7**	**1.4**	**1.0**	**0.94**	**1.02**	**1.40**
ATBARA																																				
3312S	<0.1	1.0	117	0.1	<0.01	14	<0.1	1	3	1	<0.1	<0.1	<0.5	0.3	<0.02	41	72	43	39	50	0.4	0.4	1	1.7	2.4	5.8	n.d.	0.6	1.0	7.1	2.2	1.7	1.3	0.96	0.93	1.73
2873S	<0.1	2.1	236	<0.1	0.02	25	<0.1	5	4	<0.5	0.5	<0.1	<0.5	0.1	0.01	29	79	30	29	43	0.1	0.2	2	3.5	5.1	8.9	n.d.	0.8	1.5	7.4	3.5	1.4	0.9	0.54	1.02	1.00
2873S	<0.1	1.1	98	<0.1	<0.01	15	<0.1	2	2	1	0.5	<0.1	<0.5	0.1	<0.01	23	76	23	22	64	0.1	0.1	2	3.0	5.0	10.9	0.6	0.6	1.7	5.4	1.7	1.7	1.3	0.84	0.95	1.79
2873S	<0.1	1.0	37	<0.1	0.01	12	<0.1	<1	2	1	0.4	<0.1	<0.5	0.2	<0.01	30	73	31	29	54	0.2	0.2	1	2.3	3.9	7.4	n.d.	0.5	1.3	5.7	1.7	1.8	1.2	0.93	1.04	1.84
2873S	0.0	0.0	95	0.0	0.01	13	0.0	2	3	1	0.0	0.1	0.1	0.2	0.01	28	74	28	26	51	0.1	0.2	2	2.4	3.9	9.1	4.7	0.6	1.5	6.1	2.4	1.7	1.1	0.77	0.91	1.47
2873S	**<0.1**	**1.3**	**98**	**0.1**	**0.01**	**15**	**<0.1**	**2**	**2**	**1**	**0.5**	**0.1**	**<0.5**	**0.2**	**0.01**	**27**	**75**	**27**	**26**	**56**	**0.1**	**0.2**	**2**	**2.7**	**4.5**	**8.7**	**1.0**	**0.6**	**1.4**	**6.2**	**2.2**	**1.6**	**1.1**	**0.79**	**1.00**	**1.52**
MAIN NILE SYSTEM																																				
2847S	<0.1	<0.5	24	<0.1	<0.01	2	<0.1	<1	1	<0.5	<0.1	<0.1	<0.5	0.0	<0.02	61	69	76	68	4	2	2	3	0.7	1.0	1.7	n.d.	0.9	0.4	6.2	3.3	1.4	0.9	0.79	0.87	1.08
2899S	<0.1	1.6	21	<0.1	0.01	10	<0.1	<1	2	<0.5	0.4	<0.1	<0.5	0.05	<0.01	39	69	41	38	43	0	0	1	1.7	3.0	16.4	n.d.	0.6	0.9	5.1	2.1	1.4	1.1	1.06	0.99	1.66
2899S	<0.1	<0.5	10	<0.1	<0.01	6	<0.1	<1	1	<0.5	0.3	<0.1	<0.5	0.03	<0.01	49	63	55	49	28	2	1	1	1.0	1.6	12.7	n.d.	0.6	0.5	8.3	3.1	1.4	1.2	1.03	0.94	1.45
2899S	<0.1	<0.5	63	<0.1	<0.01	8	<0.1	<1	2	<0.5	<0.1	<0.1	<0.5	0.04	<0.02	45	68	49	44	32	1	1	1	1.3	2.0	6.7	1.0	0.5	0.6	7.7	2.7	1.6	1.3	0.88	0.80	1.53
2899S	**0.0**	**1**	**13**	**0.0**	**0.01**	**7**	**0.05**	**0**	**1**	**0**	**0.3**	**0.0**	**0.0**	n.d.	n.d.	**45**	**65**	**50**	**44**	**32**	**1**	**1**	**1**	**1.1**	**1.9**	**13.7**	**2.1**	**0.6**	**0.6**	**6.8**	**2.7**	**1.4**	**1.2**	**1.04**	**0.96**	**1.54**

Sample 3643S Kagera @ Kyaka 149 grain analysed 117 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
S3643_G001	574.1	221.4	0.3289	0.12449	0.00294	6.18009
S3643_G002	73.7	35.2	1.3574	0.11893	0.00336	5.78375
S3643_G003	54.4	33.9	0.7592	0.18013	0.0048	12.59804
S3643_G004	119.7	44.9	0.5101	0.11296	0.003	5.24326
S3643_G005	869.5	366.8	0.8318	0.37666	0.0087	20.12351
S3643_G006	1217.8	278.6	0.6722	0.13395	0.00314	3.93597
S3643_G007	624.8	252.3	2.6122	0.20481	0.00484	7.53907
S3643_G008	70.6	29.3	0.4298	0.13244	0.00374	6.89661
S3643_G009	60.1	28.2	1.5647	0.11224	0.00342	5.12747
S3643_G010	916.1	263.4	0.2189	0.17427	0.00408	7.01695
S3643_G011	251	59.1	0.1594	0.08699	0.00228	2.85174
S3643_G012	142.7	59.3	0.8049	0.11506	0.003	5.4999
S3643_G013	63.3	37.5	0.7119	0.17453	0.00462	11.82816
S3643_G014	466.9	109.1	0.1547	0.08671	0.00214	2.83333
S3643_G015	214.9	156.7	1.3271	0.18229	0.00438	13.18747
S3643_G016	247.8	132.9	0.5079	0.16542	0.00398	10.69436
S3643_G017	1013.3	414.3	0.431	0.1269	0.00298	6.57451
S3643_G018	211.8	95.4	0.9274	0.12014	0.00302	6.03699
S3643_G019	180.9	46.4	0.5589	0.08701	0.0024	2.78474
S3643_G020	680.8	305.5	1.9617	0.21582	0.0051	9.86672
S3643_G021	119.7	50.5	0.527	0.12636	0.00332	6.51169
S3643_G022	219.1	60.5	0.7271	0.08756	0.00234	2.88222
S3643_G023	189.3	83.5	0.6327	0.12606	0.00318	6.62399
S3643_G024	807.3	172	0.4081	0.091	0.00222	2.56474
S3643_G025	898.8	347	0.6268	0.12455	0.00296	5.85505
S3643_G026	86.3	55.5	0.8161	0.18284	0.00468	12.92299
S3643_G027	120.3	74	0.6065	0.18424	0.00462	13.11971
S3643_G028	107.2	42.6	0.9722	0.11116	0.00306	4.91535
S3643_G029	231.6	93.9	0.8263	0.11409	0.00288	5.3117
S3643_G030	820.9	123.6	0.0137	0.07071	0.00178	1.57523
S3643_G031				0.86874	0.03074	
S3643_G032	508.2	258	0.1393	0.17407	0.00414	11.69351
S3643_G033	201.3	116	0.7329	0.1758	0.0043	11.66708
S3643_G034	578.8	203.8	0.0984	0.12002	0.0029	5.83595
S3643_G035	96.2	25.6	0.6445	0.0867	0.00268	2.81213
S3643_G036	282.4	178.2	0.8178	0.17555	0.00424	12.26249
S3643_G037	190.8	46	0.2724	0.08692	0.0024	2.82496
S3643_G038	109.3	28.9	0.6204	0.08628	0.00264	2.79966
S3643_G039	159	92.8	0.7766	0.17179	0.0043	11.33851
S3643_G040	142.2	65.1	0.4185	0.13375	0.00346	7.60302
S3643_G041	484.7	209	1.5079	0.12133	0.00296	6.07073
S3643_G042	553.7	230.5	0.6579	0.11984	0.0029	5.98576
S3643_G043	527.1	174.6	1.7985	0.16471	0.00402	6.44035
S3643_G044	120.3	28.8	0.3272	0.08559	0.00256	2.72865
S3643_G045	209.7	53.2	0.5942	0.11755	0.00312	3.73049
S3643_G046	486.3	120	0.7578	0.0959	0.00244	2.8466
S3643_G047	233.2	171.7	0.7944	0.22779	0.00554	18.46875
S3643_G048	230.1	57.8	0.4999	0.08603	0.00232	2.73935
S3643_G049	503	183.1	0.9645	0.13434	0.0033	5.7911
S3643_G050	359.2	155.6	0.7171	0.12181	0.00302	6.1832

S3643_G051	740.4	383.9	0.4734	0.17449	0.0042	11.36914
S3643_G052	2087.3	176.3	2.6116	0.26143	0.00646	2.11148
S3643_G053	182	45.4	0.3861	0.08548	0.0024	2.78238
S3643_G054	286	166.2	2.5047	0.18356	0.00456	9.4752
S3643_G055	356.6	85.7	0.1016	0.08589	0.00226	2.91623
S3643_G056	748.8	287.8	2.0974	0.17604	0.0043	6.72487
S3643_G057	238.4	76.5	0.5479	0.1359	0.00348	5.6505
S3643_G058	3861.9	254.3	0.6436	0.43191	0.01044	3.79607
S3643_G059	226.9	122.2	0.5682	0.17811	0.00442	11.85297
S3643_G060	92	37.1	0.8289	0.11648	0.00332	5.39283
S3643_G061	165.8	96.5	0.5246	0.17533	0.00442	12.10224
S3643_G062	370.2	350.6	4.2067	0.17055	0.00422	9.34045
S3643_G063	160.5	67.2	0.4863	0.12592	0.0033	6.52879
S3643_G064	313.2	196.1	0.7346	0.17842	0.0044	12.50978
S3643_G065	304.8	174.4	0.6297	0.1774	0.00438	11.9508
S3643_G066	435.6	199.1	1.2051	0.12352	0.00308	6.0067
S3643_G067	132.3	77.2	0.3465	0.22461	0.00572	15.78747
S3643_G068	254.6	104.2	0.2823	0.12746	0.00326	6.77811
S3643_G069	261.4	59.8	0.2472	0.08503	0.00232	2.67744
S3643_G070	175.7	49.3	0.8032	0.08674	0.00246	2.8555
S3643_G071	167.8	71.4	0.5891	0.12438	0.00328	6.37571
S3643_G072	174.6	107.6	0.5704	0.17835	0.00452	12.74104
S3643_G073	40.3		0.2682	0.30368	0.00812	30.3433
S3643_G074	329.4	144.4	0.5941	0.13143	0.00332	6.95477
S3643_G075	1270.6	285.4	0.4968	0.08823	0.0022	2.59525
S3643_G076	323.1	124	1.5125	0.16652	0.00422	7.57829
S3643_G077	78.4	37.1	0.0481	0.16139	0.0044	10.34461
S3643_G078	280.8	53.5	0.4907	0.08752	0.00244	2.14515
S3643_G079	148	48.6	0.233	0.10922	0.003	4.81315
S3643_G080	55.4	23.6	0.8192	0.11963	0.0037	5.83281
S3643_G081	339.3	145.7	0.8706	0.12183	0.0031	6.00129
S3643_G082	181.4	49.5	0.8478	0.08529	0.00244	2.6952
S3643_G083	135.9	56.4	0.994	0.13383	0.00364	6.24232
S3643_G084	1343.3	212.3	1.0973	0.12161	0.00308	2.12574
S3643_G085	154.8	69.5	0.7609	0.13001	0.00348	6.76092
S3643_G086	96.7	59.7	0.5742	0.17571	0.00466	12.50655
S3643_G087	731.5	359.7	0.9675	0.17325	0.0043	10.02822
S3643_G088	145.9	39	0.645	0.08574	0.00254	2.79729
S3643_G089	106.7	48.1	1.2787	0.11431	0.00324	5.35572
S3643_G090	806.8	191.4	0.2174	0.08808	0.00224	2.8698
S3643_G091	744.6	342.7	1.5683	0.13285	0.00334	6.65642
S3643_G092	709	235.7	0.9714	0.13741	0.00346	5.70217
S3643_G093	236.3	55.6	0.2081	0.08671	0.0024	2.80563
S3643_G094	490.5	116.4	0.2562	0.08651	0.00226	2.8392
S3643_G095	178.3	64.5	1.0304	0.12401	0.00336	5.06579
S3643_G096	122.4	60.5	0.935	0.13246	0.00362	7.25725
S3643_G097	186.7	109.1	0.4236	0.17735	0.00458	12.52629
S3643_G098	84.2	55.4	0.7216	0.18784	0.00506	13.81706
S3643_G099	823.5	391.8	0.9301	0.15137	0.0038	8.6559
S3643_G100	115.6	46.1	0.6817	0.11276	0.00318	5.33618
S3643_G101	94.1	54.2	0.5521	0.16989	0.00462	11.54835
S3643_G102	108.2	65.2	0.639	0.17287	0.00464	11.97059
S3643_G103	680.8	259.3	0.7733	0.17873	0.00452	8.63438
S3643_G104	369.1	104.5	0.815	0.08668	0.00234	2.86024
S3643_G105	275.6	149.6	1.4768	0.17756	0.00458	10.403

S3643_G106	644.7	217.6	0.3873	0.15087	0.00384	6.72855
S3643_G107	352.4	150.2	1.0206	0.1222	0.00318	5.87499
S3643_G108	233.2	106.1	1.0244	0.12002	0.0032	5.95722
S3643_G109	974.6	348.4	2.5946	0.18238	0.00464	6.00636
S3643_G110	362.9	184.3	1.5813	0.17657	0.00456	9.82176
S3643_G111	448.6	212	0.7449	0.21677	0.00556	12.21024
S3643_G112	409.9	254.2	0.4132	0.18917	0.00484	14.02347
S3643_G113	373.3	230.8	0.8626	0.17655	0.00454	12.10019
S3643_G114	206	91.8	0.9464	0.12003	0.00324	5.95677
S3643_G115	97.3	44.8	1.3151	0.11327	0.00332	5.27694
S3643_G116	469.5	208.4	1.9088	0.12525	0.00328	5.31573
S3643_G117	107.7	37.7	0.5236	0.1077	0.00316	4.76342
S3643_G118	180.4	45.4	0.4519	0.08723	0.00254	2.82957
S3643_G119	104.6	54.2	1.4088	0.17568	0.00486	10.06014
S3643_G120	165.2	47.9	0.8259	0.0877	0.00258	2.95881
S3643_G121	147.4	37	0.4129	0.08687	0.0026	2.83212
S3643_G122	628.5	388.7	1.2542	0.24766	0.00634	16.01942
S3643_G123	83.1	37.3	1.065	0.13726	0.004	6.98497
S3643_G124	595	164.7	0.772	0.21042	0.00548	6.82536
S3643_G125	142.2	83.4	2.2965	0.12115	0.00338	6.00811
S3643_G126	100.9	61.8	1.1243	0.17568	0.00488	12.15026
S3643_G127	296.5	185.8	0.4889	0.18917	0.00494	14.06847
S3643_G128	168.4	96.5	0.4097	0.17844	0.00476	12.46171
S3643_G129	487.3	165.8	1.1553	0.13594	0.00358	5.42793
S3643_G130	376.5	239.8	0.7391	0.17575	0.00458	12.52269
S3643_G131	58	17.8	1.1859	0.08524	0.00312	2.80497
S3643_G132	104.6	29.5	0.9713	0.11906	0.00366	3.76807
S3643_G133	69	28.6	0.3214	0.13189	0.00394	7.04089
S3643_G134	184.6	117.2	0.7016	0.19491	0.00518	14.46793
S3643_G135	53.3	22.9	0.599	0.12777	0.00402	6.61629
S3643_G136	133.9	55.7	1.2182	0.1276	0.00362	6.0842
S3643_G137	241	136.6	0.3728	0.17405	0.00462	12.11169
S3643_G138	112.9	33.2	0.9269	0.10303	0.00322	3.40736
S3643_G139	322.6	140.4	0.74	0.1215	0.00326	6.15723
S3643_G140	433.5	264.5	1.0761	0.1807	0.00474	12.24147
S3643_G141	244.2	110.5	1.0584	0.12114	0.0033	6.1553
S3643_G142	199.2	48.8	0.3448	0.08871	0.0026	2.89105
S3643_G143	321.6	132.4	0.8177	0.11355	0.00308	5.38501
S3643_G144	252.5	139.8	1.0411	0.18684	0.005	12.25908
S3643_G145	181.4	45.5	0.3057	0.08812	0.00262	2.95365
S3643_G146	74.8	30.2	0.7639	0.11604	0.00362	5.45856
S3643_G147	377.5	154.4	0.4817	0.12788	0.00344	6.6412
S3643_G148	247.3	164.6	1.2059	0.17056	0.00458	11.59954
S3643_G149	229.5	59.5	0.4758	0.08646	0.00252	2.8574

78.5% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.1636	0.36017	0.00882	1983	41.8	2001.6	29.8
0.17614	0.35284	0.00928	1948.1	44.2	1944	33.4
0.36996	0.50745	0.01348	2645.7	57.6	2650.1	35.4
0.15248	0.33677	0.00862	1871.1	41.6	1859.7	31.4
0.52534	0.38764	0.00946	2111.9	44	3097.3	32.6
0.10392	0.21319	0.0052	1245.8	27.6	1621.1	27.4
0.19962	0.26707	0.00656	1525.9	33.4	2177.6	30.6
0.21032	0.37781	0.01002	2066	46.8	2098.2	34.4
0.16608	0.33145	0.00896	1845.4	43.4	1840.7	34.6
0.18498	0.29215	0.00714	1652.3	35.6	2113.6	30
0.0819	0.23785	0.00598	1375.5	31.2	1369.3	27.4
0.15742	0.34683	0.0088	1919.4	42.2	1900.6	31.2
0.34546	0.49171	0.01294	2578.1	56	2590.9	35
0.07792	0.23707	0.00586	1371.4	30.6	1364.4	26.2
0.35614	0.52488	0.01306	2719.8	55.2	2693.2	32.6
0.2888	0.46907	0.01164	2479.5	51	2496.9	32
0.17386	0.3759	0.00918	2057.1	43	2055.9	29.8
0.16792	0.3646	0.00914	2003.9	43.2	1981.2	31
0.0832	0.23221	0.00592	1346.1	31	1351.5	28
0.26196	0.3317	0.00814	1846.6	39.4	2422.4	31.4
0.18772	0.37391	0.00956	2047.8	44.8	2047.5	32.2
0.08374	0.23882	0.00602	1380.6	31.4	1377.3	27.6
0.18554	0.38124	0.0096	2082.1	44.8	2062.5	31.4
0.06978	0.20448	0.00504	1199.3	27	1290.6	25.4
0.15604	0.34107	0.00836	1891.8	40.2	1954.6	29.6
0.36804	0.51283	0.01324	2668.7	56.4	2674.1	34.2
0.36634	0.51668	0.01314	2685.1	55.8	2688.3	33.6
0.14714	0.32083	0.0083	1793.8	40.6	1804.9	31.8
0.1487	0.33779	0.00846	1876	40.8	1870.7	30.4
0.04372	0.16162	0.00398	965.8	22	960.5	21.8
0.31328	0.4874	0.012	2559.4	52	2580.2	32
0.32	0.48151	0.01206	2533.8	52.4	2578.1	32.8
0.15768	0.35279	0.00868	1947.9	41.4	1951.8	29.8
0.09208	0.23535	0.00622	1362.5	32.4	1358.8	30.4
0.3328	0.50682	0.01258	2643	53.8	2624.7	32.6
0.08438	0.23581	0.006	1364.9	31.2	1362.2	28.2
0.09064	0.23543	0.00618	1362.9	32.2	1355.4	30.2
0.31654	0.47889	0.01212	2522.4	52.8	2551.4	33.2
0.21686	0.41244	0.01048	2226.1	47.8	2185.2	32.6
0.1654	0.36302	0.00898	1996.5	42.4	1986.1	30.2
0.16252	0.36239	0.00894	1993.5	42.4	1973.8	30
0.17534	0.2837	0.00702	1610	35.2	2037.8	30.6
0.08682	0.2313	0.00604	1341.3	31.6	1336.3	29.6
0.10822	0.23026	0.00584	1335.9	30.6	1577.9	29.4
0.07992	0.21537	0.00536	1257.4	28.4	1367.9	26.8
0.50478	0.58827	0.01468	2982.4	59.6	3014.5	33.6
0.0807	0.23104	0.00584	1339.9	30.6	1339.2	27.4
0.15854	0.31277	0.00774	1754.3	38	1945.1	30.2
0.17082	0.36829	0.00916	2021.3	43.2	2002.1	30.6

0.3075	0.47274	0.01164	2495.6	51	2553.9	32.2
0.05778	0.0586	0.00146	367.1	8.8	1152.6	24.2
0.08446	0.23617	0.00604	1366.8	31.4	1350.8	28.4
0.26204	0.37451	0.00936	2050.6	43.8	2385.1	32.4
0.08404	0.24636	0.00618	1419.7	32	1386.1	27.4
0.18342	0.27717	0.00686	1577.1	34.6	2075.9	30.8
0.1599	0.30167	0.0076	1699.6	37.6	1923.8	31
0.10262	0.06377	0.00158	398.5	9.6	1591.9	27.8
0.3292	0.48284	0.0121	2539.6	52.6	2592.9	33
0.1664	0.33592	0.00882	1867	42.6	1883.7	33.2
0.3404	0.50081	0.01266	2617.3	54.4	2612.4	33.4
0.25812	0.39736	0.0099	2156.9	45.6	2372	32.2
0.18902	0.37618	0.00958	2058.4	44.8	2049.8	32.2
0.34584	0.50873	0.01268	2651.2	54.2	2643.5	33
0.33088	0.48877	0.0122	2565.4	52.8	2600.6	32.8
0.16724	0.35284	0.00878	1948.1	41.8	1976.8	30.6
0.44726	0.50997	0.01302	2656.5	55.6	2864	34.4
0.19194	0.38583	0.0097	2103.5	45.2	2082.9	31.8
0.07972	0.22845	0.0058	1326.4	30.4	1322.2	27.6
0.08754	0.23885	0.00614	1380.7	32	1370.3	28.8
0.18488	0.37192	0.00946	2038.4	44.4	2028.9	32.2
0.35986	0.51832	0.0131	2692.1	55.6	2660.7	33.6
0.90948	0.72496	0.01976	3514.6	73.8	3498	37.6
0.1954	0.38394	0.0096	2094.7	44.8	2105.7	31.6
0.07208	0.21342	0.00528	1247	28	1299.3	25.8
0.2131	0.3302	0.00828	1839.4	40.2	2182.3	32
0.3096	0.46505	0.0122	2461.8	53.6	2466.1	35
0.0648	0.17784	0.00454	1055.2	24.8	1163.5	26.2
0.14454	0.31973	0.00824	1788.4	40.2	1787.2	31.6
0.19288	0.35376	0.00968	1952.5	46	1951.3	35.8
0.1701	0.35739	0.00896	1969.8	42.6	1976	31
0.08318	0.22927	0.0059	1330.7	31	1327.1	28.6
0.18574	0.33843	0.00874	1879.1	42	2010.4	32.8
0.0596	0.12683	0.00316	769.8	18	1157.2	24.6
0.19864	0.3773	0.00966	2063.7	45.2	2080.6	32.8
0.36746	0.51644	0.0134	2684.1	57	2643.2	34.8
0.27858	0.41998	0.01042	2260.4	47.4	2437.4	32.4
0.08874	0.23672	0.00616	1369.6	32.2	1354.8	29.4
0.16488	0.33993	0.00888	1886.3	42.8	1877.8	33
0.08118	0.2364	0.00588	1368	30.6	1374	26.8
0.1863	0.36353	0.00904	1998.9	42.8	2066.9	31.2
0.1601	0.30109	0.0075	1696.7	37.2	1931.7	30.6
0.08482	0.23476	0.00598	1359.4	31.2	1357	28.2
0.08202	0.23812	0.00596	1376.9	31	1366	27.2
0.15052	0.29638	0.0076	1673.3	37.8	1830.4	31.6
0.21748	0.3975	0.01028	2157.5	47.4	2143.6	33.6
0.35942	0.51245	0.013	2667.1	55.4	2644.7	34
0.41154	0.5337	0.01398	2757	58.8	2737.2	35.6
0.24262	0.4149	0.01032	2237.3	47	2302.5	32.2
0.16344	0.34334	0.00892	1902.7	42.8	1874.7	32.8
0.34558	0.49318	0.01288	2584.4	55.6	2568.5	35.2
0.35476	0.5024	0.01302	2624.1	55.8	2602.1	35
0.24374	0.3505	0.00874	1937	41.8	2300.2	32.4
0.08444	0.23942	0.00604	1383.7	31.4	1371.5	27.8
0.29842	0.42508	0.01074	2283.5	48.6	2471.3	33.4

0.19104	0.32357	0.00808	1807.1	39.4	2076.4	31.6
0.16974	0.34882	0.00878	1929	42	1957.5	31.4
0.17508	0.36011	0.00916	1982.7	43.4	1969.6	32
0.1703	0.23895	0.00596	1381.2	31	1976.8	31
0.28156	0.40358	0.01016	2185.5	46.6	2418.2	33.2
0.34828	0.40869	0.01026	2208.9	47	2620.7	33.6
0.39954	0.53784	0.01348	2774.4	56.6	2751.3	34
0.34618	0.49726	0.0125	2602	53.8	2612.2	33.8
0.17704	0.36005	0.0092	1982.4	43.6	1969.6	32.4
0.16686	0.33802	0.00892	1877.1	43	1865.1	33.6
0.15392	0.30792	0.00776	1730.5	38.2	1871.4	31
0.1507	0.3209	0.00844	1794.1	41.2	1778.5	33
0.08906	0.23535	0.0061	1362.5	31.8	1363.4	29.2
0.3046	0.41547	0.01088	2239.9	49.6	2440.3	35.2
0.094	0.24479	0.00636	1411.6	33	1397.1	29.8
0.09122	0.23653	0.00618	1368.6	32.2	1364.1	29.8
0.45746	0.4693	0.01176	2480.5	51.6	2878	34.2
0.2203	0.36922	0.00982	2025.7	46.2	2109.5	35
0.1968	0.23534	0.00592	1362.4	30.8	2089	32
0.18346	0.35981	0.00932	1981.3	44.2	1977	33.2
0.37154	0.50179	0.01322	2621.5	56.8	2616.1	36
0.408	0.53956	0.01364	2781.6	57.2	2754.3	34.4
0.36788	0.50668	0.01298	2642.4	55.6	2639.8	34.8
0.15838	0.28969	0.0073	1640	36.4	1889.3	31.2
0.36274	0.51696	0.01302	2686.3	55.4	2644.4	34
0.10664	0.23876	0.00672	1380.2	35	1356.9	34.6
0.12326	0.22962	0.00614	1332.5	32.2	1586	32.6
0.22756	0.38731	0.01042	2110.3	48.4	2116.6	35.8
0.42594	0.53855	0.01376	2777.4	57.6	2780.9	35
0.22284	0.37569	0.01036	2056.1	48.6	2061.5	37
0.18822	0.34594	0.00902	1915.2	43.2	1988	33.6
0.35628	0.50487	0.01284	2634.7	55	2613.1	34.4
0.11318	0.23995	0.00642	1386.4	33.4	1506.1	32.2
0.18254	0.36768	0.00934	2018.5	44	1998.4	32.2
0.3571	0.4915	0.0124	2577.2	53.6	2623.1	34.2
0.18484	0.36866	0.00942	2023.1	44.4	1998.1	32.6
0.09166	0.23644	0.00614	1368.2	32	1379.6	29.6
0.16074	0.34408	0.00874	1906.3	42	1882.5	31.8
0.36248	0.47603	0.01214	2510	53	2624.4	34.8
0.09446	0.24317	0.00634	1403.2	32.8	1395.8	30
0.18206	0.34128	0.00924	1892.8	44.4	1894.1	35.4
0.19688	0.37678	0.00956	2061.2	44.8	2064.8	32.6
0.34418	0.49342	0.01258	2585.5	54.4	2572.6	34.6
0.09004	0.23978	0.0062	1385.6	32.2	1370.8	29.4

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2021.6	41.8	-0.9	-1.9	2021.6	41.8
1940.2	50.6	0.2	0.4	1940.2	50.6
2654.1	44.2	-0.2	-0.3	2654.1	44.2
1847.6	48	0.6	1.3	1847.6	48
3818.4	35	-31.8	-44.7		
2150.4	41	-23.2	-42.1		
2864.9	38.4	-29.9	-46.7		
2130.6	49.4	-1.5	-3	2130.6	49.4
1836	55.2	0.3	0.5	1836	55.2
2599.1	39	-21.8	-36.4		
1360.3	50.6	0.5	1.1	1360.3	50.6
1880.8	47	1	2.1	1880.8	47
2601.6	44.2	-0.5	-0.9	2601.6	44.2
1354.1	47.6	0.5	1.3	1354.1	47.6
2673.8	39.8	1	1.7	2673.8	39.8
2511.8	40.4	-0.7	-1.3	2511.8	40.4
2055.5	41.4	0.1	0.1	2055.5	41.4
1958.3	44.8	1.1	2.3	1958.3	44.8
1360.7	53.2	-0.4	-1.1	1360.7	53.2
2949.8	38.2	-23.8	-37.4		
2047.9	46.4	0	0	2047.9	46.4
1372.8	51.4	0.2	0.6	1372.8	51.4
2043.7	44.6	0.9	1.9	2043.7	44.6
1446.6	46.4	-7.1	-17.1		
2022.4	42.2	-3.2	-6.5	2022.4	42.2
2678.8	42.4	-0.2	-0.4	2678.8	42.4
2691.4	41.4	-0.1	-0.2	2691.4	41.4
1818.5	50	-0.6	-1.4	1818.5	50
1865.6	45.6	0.3	0.6	1865.6	45.6
949	51.6	0.6	1.8	965.8	22
2597.2	39.6	-0.8	-1.5	2597.2	39.6
2613.6	40.8	-1.7	-3.1	2613.6	40.8
1956.5	43.2	-0.2	-0.4	1956.5	43.2
1353.8	59.6	0.3	0.6	1353.8	59.6
2611.3	40.2	0.7	1.2	2611.3	40.2
1358.7	53.2	0.2	0.5	1358.7	53.2
1344.5	59	0.5	1.4	1344.5	59
2575.2	41.8	-1.1	-2	2575.2	41.8
2147.8	45.2	1.9	3.6	2147.8	45.2
1975.9	43.4	0.5	1	1975.9	43.4
1953.8	43.2	1	2	1953.8	43.2
2504.6	41	-21	-35.7		
1328.9	57.8	0.4	0.9	1328.9	57.8
1919.3	47.6	-15.3	-30.4		
1545.8	47.8	-8.1	-18.7		
3036.6	39	-1.1	-1.8	3036.6	39
1338.9	52.2	0.1	0.1	1338.9	52.2
2155.5	42.8	-9.8	-18.6		
1982.9	44.2	1	1.9	1982.9	44.2

2601.2	40.2	-2.3	-4.1	2601.2	40.2
3255.3	39	-68.1	-88.7		
1326.4	54.4	1.2	3	1326.4	54.4
2685.3	41	-14	-23.6		
1335.7	50.8	2.4	6.3		
2615.9	40.6	-24	-39.7		
2175.6	44.6	-11.7	-21.9		
4024.1	36	-75	-90.1		
2635.4	41.2	-2.1	-3.6	2635.4	41.2
1902.9	51.2	-0.9	-1.9	1902.9	51.2
2609.2	42	0.2	0.3	2609.2	42
2563	41.4	-9.1	-15.8		
2041.8	46.4	0.4	0.8	2041.8	46.4
2638.2	41	0.3	0.5	2638.2	41
2628.7	41	-1.4	-2.4	2628.7	41
2007.7	44.2	-1.5	-3	2007.7	44.2
3014	40.8	-7.2	-11.9	3014	40.8
2063.2	45.2	1	1.9	2063.2	45.2
1316.2	53	0.3	0.8	1316.2	53
1354.7	54.6	0.8	1.9	1354.7	54.6
2020	46.8	0.5	0.9	2020	46.8
2637.6	42	1.2	2.1	2637.6	42
3489.1	41.4	0.5	0.7	3489.1	41.4
2117.2	44.2	-0.5	-1.1	2117.2	44.2
1387.5	47.8	-4	-10.1	1387.5	47.8
2523	42.6	-15.7	-27.1		
2470.3	46	-0.2	-0.3	2470.3	46
1372	53.6	-9.3	-23.1	1055.2	24.8
1786.4	50	0.1	0.1	1786.4	50
1950.7	55.2	0.1	0.1	1950.7	55.2
1983.2	45.2	-0.3	-0.7	1983.2	45.2
1322.1	55.4	0.3	0.6	1322.1	55.4
2148.8	47.6	-6.5	-12.6	2148.8	47.6
1980	45	-33.5	-61.1		
2098.1	47	-0.8	-1.6	2098.1	47
2612.8	44.2	1.5	2.7	2612.8	44.2
2589.3	41.4	-7.3	-12.7	2589.3	41.4
1332.3	57.4	1.1	2.8	1332.3	57.4
1869	51.2	0.5	0.9	1869	51.2
1384.2	48.8	-0.4	-1.2	1384.2	48.8
2136	44	-3.3	-6.4	2136	44
2194.8	43.8	-12.2	-22.7		
1354.1	53.4	0.2	0.4	1354.1	53.4
1349.6	50.4	0.8	2	1349.6	50.4
2014.7	48	-8.6	-16.9		
2130.8	47.8	0.7	1.3	2130.8	47.8
2628.2	43	0.8	1.5	2628.2	43
2723.3	44.4	0.7	1.2	2723.3	44.4
2361.5	42.8	-2.8	-5.3	2361.5	42.8
1844.4	51	1.5	3.2	1844.4	51
2556.6	45.6	0.6	1.1	2556.6	45.6
2585.6	44.8	0.8	1.5	2585.6	44.8
2641.1	42	-15.8	-26.7		
1353.4	52	0.9	2.2	1353.4	52
2630.2	42.8	-7.6	-13.2	2630.2	42.8

2355.8	43.4	-13	-23.3		
1988.6	46.2	-1.5	-3	1988.6	46.2
1956.5	47.6	0.7	1.3	1956.5	47.6
2674.6	42.2	-30.1	-48.4		
2620.9	43	-9.6	-16.6		
2956.9	41.4	-15.7	-25.3		
2735	42.2	0.8	1.4	2735	42.2
2620.7	42.8	-0.4	-0.7	2620.7	42.8
1956.7	48.2	0.7	1.3	1956.7	48.2
1852.5	53	0.6	1.3	1852.5	53
2032.3	46.4	-7.5	-14.9	2032.3	46.4
1760.9	53.6	0.9	1.9	1760.9	53.6
1365.6	56	-0.1	-0.2	1365.6	56
2612.5	46	-8.2	-14.3	2612.5	46
1375.9	56.6	1	2.6	1375.9	56.6
1357.6	57.6	0.3	0.8	1357.6	57.6
3169.9	40.6	-13.8	-21.7		
2192.9	50.6	-4	-7.6	2192.9	50.6
2908.8	42.2	-34.8	-53.2		
1973.2	49.8	0.2	0.4	1973.2	49.8
2612.5	46.2	0.2	0.3	2612.5	46.2
2735	43	1	1.7	2735	43
2638.4	44.4	0.1	0.2	2638.4	44.4
2176.1	45.8	-13.2	-24.6		
2613.2	43.4	1.6	2.8	2613.2	43.4
1321	71	1.7	4.5	1321	71
1942.2	55	-16	-31.4		
2123.3	52.4	-0.3	-0.6	2123.3	52.4
2784	43.6	-0.1	-0.2	2784	43.6
2067.5	55.4	-0.3	-0.6	2067.5	55.4
2065.2	50	-3.7	-7.3	2065.2	50
2597	44.2	0.8	1.5	2597	44.2
1679.4	57.8	-7.9	-17.4		
1978.4	47.8	1	2	1978.4	47.8
2659.3	43.4	-1.8	-3.1	2659.3	43.4
1973.1	48.6	1.2	2.5	1973.1	48.6
1397.9	56.2	-0.8	-2.1	1397.9	56.2
1857	49	1.3	2.7	1857	49
2714.5	44.2	-4.4	-7.5	2714.5	44.2
1385.1	57	0.5	1.3	1385.1	57
1896.1	56	-0.1	-0.2	1896.1	56
2069	47.4	-0.2	-0.4	2069	47.4
2563.1	45	0.5	0.9	2563.1	45
1348.5	56.2	1.1	2.7	1348.5	56.2

Sample 3641L Kagera @ Kasensero 58 grain analysed 38 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X3641B_G001	122.9	19.2	0.4172	0.06545	0.00258	1.16201
X3641B_G002	98.2	45.3	0.6238	0.13097	0.00372	7.19681
X3641B_G003	396.2	176.9	0.5981	0.12621	0.00316	6.75814
X3641B_G004	87.1	55	0.774	0.18187	0.00506	12.87784
X3641B_G005	135.5	82.4	0.5751	0.17786	0.00452	12.57766
X3641B_G006	234.2	140.4	0.6698	0.17547	0.00452	12.11741
X3641B_G007	522.8	248.6	0.796	0.17791	0.00442	10.1965
X3641B_G008	208.1	47.8	0.148	0.08678	0.00248	2.79078
X3641B_G009	1598.3	581.4	2.8972	0.17757	0.0043	5.55537
X3641B_G010	202.5	55.6	0.467	0.08912	0.00274	3.12311
X3641B_G011	4170.6	204.4	0.6957	0.16991	0.00434	1.0851
X3641B_G012	259.8	77.9	1.018	0.08783	0.0025	2.95339
X3641B_G013	358	42.6	0.6047	0.0599	0.00202	0.89369
X3641B_G014	211.8	94.1	0.1797	0.14641	0.00378	8.61914
X3641B_G015	424.6	197.3	0.8657	0.12608	0.0032	6.63312
X3641B_G016	184.8	84	1.0174	0.1205	0.00326	6.02866
X3641B_G017	50.7	14.3	0.8263	0.0888	0.00386	2.94088
X3641B_G018	547.5	318	0.6953	0.17378	0.00424	11.85819
X3641B_G019	142.9	45.4	1.1609	0.08681	0.00276	2.97069
X3641B_G020	950.7	247.2	1.5872	0.17515	0.00432	5.42605
X3641B_G021	99.6	29	0.8975	0.0851	0.00292	2.84697
X3641B_G022	148.1	39.8	0.5114	0.08687	0.00272	2.9534
X3641B_G023	81	24.7	1.061	0.08523	0.0031	2.88253
X3641B_G024	1013.1	387.6	3.7178	0.19022	0.00486	5.10858
X3641B_G025				0.76734	0.01938	
X3641B_G026	206.7	93	0.8356	0.12758	0.00338	6.60543
X3641B_G027	101	29.5	0.8033	0.08755	0.00298	3.00169
X3641B_G028	213.2	107.4	0.9971	0.18136	0.0047	10.4898
X3641B_G029	328.7	194.5	0.6324	0.17374	0.00446	11.9496
X3641B_G030	150.8	69.4	0.9485	0.12041	0.00332	6.14126
X3641B_G031	164.3	41.6	0.6194	0.08655	0.00266	2.77143
X3641B_G032	222.1	131.6	0.4846	0.18447	0.00484	13.1075
X3641B_G033	288.2	163.7	0.3571	0.17276	0.00452	12.08018
X3641B_G034	195.1	54.4	0.8078	0.08724	0.00256	2.87653
X3641B_G035	217.9	152.9	0.9177	0.1785	0.00472	13.25036
X3641B_G036	1148.6		1.8138	0.15346	0.00394	3.8916
X3641B_G037	186.2	59.3	0.5542	0.05595	0.00216	2.20054
X3641B_G038	148.1	82.3	0.8183	0.15456	0.00416	9.65869
X3641B_G039	122	55.3	0.7763	0.12834	0.00362	6.72756
X3641B_G040	210.9	77.9	0.1585	0.12136	0.00332	6.06518
X3641B_G041				0.76549	4.07956	-54.93647
X3641B_G042	608	349.8	1.7181	0.16057	0.0041	8.92574
X3641B_G043	98.7	59.1	0.5616	0.17547	0.00506	12.31024
X3641B_G044	1026.6	376.8	1.5048	0.17682	0.00468	7.64201
X3641B_G045	484.2	226.4	0.9653	0.16579	0.00428	9.03234
X3641B_G046	573.6	118.8	0.2592	0.0889	0.0024	2.5675
X3641B_G047	74	41.2	0.5904	0.1653	0.00474	10.832
X3641B_G048	280.7	124.4	0.6541	0.13252	0.00354	7.1307
X3641B_G049	670.4	332	0.9722	0.16518	0.00432	9.49005
X3641B_G050	415.8	236	0.4722	0.17584	0.00458	12.10025

X3641B_G051	717.4	170.8	0.1559	0.08557	0.00228	2.84972
X3641B_G052	3114.2	217	1.5637	0.2178	0.0057	1.64625
X3641B_G053	3485.3	299	3.0691	0.17211	0.00512	1.25458
X3641B_G054	190	33.7	0.2654	0.08655	0.00278	2.07589
X3641B_G055				-0.1536	0.87812	
X3641B_G056	313.8	202.8	0.9766	0.17671	0.00478	12.3199
X3641B_G057	1936.3	347.1	3.527	0.17426	0.00462	2.36166
X3641B_G058	859.4	269.6	2.1666	0.16627	0.00448	5.19294

65.5% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.04548	0.1288	0.00338	781	19.4	782.9	25.8
0.213	0.39868	0.01	2163	46	2136.1	33.8
0.17892	0.38847	0.00908	2115.7	42.2	2080.3	30.2
0.37802	0.51372	0.0132	2672.5	56.2	2670.8	35.6
0.33914	0.51306	0.0123	2669.7	52.4	2648.6	32.8
0.3304	0.50103	0.0121	2618.2	52	2613.5	33.2
0.26834	0.41581	0.00976	2241.4	44.4	2452.8	31.6
0.08246	0.23333	0.00564	1351.9	29.4	1353.1	28
0.14294	0.22698	0.00522	1318.7	27.4	1909.2	28.8
0.09848	0.25425	0.00634	1460.4	32.6	1438.4	30.4
0.02888	0.04633	0.00108	292	6.6	746.1	18.2
0.0869	0.24397	0.0059	1407.3	30.6	1395.7	28.4
0.03052	0.10824	0.00266	662.5	15.4	648.3	20
0.2352	0.4271	0.0102	2292.6	46	2298.6	32
0.17816	0.38168	0.00898	2084.1	41.8	2063.8	30.6
0.17042	0.36298	0.00878	1996.3	41.6	1980	31.6
0.12688	0.24028	0.00708	1388.2	36.8	1392.5	39.8
0.30742	0.49506	0.01144	2592.5	49.4	2593.3	31.4
0.09678	0.24828	0.00628	1429.6	32.4	1400.2	30.8
0.14158	0.22476	0.0052	1307	27.4	1889	29
0.09908	0.24273	0.00632	1400.9	32.8	1368	32.4
0.09432	0.24667	0.00618	1421.3	32	1395.7	30.4
0.10574	0.24536	0.00656	1414.5	34	1377.4	34
0.13688	0.19484	0.00458	1147.5	24.8	1837.5	29.4
131.99006	24.17686	1.21936				
0.184	0.37564	0.009	2055.9	42.2	2060.1	31.6
0.10374	0.24873	0.00646	1431.9	33.4	1408	32.6
0.2866	0.41962	0.01004	2258.8	45.6	2479	32.6
0.3249	0.49898	0.01188	2609.4	51	2600.5	32.8
0.1768	0.37004	0.009	2029.6	42.4	1996.1	32.2
0.08724	0.23232	0.00576	1346.6	30.2	1347.9	29.4
0.3632	0.51549	0.01246	2680	53	2687.4	33.6
0.33368	0.50731	0.0122	2645.1	52.2	2610.6	33.4
0.08726	0.23922	0.00584	1382.6	30.4	1375.8	28.8
0.37048	0.53856	0.01306	2777.4	54.8	2697.7	33.8
0.105	0.18398	0.0043	1088.7	23.4	1611.9	28
0.08676	0.28537	0.007	1618.4	35.2	1181.2	32
0.27328	0.45336	0.011	2410.2	48.8	2402.8	33.4
0.19816	0.3803	0.00938	2077.7	43.8	2076.2	33.2
0.17362	0.36257	0.00874	1994.3	41.4	1985.3	31.8
231.44258	-0.52066	1.9931				
0.2406	0.40329	0.0094	2184.2	43.2	2330.4	31.6
0.37244	0.50897	0.01308	2652.2	55.8	2628.4	36.2
0.21162	0.31355	0.00746	1758.2	36.6	2189.8	32
0.246	0.39526	0.00928	2147.2	42.8	2341.3	32
0.0723	0.20952	0.00494	1226.3	26.4	1291.4	26.2
0.32492	0.47542	0.01202	2507.3	52.6	2508.8	35.6
0.19998	0.39039	0.00928	2124.6	43	2127.9	31.8
0.26146	0.41683	0.00984	2246.1	44.8	2386.6	32.4
0.33136	0.49926	0.01172	2610.6	50.4	2612.2	32.8

0.07972	0.2416	0.00566	1395	29.4	1368.7	26.6
0.04494	0.05484	0.00128	344.2	7.8	988.1	22.2
0.03756	0.05289	0.0013	332.2	8	825.5	21.8
0.06764	0.174	0.00434	1034.1	23.8	1140.9	27.8
0.35044	0.50579	0.0122	2638.6	52.2	2629.1	34
0.06532	0.09832	0.0023	604.6	13.4	1231.1	25.2
0.14602	0.22659	0.00536	1316.6	28.2	1851.5	30.6

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
788.8	82.8	-0.2	-1	781	19.4
2111	49.8	1.3	2.5	2111	49.8
2045.8	44.2	1.7	3.4	2045.8	44.2
2670	46	0.1	0.1	2670	46
2633	42.2	0.8	1.4	2633	42.2
2610.5	42.8	0.2	0.3	2610.5	42.8
2633.5	41.2	-8.6	-14.9	2633.5	41.2
1355.6	55.2	-0.1	-0.3	1355.6	55.2
2630.3	40.2	-30.9	-49.9		
1406.7	58.8	1.5	3.8	1406.7	58.8
2556.8	42.8	-60.9	-88.6		
1378.8	54.8	0.8	2.1	1378.8	54.8
600	73	2.2	10.4	662.5	15.4
2304.4	44.4	-0.3	-0.5	2304.4	44.4
2044	44.8	1	2	2044	44.8
1963.6	48.2	0.8	1.7	1963.6	48.2
1399.8	83.4	-0.3	-0.8	1399.8	83.4
2594.4	40.6	0	-0.1	2594.4	40.6
1356.3	61.4	2.1	5.4		
2607.5	41	-30.8	-49.9		
1317.8	66.6	2.4	6.3		
1357.6	60.4	1.8	4.7	1357.6	60.4
1320.8	70.4	2.7	7.1		
2744.1	42	-37.5	-58.2		
2064.9	46.8	-0.2	-0.4	2064.9	46.8
1372.6	65.4	1.7	4.3	1372.6	65.4
2665.3	43	-8.9	-15.3		
2594	42.8	0.3	0.6	2594	42.8
1962.3	49.2	1.7	3.4	1962.3	49.2
1350.5	59.4	-0.1	-0.3	1350.5	59.4
2693.5	43.4	-0.3	-0.5	2693.5	43.4
2584.6	43.6	1.3	2.3	2584.6	43.6
1365.8	56.6	0.5	1.2	1365.8	56.6
2639	44	3	5.2		
2384.8	43.8	-32.5	-54.3		
450.4	85.8	37	259.3		
2397	45.8	0.3	0.5	2397	45.8
2075.4	49.6	0.1	0.1	2075.4	49.6
1976.3	48.8	0.5	0.9	1976.3	48.8
2461.7	43.2	-6.3	-11.3	2461.7	43.2
2610.5	48	0.9	1.6	2610.5	48
2623.3	44	-19.7	-33		
2515.6	43.4	-8.3	-14.6	2515.6	43.4
1402	51.8	-5	-12.5	1402	51.8
2510.6	48.2	-0.1	-0.1	2510.6	48.2
2131.6	46.8	-0.2	-0.3	2131.6	46.8
2509.4	44	-5.9	-10.5	2509.4	44
2614	43.4	-0.1	-0.1	2614	43.4

1328.5	51.6	1.9	5		
2964.5	42.2	-65.2	-88.4		
2578.3	49.6	-59.8	-87.1		
1350.5	62	-9.4	-23.4	1034.1	23.8
2622.2	45	0.4	0.6	2622.2	45
2599	44.2	-50.9	-76.7		
2520.4	45.2	-28.9	-47.8		

Sample 3642S Lake Victoria beach @ Kasensero 28 grain analysed 14 conc

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
S3642_G001	889.9	209.4	0.2273	0.08688	0.00204	2.80354
S3642_G002	163.1	73	0.5791	0.13677	0.00338	7.4268
S3642_G003	60.7	31	10.1679	0.0854	0.00362	1.59573
S3642_G004	885.7	315.7	1.7628	0.13918	0.00324	5.9332
S3642_G005	391.6	208.5	0.2573	0.17397	0.00406	11.7821
S3642_G006	95.7	43.8	1.0644	0.11867	0.00322	5.88721
S3642_G007	333.6	167.4	0.9498	0.1702	0.00402	9.6367
S3642_G008	2788.5	150.1	2.1868	0.13108	0.00332	0.71723
S3642_G009	356.1	161.3	0.3735	0.14641	0.00346	8.41081
S3642_G010	1067.2	21.3	5.8152	0.78262	0.02128	3.2998
S3642_G011				0.48465	3.9126	
X3642n_G001	592.1	80.3	1.6552	0.15535	0.00408	2.38741
X3642n_G002	599.3	131.7	0.386	0.09088	0.00236	2.69993
X3642n_G003	429.9	111.2	0.9035	0.118	0.00306	3.81989
X3642n_G004	143.1	62.9	0.3598	0.13535	0.00352	7.55175
X3642n_G005	113.4	63.8	0.9208	0.17949	0.00482	11.71832
X3642n_G006	289.6	96.4	1.7208	0.13907	0.00358	5.12738
X3642n_G007				0.77066	0.02272	
X3642n_G008	95.7	30.5	0.5361	0.14855	0.00464	6.07985
X3642n_G009	32.1	14.1	6.4362	0.08241	0.00386	1.58343
X3642n_G010	73.2	33.9	1.2129	0.11878	0.0035	5.78193
X3642n_G011	158	93.7	0.6171	0.17621	0.00456	12.14129
X3642n_G012	4843.8	276.8	1.2251	0.388	0.00988	2.75403
X3642n_G013	795.1	5.3	5.0438	0.76453	0.0207	2.50694
X3642n_G014	230.2	106.5	0.4006	0.14532	0.0037	8.45231
X3642n_G015	274.3	93.9	0.9682	0.12353	0.0034	4.70089
X3642n_G016	1112.5	148.2	1.9378	0.13263	0.0034	1.84964
X3642n_G017	248.9	155.4	1.1148	0.1735	0.00458	11.47396

ordant ages 50.0% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.0741	0.23412	0.0057	1356.1	29.8	1356.5	25.4
0.20406	0.39397	0.00988	2141.2	45.6	2164.2	31.6
0.06744	0.13557	0.00396	819.6	22.4	968.5	32.2
0.15524	0.30929	0.00754	1737.2	37.2	1966.1	29.2
0.30974	0.49139	0.01206	2576.7	52.2	2587.2	31.6
0.17364	0.35995	0.00932	1981.9	44.2	1959.4	32.6
0.2553	0.41081	0.01012	2218.6	46.2	2400.7	31.4
0.01982	0.0397	0.00098	251	6	549	15
0.22344	0.41681	0.01026	2246	46.6	2276.3	31
0.09046	0.03059	0.00084	194.2	5.2	1481	30.2
0.06654	0.11151	0.0027	681.5	15.6	1238.8	25.6
0.07518	0.21557	0.00516	1258.4	27.4	1328.4	26.2
0.10596	0.23489	0.00564	1360.1	29.4	1596.9	28.4
0.21028	0.40486	0.0098	2191.4	45	2179.2	31.8
0.33634	0.47372	0.01184	2499.9	51.8	2582.2	34.4
0.14114	0.26752	0.00642	1528.2	32.6	1840.7	30
1608.64014	82.82088	15.12962				
0.19636	0.29698	0.00792	1676.3	39.4	1987.4	35.8
0.07304	0.13942	0.00416	841.4	23.6	963.7	34.6
0.17878	0.35322	0.00904	1950	43	1943.7	33.8
0.33736	0.49997	0.01216	2613.7	52.2	2615.4	33.4
0.0745	0.0515	0.00124	323.7	7.6	1343.2	26.2
0.069	0.02379	0.0006	151.6	3.8	1274	26.8
0.2319	0.42204	0.01012	2269.7	45.8	2280.8	31.8
0.1369	0.27613	0.0068	1571.8	34.4	1767.4	31
0.05058	0.10119	0.0024	621.4	14	1063.3	23
0.3247	0.47986	0.01182	2526.7	51.4	2562.5	33.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
1357.8	45.2	0	-0.1	1357.8	45.2
2186.7	43	-1.1	-2.1	2186.7	43
1324.6	82	-15.4	-38.1		
2217	40.4	-11.6	-21.6		
2596.2	39	-0.4	-0.8	2596.2	39
1936.3	48.6	1.2	2.4	1936.3	48.6
2559.6	39.6	-7.6	-13.3	2559.6	39.6
2112.5	44.4	-54.3	-88.1		
2304.4	40.6	-1.3	-2.5	2304.4	40.6
4890.4	38.8	-86.9	-96		
2405.7	44.6	-45	-71.7		
1444.1	49.4	-5.3	-12.9	1444.1	49.4
1926.2	46.4	-14.8	-29.4		
2168.5	45.4	0.6	1.1	2168.5	45.4
2648.2	44.6	-3.2	-5.6	2648.2	44.6
2215.7	44.6	-17	-31		
2329.3	53.6	-15.7	-28		
1255.3	91.6	-12.7	-33	841.4	23.6
1938	52.8	0.3	0.6	1938	52.8
2617.5	43	-0.1	-0.1	2617.5	43
3863.2	38.4	-75.9	-91.6		
4857.1	38.6	-88.1	-96.9		
2291.6	43.8	-0.5	-1	2291.6	43.8
2007.8	48.8	-11.1	-21.7		
2133.1	44.8	-41.6	-70.9		
2591.7	44	-1.4	-2.5	2591.7	44

Sample 3692S Victoria Nile @ downstream Murchison Falls 104 grain analyse

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X3692_G001				0.88286	0.06682	337.52625
X3692_G002	406.4	325.3	2.5116	0.1782	0.0043	11.68989
X3692_G003	1887.7	3.7	8.9467	0.28648	0.00706	2.14376
X3692_G004	700.3	387.3	0.7483	0.17	0.00406	10.8631
X3692_G005	505.6	283.8	0.5058	0.17418	0.00418	11.73236
X3692_G006	299.5	165.6	0.5404	0.16811	0.00412	11.09019
X3692_G007	571.4	223.1	0.5534	0.1751	0.00424	9.07035
X3692_G008	1586	452.9	0.5987	0.18481	0.00442	6.94309
X3692_G009	252.1	145.2	0.6936	0.17355	0.00428	11.54016
X3692_G010	451	244.4	0.6329	0.17307	0.0042	11.08563
X3692_G011	333.5	126.5	0.2192	0.13477	0.00336	6.85359
X3692_G012	52.4	8.2	0.5336	0.07092	0.00348	1.40661
X3692_G013	124.6	68.9	0.4931	0.16769	0.00432	11.16758
X3692_G014	473.7	214.8	0.1781	0.17405	0.00424	10.62145
X3692_G015	601.1	243	0.0977	0.19552	0.00474	11.16034
X3692_G016	319.3	170.6	0.4924	0.17144	0.00422	11.13721
X3692_G017	471.6	227.9	0.1937	0.16732	0.00408	10.61849
X3692_G018	1429.6	550.6	0.3217	0.15858	0.00382	8.36362
X3692_G019	165.7	72.2	0.8398	0.12671	0.00334	6.32017
X3692_G020	127.4	72	0.9599	0.16966	0.0044	10.61415
X3692_G021	191.2	96.1	0.6516	0.16018	0.00408	9.56216
X3692_G022	132.4	80	0.6875	0.17059	0.00438	11.73944
X3692_G023	3803	968.2	0.1375	0.14289	0.00344	5.22846
X3692_G024	97	54.9	0.9931	0.17288	0.00462	10.76897
X3692_G025	188.3	93.5	0.7634	0.16558	0.00424	9.61625
X3692_G026	570.7	185.4	1.8841	0.16072	0.004	6.24366
X3692_G027	175.6	91.2	0.479	0.17427	0.00444	11.13049
X3692_G028	662.7	323.2	0.0378	0.16973	0.00414	11.21013
X3692_G029	344.8	169.5	0.5541	0.17544	0.00436	10.62081
X3692_G030	576.4	217.3	0.1251	0.15335	0.0038	8.01109
X3692_G031				-0.48241	0.586	153.37337
X3692_G032	270.5	185.7	1.8127	0.1707	0.0043	10.9109
X3692_G033	886.5	179.9	0.9272	0.16702	0.00424	4.301
X3692_G034	960.1	114.8	0.5767	0.08978	0.00236	1.38199
X3692_G035	157.9	99.1	0.7663	0.17054	0.0044	11.89911
X3692_G036	118.2	60.7	0.5366	0.16245	0.00432	10.08445
X3692_G037	264.1	155.3	0.8703	0.17684	0.00446	11.62756
X3692_G038	2034.2	885.8	0.2316	0.17067	0.00416	9.90609
X3692_G039	219.5	124.3	0.6156	0.17558	0.00446	11.69613
X3692_G040	206.8	126.4	0.9226	0.1752	0.00448	11.73666
X3692_G041				0.88066	0.02802	90.23416
X3692_G042	464.5	273.5	2.0019	0.18386	0.0046	10.36045
X3692_G043	393.7	225.9	0.8053	0.17272	0.00432	11.2598
X3692_G044	741.3	380.5	0.2637	0.17792	0.0044	11.76166
X3692_G045	170.6	75.4	0.8381	0.12769	0.00344	6.43356
X3692_G046	126	68.3	0.6106	0.17042	0.00452	10.96967
X3692_G047	219.5	33.9	0.6515	0.06461	0.00208	1.23268
X3692_G048	336.3	42.1	0.0866	0.06495	0.00196	1.18034
X3692_G049	397.9	145.9	0.8934	0.17453	0.00446	7.90508
X3692_G050	2485.3	97.3	0.1032	0.16079	0.00438	0.86001

X3692_G051				0.85808	0.04284	
X3692_G052	402.9	180.8	0.2388	0.17558	0.00446	10.46708
X3692_G053	298.8	184.9	0.9933	0.17338	0.00444	11.57794
X3692_G054	136.7	81.2	0.7701	0.1733	0.00462	11.63702
X3692_G055	206	106.9	0.6699	0.16194	0.00426	9.88933
X3692_G056	1527.3	770.9	0.8546	0.1674	0.00418	10.50967
X3692_G057	446.8	245.3	0.4922	0.17145	0.00436	11.38799
X3692_G058	556.5	67.2	0.5147	0.07692	0.0022	1.17005
X3692_G059	945.3	298.4	1.5299	0.18075	0.00458	6.67336
X3692_G060	490.7	217.3	0.1817	0.17183	0.00438	10.37596
X3692_G061	279	147.1	0.8922	0.17624	0.00458	10.75878
X3692_G062	262	133.9	0.2872	0.16844	0.0044	10.96056
X3692_G063	474.4	229.3	0.6298	0.16892	0.00432	9.97374
X3692_G064	923.3	374.2	0.1804	0.16308	0.00412	9.15003
X3692_G065	383.1	192.4	0.3294	0.17603	0.00452	11.324
X3692_G066	1290.1	226	4.6279	0.1278	0.00358	1.13264
X3692_G067	235.1	126.2	0.5125	0.18297	0.00478	12.01682
X3692_G068	353.3	196.6	0.7278	0.17262	0.00446	11.10968
X3692_G069	351.2	160.1	0.1427	0.17028	0.0044	10.46024
X3692_G070	385.2	197.5	0.5923	0.17203	0.00444	10.63904
X3692_G071	410	224.6	0.9895	0.174	0.0045	10.6767
X3692_G072	257.7	146.7	1.135	0.16843	0.00446	10.25057
X3692_G073	262.7	135	0.3671	0.18088	0.00476	11.75534
X3692_G074	451.7	244	0.4924	0.17108	0.00444	11.19647
X3692_G075	233.7	137.5	0.2996	0.17816	0.00484	12.89172
X3692_G076	572.1	360	0.841	0.20069	0.00524	14.2413
X3692_G077	404.3	211.6	0.4311	0.17256	0.00456	11.18286
X3692_G078	517.6	132.5	3.629	0.12921	0.00374	2.36433
X3692_G079	1137.8	223.4	3.9005	0.1034	0.00294	1.34044
X3692_G080	701	309.5	0.1159	0.1706	0.00444	10.22578
X3692_G081	169.9	114.3	1.1879	0.20891	0.00564	14.8672
X3692_G082	257	143.4	1.1626	0.17372	0.00466	10.54593
X3692_G083	283.2	144.6	0.6144	0.16992	0.00452	10.39378
X3692_G084	631.6	222.8	1.3517	0.18194	0.00498	7.59834
X3692_G085				0.84929	0.03934	486.63724
X3692_G086	645.7	265	0.6828	0.17486	0.00458	8.77624
X3692_G087	7773.7	-130.5	94.6384	0.95561	0.03136	6.45552
X3692_G088	1165.5	112.5	45.6763	0.48287	0.01398	12.18136
X3692_G089	848.3	508.1	0.5928	0.17526	0.00456	12.19969
X3692_G090	186.9	108.9	0.8029	0.174	0.00474	11.47802
X3692_G091	410	252.3	1.0696	0.23116	0.00608	16.45126
X3692_G092	346.9	128.4	0.5365	0.16305	0.00442	7.70898
X3692_G093				0.91856	0.17156	285.53705
X3692_G094	235.1	145.2	1.0551	0.1743	0.00476	11.50922
X3692_G095	225.9	125.9	0.991	0.17101	0.00484	10.53601
X3692_G096	332.8	228.2	0.3506	0.22487	0.00606	18.45086
X3692_G097	460.2	216.7	0.7919	0.1679	0.00452	9.21456
X3692_G098	381.6	176	0.0739	0.1646	0.00442	10.31916
X3692_G099				0.79085	0.07966	
X3692_G100	261.3	134.2	0.701	0.16925	0.00462	10.23118
X3692_G101	1268.8	565.8	0.267	0.16777	0.00442	10.14773
X3692_G102	190.5	96.5	0.4361	0.17212	0.00476	10.86254
X3692_G103	60.9	22.6	0.6715	0.12961	0.0043	5.76106
X3692_G104	152.2	98.5	1.0428	0.18086	0.005	12.42507

d 77 concordant ages 74.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
54.95414	2.77386	0.46596				
0.27914	0.47595	0.00996	2509.6	43.6	2579.9	29.8
0.05134	0.05429	0.00114	340.8	7	1163	22.4
0.257	0.46362	0.00962	2455.5	42.4	2511.5	29.4
0.27898	0.48871	0.01018	2565.1	44	2583.3	29.8
0.26866	0.47865	0.0101	2521.4	44	2530.7	30.2
0.21642	0.37585	0.00782	2056.9	36.6	2345.1	29.2
0.16376	0.27258	0.00562	1553.9	28.4	2104.2	28
0.28164	0.48245	0.01022	2537.9	44.4	2567.8	30.4
0.26566	0.46474	0.0097	2460.5	42.6	2530.4	29.8
0.16896	0.36897	0.0078	2024.6	36.8	2092.7	29
0.06626	0.14391	0.00396	866.7	22.4	891.7	33.4
0.28624	0.4832	0.01062	2541.2	46.2	2537.2	31.6
0.25544	0.44278	0.00926	2363.1	41.4	2490.6	29.8
0.26702	0.41414	0.00862	2233.8	39.2	2536.6	29.8
0.27124	0.47133	0.00994	2489.4	43.6	2534.7	30.2
0.2564	0.46045	0.00964	2441.5	42.6	2490.3	29.8
0.19862	0.38265	0.0079	2088.7	36.8	2271.2	28.8
0.16428	0.36189	0.00788	1991.1	37.2	2021.3	30
0.27274	0.45391	0.00996	2412.6	44.2	2489.9	31.6
0.2406	0.43313	0.00932	2319.8	42	2393.5	30.6
0.29952	0.4993	0.0109	2610.8	46.8	2583.8	31.6
0.12424	0.26548	0.00546	1517.8	27.8	1857.3	27
0.28632	0.45195	0.0102	2403.9	45.2	2503.4	32.6
0.24368	0.42136	0.00912	2266.7	41.4	2398.7	30.8
0.15318	0.28185	0.00592	1600.7	29.8	2010.6	28.6
0.28142	0.46339	0.01002	2454.5	44.2	2534.1	31.2
0.27098	0.4792	0.00998	2523.8	43.4	2540.8	30
0.26146	0.43922	0.00928	2347.1	41.6	2490.5	30.2
0.19562	0.37903	0.00794	2071.8	37.2	2232.3	29.2
532.70624	-2.30674	7.67178				
0.27214	0.46375	0.00988	2456.1	43.6	2515.6	30.6
0.1071	0.18684	0.00396	1104.2	21.6	1693.6	27.2
0.03558	0.11169	0.00236	682.6	13.6	881.3	19.8
0.30574	0.50624	0.01104	2640.6	47.2	2596.5	31.6
0.26666	0.45039	0.01002	2397	44.6	2442.5	32
0.2903	0.47705	0.01016	2514.4	44.4	2574.9	30.8
0.2389	0.42111	0.0087	2265.5	39.4	2426.1	29.4
0.2949	0.4833	0.01036	2541.6	45	2580.4	31
0.2975	0.48604	0.01046	2553.5	45.4	2583.6	31.2
3.17458	0.7434	0.0261				
0.25574	0.40885	0.0086	2209.7	39.4	2467.5	30.2
0.27898	0.47298	0.00996	2496.6	43.6	2544.9	30.4
0.28784	0.47963	0.01	2525.7	43.6	2585.6	30.2
0.17124	0.36555	0.00802	2008.4	37.8	2036.9	30.6
0.28836	0.46703	0.01032	2470.5	45.4	2520.6	32.2
0.03882	0.13843	0.0031	835.8	17.6	815.6	22
0.03484	0.13185	0.00288	798.4	16.4	791.5	20.4
0.19918	0.32862	0.00698	1831.7	33.8	2220.3	30
0.02262	0.03881	0.00084	245.5	5.2	630.1	16.4

1145.08448	28.42135	9.70214				
0.26242	0.43252	0.00914	2317.1	41.2	2477	30.6
0.2937	0.48449	0.01034	2546.8	45	2570.9	31.2
0.30884	0.4872	0.0108	2558.6	46.8	2575.7	32.4
0.25796	0.44307	0.00964	2364.4	43	2424.5	31.4
0.25954	0.45551	0.00948	2419.7	42	2480.8	30.2
0.28604	0.48192	0.01018	2535.6	44.2	2555.4	30.8
0.0327	0.11036	0.00238	674.8	13.8	786.7	19.6
0.16678	0.26788	0.00562	1530	28.6	2069.1	29
0.26108	0.43812	0.00924	2342.2	41.4	2468.9	30.6
0.2762	0.44291	0.0095	2363.7	42.4	2502.5	31.4
0.28404	0.4721	0.0102	2492.8	44.6	2519.8	31.6
0.25222	0.42839	0.00906	2298.5	40.8	2432.4	30.6
0.22896	0.40708	0.00852	2201.6	39	2353.1	30
0.28798	0.46675	0.00992	2469.3	43.6	2550.2	31
0.03074	0.0643	0.0014	401.7	8.4	769	19.2
0.31086	0.4765	0.01026	2512	44.8	2605.7	31.8
0.28398	0.46695	0.00994	2470.2	43.6	2532.4	31.2
0.26782	0.44569	0.00948	2376.1	42.2	2476.4	31
0.27218	0.44869	0.00954	2389.4	42.4	2492.1	31
0.27274	0.44518	0.00944	2373.8	42.2	2495.4	31
0.26896	0.44155	0.00958	2357.6	42.8	2457.7	31.6
0.30642	0.47152	0.01018	2490.2	44.6	2585.1	31.8
0.28764	0.47482	0.0101	2504.7	44.2	2539.6	31.2
0.34852	0.525	0.01172	2720.4	49.6	2671.8	33.2
0.36918	0.51485	0.01108	2677.3	47.2	2765.9	32.2
0.29224	0.47018	0.01014	2484.4	44.4	2538.5	31.8
0.06652	0.13276	0.00294	803.6	16.8	1231.9	26
0.03722	0.09406	0.00204	579.5	12	863.4	20.8
0.26338	0.43487	0.00924	2327.6	41.6	2455.4	31
0.39838	0.51631	0.01144	2683.5	48.6	2806.8	33.2
0.28048	0.44044	0.00962	2352.6	43	2484	32
0.2733	0.4438	0.00958	2367.6	42.8	2470.5	31.8
0.20444	0.30299	0.00666	1706.1	33	2184.7	31.6
52.01994	4.15714	0.45004				
0.22666	0.36415	0.00772	2001.8	36.4	2315	30.8
0.18324	0.04901	0.00136	308.4	8.4	2039.9	37.8
0.33804	0.18302	0.00438	1083.5	23.8	2618.5	35.2
0.31366	0.50502	0.01066	2635.3	45.6	2619.9	31.4
0.3102	0.47859	0.01054	2521.1	46	2562.8	32.8
0.429	0.51632	0.01106	2683.6	47	2903.4	32.4
0.2064	0.34302	0.00746	1901.2	35.8	2197.6	31.2
107.49616	2.25528	0.88524				
0.31202	0.47906	0.01056	2523.2	46	2565.3	32.8
0.29612	0.44698	0.01016	2381.8	45.2	2483.1	33.6
0.49502	0.5953	0.01304	3010.9	52.6	3013.5	33.4
0.24526	0.39818	0.0086	2160.7	39.6	2359.6	31.6
0.27492	0.45483	0.00982	2416.7	43.6	2463.8	31.8
410.7407	9.99401	3.79616				
0.277	0.43858	0.0096	2344.3	43	2455.9	32.4
0.26384	0.43882	0.00926	2345.4	41.4	2448.3	31.2
0.29768	0.45788	0.01012	2430.2	44.8	2511.4	33
0.18784	0.32248	0.00798	1801.8	38.8	1940.6	35.8
0.34168	0.49842	0.01108	2607	47.6	2637.1	33.4

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2636.2	40	-2.7	-4.8	2636.2	40
3398.6	38.4	-70.7	-90		
2557.6	40	-2.2	-4	2557.6	40
2598.2	40	-0.7	-1.3	2598.2	40
2538.9	41	-0.4	-0.7	2538.9	41
2607	40.4	-12.3	-21.1		
2696.5	39.6	-26.2	-42.4		
2592.2	41.2	-1.2	-2.1	2592.2	41.2
2587.6	40.4	-2.8	-4.9	2587.6	40.4
2161	43.4	-3.3	-6.3	2161	43.4
955.1	100.4	-2.8	-9.3	866.7	22.4
2534.7	43.2	0.2	0.3	2534.7	43.2
2597	40.6	-5.1	-9	2597	40.6
2789.2	39.6	-11.9	-19.9		
2571.8	41.2	-1.8	-3.2	2571.8	41.2
2531	41	-2	-3.5	2531	41
2440.6	40.8	-8	-14.4	2440.6	40.8
2052.8	46.6	-1.5	-3	2052.8	46.6
2554.3	43.4	-3.1	-5.5	2554.3	43.4
2457.6	43	-3.1	-5.6	2457.6	43
2563.4	43	1	1.8	2563.4	43
2262.5	41.6	-18.3	-32.9		
2585.7	44.6	-4	-7	2585.7	44.6
2513.5	43	-5.5	-9.8	2513.5	43
2463.2	42	-20.4	-35		
2599.1	42.4	-3.1	-5.6	2599.1	42.4
2555	40.8	-0.7	-1.2	2555	40.8
2610.2	41.4	-5.8	-10.1	2610.2	41.4
2383.6	42.2	-7.2	-13.1	2383.6	42.2
2564.5	42.2	-2.4	-4.2	2564.5	42.2
2528	42.6	-34.8	-56.3		
1420.9	50.2	-22.6	-52		
2562.9	43.2	1.7	3	2562.9	43.2
2481.3	44.8	-1.9	-3.4	2481.3	44.8
2623.5	42	-2.3	-4.2	2623.5	42
2564.2	40.8	-6.6	-11.6	2564.2	40.8
2611.6	42.2	-1.5	-2.7	2611.6	42.2
2607.9	42.6	-1.2	-2.1	2607.9	42.6
2688	41.4	-10.5	-17.8		
2584.2	41.8	-1.9	-3.4	2584.2	41.8
2633.6	41	-2.3	-4.1	2633.6	41
2066.4	47.4	-1.4	-2.8	2066.4	47.4
2561.8	44.4	-2	-3.6	2561.8	44.4
761.7	67.8	2.5	9.7	835.8	17.6
772.7	63.6	0.9	3.3	798.4	16.4
2601.6	42.6	-17.5	-29.6		
2464	46	-61	-90		

2611.6	42.2	-6.5	-11.3	2611.6	42.2
2590.5	42.8	-0.9	-1.7	2590.5	42.8
2589.8	44.4	-0.7	-1.2	2589.8	44.4
2476	44.4	-2.5	-4.5	2476	44.4
2531.8	41.8	-2.5	-4.4	2531.8	41.8
2571.8	42.6	-0.8	-1.4	2571.8	42.6
1119.1	57	-14.2	-39.7	674.8	13.8
2659.8	42	-26.1	-42.5		
2575.5	42.6	-5.1	-9.1	2575.5	42.6
2617.8	43.2	-5.5	-9.7	2617.8	43.2
2542.2	43.8	-1.1	-1.9	2542.2	43.8
2547	42.8	-5.5	-9.8	2547	42.8
2487.8	42.6	-6.4	-11.5	2487.8	42.6
2615.8	42.8	-3.2	-5.6	2615.8	42.8
2067.9	49.4	-47.8	-80.6		
2680	43.2	-3.6	-6.3	2680	43.2
2583.2	43.2	-2.5	-4.4	2583.2	43.2
2560.4	43.2	-4.1	-7.2	2560.4	43.2
2577.5	43.2	-4.1	-7.3	2577.5	43.2
2596.5	43.2	-4.9	-8.6	2596.5	43.2
2542.1	44.4	-4.1	-7.3	2542.1	44.4
2661	43.6	-3.7	-6.4	2661	43.6
2568.2	43.4	-1.4	-2.5	2568.2	43.4
2635.8	45.2	1.8	3.2	2635.8	45.2
2831.8	42.6	-3.2	-5.5	2831.8	42.6
2582.6	44.2	-2.1	-3.8	2582.6	44.2
2087.2	51	-34.8	-61.5		
1686	52.4	-32.9	-65.6		
2563.5	43.6	-5.2	-9.2	2563.5	43.6
2897.1	43.8	-4.4	-7.4	2897.1	43.8
2593.8	44.8	-5.3	-9.3	2593.8	44.8
2556.9	44.6	-4.2	-7.4	2556.9	44.6
2670.6	45.4	-21.9	-36.1		
2604.7	43.6	-13.5	-23.1		
5173.5	46.2	-84.9	-94		
4189.7	42.8	-58.6	-74.1		
2608.5	43.4	0.6	1	2608.5	43.4
2596.5	45.4	-1.6	-2.9	2596.5	45.4
3060.1	42	-7.6	-12.3	3060.1	42
2487.5	45.6	-13.5	-23.6		
2599.4	45.6	-1.6	-2.9	2599.4	45.6
2567.6	47.4	-4.1	-7.2	2567.6	47.4
3015.9	43.2	-0.1	-0.2	3015.9	43.2
2536.8	45.2	-8.4	-14.8	2536.8	45.2
2503.5	45.2	-1.9	-3.5	2503.5	45.2
2550.2	45.8	-4.5	-8.1	2550.2	45.8
2535.5	44.2	-4.2	-7.5	2535.5	44.2
2578.4	46.2	-3.2	-5.7	2578.4	46.2
2092.7	58.4	-7.1	-13.9	2092.7	58.4
2660.8	45.8	-1.1	-2	2660.8	45.8

Sample 3690B Albert Nile @ Wadelai 150 grain analysed 113 concordant a

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X3690F_G001	329.3	163.1	0.6519	0.1654	0.00396	9.77639
X3690F_G002				0.90308	0.05218	941.45526
X3690F_G003	73.5	32.7	0.5438	0.16802	0.00464	9.23257
X3690F_G004	297.2	171.4	0.2896	0.1769	0.00422	12.59087
X3690F_G005	907.5	283.1	0.118	0.1568	0.00376	6.96666
X3690F_G006	764.7	228.4	0.3295	0.14927	0.00358	6.01664
X3690F_G007	3393.6	298.8	0.0028	0.05802	0.0014	0.7663
X3690F_G008				0.08144	1.18054	24.27058
X3690F_G009	517.1	199.9	0.0909	0.16509	0.00396	8.95127
X3690F_G010	643	389.7	0.7379	0.1725	0.00416	11.77868
X3690F_G011	246.2	128	0.9155	0.16449	0.00404	9.37308
X3690F_G012	1053.6	522	0.7037	0.17162	0.00404	10.44863
X3690F_G013	668.7	348.3	0.2463	0.17206	0.00408	11.46764
X3690F_G014	48.2	33.2	1.0793	0.17079	0.00474	12.05511
X3690F_G015	234.2	125.9	0.6887	0.17006	0.00412	10.67729
X3690F_G016	529.5	249.1	0.1086	0.16897	0.00402	10.69648
X3690F_G017	560.8	226.2	0.7535	0.16301	0.00388	8.07454
X3690F_G018				0.06047	1.04164	6.11681
X3690F_G019	1022.8	440.8	0.1046	0.16756	0.00394	9.98442
X3690F_G020	1566.1	288.9	0.106	0.13179	0.00314	3.52661
X3690F_G021	20.7	11.1	0.1832	0.16641	0.00562	11.40369
X3690F_G022				0.72655	0.68734	
X3690F_G023	433.6	39.3	0.0132	0.06081	0.00178	0.82308
X3690F_G024	406	281.1	0.7392	0.21854	0.0052	17.08258
X3690F_G025	293.9	126.9	0.5703	0.16337	0.00404	8.75516
X3690F_G026				-0.20343	2.09734	
X3690F_G027	147	77.3	0.4627	0.16914	0.0043	10.91474
X3690F_G028	243.9	138	1.2289	0.18553	0.00456	11.24362
X3690F_G029				0.68084	0.02552	34.14083
X3690F_G030	43.6	24.7	0.5217	0.17161	0.00516	11.52783
X3690F_G031	0.9	0.1	0.1412	0.30378	0.08498	5.1933
X3690F_G032				0.616	0.29742	110.25622
X3690F_G033	199.8	108.1	0.6516	0.1701	0.00418	10.80805
X3690F_G034	158.5	75.8	0.336	0.17296	0.0043	10.56262
X3690F_G035	190.1	122.3	0.581	0.17444	0.00436	12.7307
X3690F_G036				0.83676	0.03698	115.20857
X3690F_G037	613.6	94.9	0.8617	0.06586	0.00174	1.17749
X3690F_G038	81.8	44.2	0.2641	0.16901	0.00452	11.51715
X3690F_G039	27.1	16	2.7126	0.15094	0.0063	7.24448
X3690F_G040	401.4	202.4	0.3369	0.16822	0.00418	10.76477
X3690F_G041	796.4	397.3	0.9934	0.17511	0.00424	10.26584
X3690F_G042	198.9	103.5	0.6065	0.16962	0.0043	10.57749
X3690F_G043	405.5	211.4	0.574	0.16784	0.00414	10.50633
X3690F_G044	175	74.3	1.3278	0.15346	0.00412	6.90157
X3690F_G045	650.3	360	0.719	0.1723	0.00418	11.13128
X3690F_G046	644.8	325.8	0.2166	0.16927	0.0041	11.08611
X3690F_G047	1104.6	473.1	0.1657	0.16388	0.00406	9.5282
X3690F_G048				0.50992	0.59478	
X3690F_G049	416.6	239.4	0.4427	0.17207	0.00422	11.85949
X3690F_G050	634.3	295.2	0.7202	0.17175	0.0042	9.68344

X3690F_G051	390.4	232	0.6818	0.17346	0.00434	11.80342
X3690F_G052	193.4	98.6	0.6377	0.16866	0.00428	10.29629
X3690F_G053	1035.2	433.6	0.4965	0.16721	0.00406	9.35614
X3690F_G054	384	174.2	0.2021	0.17244	0.00434	10.53307
X3690F_G055	296.2	183.1	0.8753	0.17674	0.00442	12.06794
X3690F_G056	173.6	111.1	0.9968	0.17264	0.00436	11.84738
X3690F_G057	146.5	80.8	0.7585	0.16906	0.00432	10.77331
X3690F_G058	45.5	5.2	0.3823	0.06846	0.0037	1.01112
X3690F_G059	112.5	16.9	0.2114	0.07789	0.0026	1.62415
X3690F_G060	146.5	20.5	0.0614	0.07271	0.0023	1.47718
X3690F_G061	76.7	45.3	1.2839	0.16615	0.0045	10.10964
X3690F_G062	120.3	61.1	0.6758	0.1601	0.00424	9.62046
X3690F_G063				0.95817	0.06772	
X3690F_G064	733.9	312.7	0.3059	0.16758	0.00426	9.55491
X3690F_G065	186.9	86.4	1.0661	0.16765	0.00436	8.87168
X3690F_G066	57.9	39.9	1.0097	0.17021	0.00512	12.27652
X3690F_G067	67.1	45.1	0.8484	0.16815	0.00468	12.13651
X3690F_G068	103.8	31	0.673	0.11944	0.00402	4.23656
X3690F_G069	296.2	172	0.4575	0.21846	0.0055	15.8957
X3690F_G070	220	132.6	0.8661	0.16679	0.00432	11.11731
X3690F_G071	260.9	146.3	0.8244	0.16923	0.00438	10.78661
X3690F_G072	768.8	453.6	1.1142	0.18373	0.00456	11.95167
X3690F_G073	140.5	74.1	0.8002	0.17121	0.00454	10.44214
X3690F_G074						
X3690F_G075	253.1	119.1	0.1797	0.1657	0.00428	10.32546
X3690F_G076	352.3	152.7	0.3188	0.16411	0.00458	9.27133
X3690F_G077	243.4	79.9	0.0011	0.14413	0.0039	6.8463
X3690F_G078	8.7		2.5298	0.69282	0.11326	9.86505
X3690F_G079	124	66.9	0.5123	0.16929	0.00472	11.06805
X3690F_G080	291.2	128.8	0.3195	0.16333	0.00422	9.40702
X3690F_G081	262.7	119.6	0.3049	0.16192	0.00426	9.5687
X3690F_G082	632.9	329.7	0.1659	0.16524	0.00418	11.14912
X3690F_G083	185.5	93.5	0.263	0.16481	0.0043	10.6713
X3690F_G084	305.4	137.6	0.3638	0.16975	0.0044	10.01158
X3690F_G085				0.97557	0.03546	
X3690F_G086	69.4	37.9	0.7658	0.16928	0.00512	10.70534
X3690F_G087	275.6	141	0.787	0.17256	0.00448	10.31722
X3690F_G088	261.3	53.1	0.1079	0.11629	0.00328	3.4086
X3690F_G089	977.8	420.1	0.0253	0.15978	0.00404	9.53313
X3690F_G090	13.8	8.1	0.5616	0.17202	0.00678	11.80129
X3690F_G091	462.5	174.2	0.1762	0.15372	0.00398	7.90303
X3690F_G092	6	3.1	0.1874	0.17724	0.0087	11.88231
X3690F_G093	158	87.1	0.8848	0.17144	0.0046	10.70519
X3690F_G094	469.4	231.1	0.5601	0.16298	0.0042	9.75954
X3690F_G095	1189.5	140.2	0.8034	0.0709	0.00192	1.06212
X3690F_G096	1017.3	433.3	0.6024	0.17017	0.00438	9.04196
X3690F_G097	468	224	0.4115	0.16692	0.00434	10.10948
X3690F_G098	134.1	73.2	1.1863	0.15923	0.00436	9.23384
X3690F_G099	218.2	104.9	0.4388	0.16655	0.00444	10.06478
X3690F_G100	64.8	32.6	0.5957	0.15805	0.00464	9.53438
X3690F_G101	57.4	23.7	0.3144	0.15946	0.00478	8.65057
X3690F_G102	351.8	165.4	0.8393	0.16507	0.00436	9.87783
X3690F_G103	232.4	145.6	0.6181	0.17954	0.00478	12.95515
X3690F_G104	392.7	200	1.0292	0.17324	0.0046	10.11684
X3690F_G105	320.6	185.8	0.8413	0.16979	0.00452	11.11952

X3690F_G106	287.5	161.6	1.1077	0.16089	0.00434	9.88271
X3690F_G107	95.1	61.5	1.0905	0.16858	0.00498	11.51352
X3690F_G108	71.6	47	0.899	0.17456	0.00518	12.37843
X3690F_G109	744	73.5	0.0917	0.06643	0.00198	0.95842
X3690F_G110	695.8	72.1	0.0137	0.0595	0.0018	0.91988
X3690F_G111	424.8	662	5.1404	0.16712	0.00472	7.56596
X3690F_G112				-18.06665	782.08074	
X3690F_G113	305	170.7	0.4225	0.19291	0.00518	13.37921
X3690F_G114	446.9	223.6	0.4489	0.16535	0.00446	10.2918
X3690F_G115	335.7	162.5	0.7658	0.16546	0.0045	9.62866
X3690F_G116	10.1	5.3	0.27	0.1705	0.00858	11.35037
X3690F_G117	226	120.8	0.324	0.16778	0.00464	11.22025
X3690F_G118	298.5	162.7	0.434	0.16893	0.00458	11.27816
X3690F_G119	2075.9	919.6	0.1222	0.16922	0.0045	10.21856
X3690F_G120	343.1	179.5	0.7385	0.16743	0.00456	10.30565
X3690F_G121	1036.1	288.1	0.5704	0.15628	0.00422	5.92759
X3690F_G122	659.5	323.4	0.3968	0.17596	0.00476	11.01242
X3690F_G123	74.4	38.2	0.2808	0.16784	0.005	11.00051
X3690F_G124	8.7	0.8	0.0613	0.06605	0.01072	0.94058
X3690F_G125	792.3	303.9	0.137	0.16303	0.00442	8.67826
X3690F_G126	248.9	135.7	0.7955	0.16769	0.00466	10.54518
X3690F_G127	1740.7	264.1	0.1994	0.21461	0.00596	4.87356
X3690F_G128	461.6	222.2	0.4238	0.1678	0.00462	10.18399
X3690F_G129	197	132.5	1.5497	0.16621	0.00472	10.97666
X3690F_G130	432.2	233.7	0.8499	0.17001	0.0047	10.60459
X3690F_G131	639.8	354.3	0.7794	0.16051	0.00442	10.20945
X3690F_G132	389.9	214.3	0.3915	0.16993	0.00476	11.49321
X3690F_G133	49.1		2.0975	0.13572	0.00504	5.60676
X3690F_G134	1610.2	240.5	0.0345	0.06963	0.00198	1.52842
X3690F_G135	113.4	52.4	0.522	0.1672	0.00534	9.66059
X3690F_G136	387.2	264.1	1.431	0.17179	0.0048	11.73243
X3690F_G137	124.9	78.7	0.951	0.17216	0.00516	11.82594
X3690F_G138	408.8	133.5	0.7821	0.15862	0.00454	6.50117
X3690F_G139	278.8	177.8	0.8274	0.17338	0.0049	12.22433
X3690F_G140	1145.4	436	0.3175	0.17135	0.00478	8.88452
X3690F_G141	653.1	281.9	0.3358	0.17261	0.00484	9.83314
X3690F_G142	66.1	43.2	1.1696	0.16744	0.00514	11.39245
X3690F_G143	67.1	47.5	2.2332	0.16596	0.00516	10.12685
X3690F_G144	450.6	261.7	0.7975	0.16159	0.00456	10.61481
X3690F_G145	154.3	27.9	0.9907	0.07168	0.00268	1.50098
X3690F_G146	231.9	128.6	0.4692	0.17178	0.00496	11.59523
X3690F_G147	314.6	155.5	0.0623	0.16779	0.0048	11.1317
X3690F_G148	314.6	150.9	0.7557	0.16606	0.00478	9.44588
X3690F_G149	446	124.3	0.2949	0.15005	0.00434	5.73109
X3690F_G150	179.6	96.3	0.508	0.17003	0.00496	11.10114

ges 75.3% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.2434	0.42887	0.00966	2300.6	43.6	2413.9	30.2
177.0274	7.56415	1.4417				
0.2618	0.39871	0.00986	2163.1	45.4	2361.4	34
0.31404	0.51643	0.01166	2684	49.6	2649.5	30.8
0.1734	0.32239	0.00724	1801.4	35.2	2107.2	29.2
0.15028	0.29246	0.00658	1653.8	32.8	1978.3	28.6
0.01912	0.09582	0.00212	589.9	12.4	577.6	14.4
354.49484	2.16238	4.73778				
0.22344	0.39341	0.00886	2138.6	41	2333	30
0.29584	0.49544	0.01124	2594.2	48.4	2587	31
0.2396	0.41346	0.00948	2230.7	43.2	2375.2	30.8
0.25632	0.44174	0.00984	2358.4	44	2475.4	30
0.2832	0.4836	0.01082	2542.9	47	2562	30.4
0.34762	0.51214	0.01292	2665.8	55	2608.7	35.2
0.26946	0.45556	0.01036	2419.9	45.8	2495.5	30.8
0.26496	0.45932	0.0103	2436.6	45.4	2497.1	30.4
0.1999	0.35941	0.00804	1979.4	38.2	2239.4	29.6
104.9258	0.7339	1.42552				
0.2452	0.43235	0.00962	2316.3	43.2	2433.3	29.8
0.08746	0.19416	0.00434	1143.9	23.4	1533.2	25.8
0.3974	0.49723	0.01456	2601.9	62.6	2556.7	41.8
	-12.71118	71.70052				
0.02434	0.0982	0.00228	603.9	13.4	609.8	17.2
0.42524	0.56717	0.01278	2896.2	52.6	2939.5	31.4
0.22434	0.38886	0.0089	2117.5	41.4	2312.8	30.8
0.2883	0.46822	0.01098	2475.8	48.2	2515.9	32.2
0.28806	0.43973	0.0101	2349.4	45.2	2543.5	31.4
1.2601	0.36384	0.01394				
0.35904	0.48739	0.01302	2559.4	56.4	2566.8	37.6
1.22524	0.12404	0.02316	753.8	132.8	1851.5	286.4
66.74922	1.2987	0.67126				
0.27662	0.46103	0.01054	2444.1	46.6	2506.8	31.2
0.27348	0.44312	0.01022	2364.6	45.6	2485.4	31.4
0.33096	0.52954	0.01226	2739.5	51.6	2659.9	32
6.53098	0.99901	0.0598				
0.03188	0.12973	0.00294	786.3	16.8	790.1	19.2
0.32024	0.49446	0.01204	2589.9	52	2566	33.8
0.30128	0.34824	0.01134	1926.2	54.2	2142	47.2
0.27834	0.46431	0.01068	2458.6	47	2503	31.4
0.25832	0.42537	0.00958	2284.8	43.4	2459	30.6
0.2787	0.45246	0.01054	2406.2	46.8	2486.7	32
0.26982	0.45419	0.01038	2413.9	46	2480.5	31.2
0.18992	0.32633	0.00778	1820.6	37.8	2098.9	31.8
0.28066	0.46874	0.01056	2478	46.4	2534.2	30.8
0.2797	0.4752	0.0107	2506.3	46.8	2530.4	30.8
0.24528	0.42186	0.00962	2268.9	43.6	2390.3	31
0.30302	0.50008	0.01136	2614.1	48.8	2593.4	31.4
0.246	0.40909	0.00924	2210.8	42.2	2405.1	30.6

0.30746	0.49373	0.01136	2586.8	49	2588.9	31.8
0.27068	0.44295	0.01024	2363.8	45.8	2461.8	31.8
0.2362	0.40599	0.0091	2196.6	41.8	2373.5	30.4
0.27546	0.44321	0.0102	2365	45.6	2482.8	31.6
0.31374	0.49543	0.01136	2594.1	49	2609.7	31.8
0.31144	0.49793	0.01152	2604.9	49.6	2592.4	32
0.28622	0.46236	0.01076	2450	47.4	2503.8	32.2
0.05282	0.10716	0.00318	656.2	18.6	709.4	31.4
0.054	0.1513	0.00372	908.2	20.8	979.6	26
0.04702	0.14741	0.00356	886.4	20	921.1	24.2
0.28238	0.44149	0.01064	2357.3	47.6	2444.9	33.4
0.26352	0.436	0.01034	2332.7	46.4	2399.1	32.6
	77.08825	85.53718				
0.25148	0.41369	0.00952	2231.8	43.4	2392.8	31.6
0.23868	0.38395	0.00896	2094.7	41.8	2324.9	31.8
0.38306	0.52333	0.01386	2713.3	58.6	2625.8	37.6
0.3502	0.52369	0.01298	2714.8	55	2615	35
0.14234	0.25736	0.00676	1476.3	34.6	1681.1	35
0.41618	0.52795	0.01214	2732.8	51.2	2870.5	32.6
0.29822	0.48363	0.01126	2543.1	49	2533	32.4
0.28904	0.46248	0.01076	2450.5	47.4	2504.9	32.4
0.30748	0.47198	0.01062	2492.2	46.6	2600.6	31.4
0.2867	0.44254	0.01048	2362	46.8	2474.8	33
0.2756	0.45215	0.01044	2404.8	46.4	2464.4	32
0.26556	0.4099	0.00998	2214.5	45.6	2365.2	34
0.18994	0.34465	0.00812	1909	39	2091.7	31.8
1.16312	0.10331	0.01474	633.8	86.2	2422.2	200
0.31918	0.47438	0.01164	2502.7	50.8	2528.9	34.6
0.25126	0.4179	0.00962	2250.9	43.8	2378.5	31.8
0.2597	0.42878	0.00998	2300.2	45	2394.2	32.2
0.29256	0.48956	0.01112	2568.8	48.2	2535.7	31.6
0.2883	0.46981	0.0109	2482.7	47.8	2494.9	32.4
0.26802	0.42794	0.00986	2296.4	44.6	2435.9	32
106.99716	7.93795	0.8005				
0.333	0.45884	0.01194	2434.4	52.8	2497.9	37
0.27706	0.4338	0.01	2322.8	45	2463.6	32.2
0.09766	0.21268	0.00502	1243.1	26.6	1506.4	28.8
0.24998	0.43292	0.00976	2318.9	44	2390.7	31.2
0.47682	0.49776	0.01632	2604.2	70.2	2588.8	48
0.2113	0.37302	0.00852	2043.6	40	2220	31.2
0.5961	0.48642	0.01954	2555.2	84.8	2595.2	59.4
0.29662	0.45307	0.01066	2408.9	47.2	2497.9	33.2
0.26006	0.43448	0.00988	2325.9	44.4	2412.3	31.6
0.0293	0.1087	0.00248	665.2	14.4	734.9	18.6
0.2407	0.38553	0.00876	2102.1	40.8	2342.3	31.4
0.27142	0.43945	0.01004	2348.2	45	2444.8	32
0.25966	0.42076	0.00996	2263.9	45.2	2361.5	33.2
0.27632	0.43847	0.01018	2343.8	45.6	2440.7	32.6
0.28648	0.43768	0.0109	2340.2	48.8	2390.9	35.4
0.26484	0.39361	0.00992	2139.5	45.8	2301.9	35.6
0.26926	0.43418	0.00998	2324.5	44.8	2423.4	32.2
0.35642	0.52355	0.01214	2714.2	51.4	2676.4	33.2
0.27622	0.4237	0.00974	2277.3	44.2	2445.5	32.4
0.30546	0.47517	0.01098	2506.2	48	2533.2	32.8

0.27484	0.44568	0.01038	2376	46.2	2423.9	32.8
0.35024	0.49552	0.01248	2594.5	53.8	2565.7	36.2
0.3784	0.51451	0.01304	2675.9	55.6	2633.5	36.6
0.02882	0.10468	0.00244	641.8	14.2	682.5	18.8
0.0281	0.11217	0.00262	685.3	15.2	662.3	18.6
0.2183	0.32848	0.00784	1831	38	2180.8	33.2
716.87194	0.09561	4.1446				
0.37004	0.50322	0.01162	2627.6	49.8	2706.8	33.4
0.28514	0.4516	0.01042	2402.4	46.2	2461.4	32.8
0.26948	0.42224	0.0098	2270.6	44.4	2399.9	32.8
0.5814	0.48301	0.01938	2540.4	84.2	2552.4	60
0.31894	0.48521	0.0114	2549.9	49.4	2541.6	33.8
0.31446	0.48439	0.0112	2546.4	48.6	2546.4	33.2
0.27974	0.43815	0.00996	2342.4	44.6	2454.8	32.4
0.28888	0.44661	0.01034	2380.2	46	2462.6	33
0.16442	0.2752	0.0063	1567.1	31.8	1965.3	30.8
0.30574	0.45408	0.01042	2413.4	46.2	2524.2	33
0.33578	0.47554	0.01184	2507.8	51.8	2523.2	36.2
0.14642	0.10332	0.0065	633.8	38	673.2	85.6
0.24172	0.38622	0.00884	2105.3	41.2	2304.8	32.4
0.301	0.45626	0.01066	2423	47.2	2483.9	33.6
0.1379	0.16476	0.00382	983.2	21.2	1797.7	30.4
0.28784	0.44036	0.01018	2352.3	45.6	2451.6	33.2
0.31906	0.47915	0.01134	2523.6	49.4	2521.2	34.4
0.30066	0.45258	0.01048	2406.7	46.6	2489.1	33.4
0.2888	0.4615	0.01064	2446.2	47	2453.9	33.2
0.32984	0.49073	0.01146	2573.8	49.6	2564	34
0.20714	0.29972	0.00838	1689.9	41.6	1917.1	40
0.04428	0.15927	0.00366	952.7	20.4	941.9	22.4
0.3144	0.41922	0.0109	2256.9	49.6	2403	37.8
0.33664	0.49552	0.01152	2594.5	49.6	2583.3	34
0.36256	0.4984	0.01232	2606.9	53	2590.7	36.4
0.1894	0.29736	0.00696	1678.2	34.6	2046.1	32.6
0.35394	0.51154	0.01196	2663.2	51	2621.8	34.4
0.25332	0.3762	0.00866	2058.5	40.6	2326.2	33
0.28228	0.41333	0.00956	2230.1	43.6	2419.3	33.6
0.35726	0.49367	0.01236	2586.5	53.4	2555.8	37
0.321	0.44273	0.01116	2362.9	49.8	2446.4	37
0.30712	0.4766	0.01106	2512.4	48.2	2490	34
0.05558	0.15193	0.00386	911.8	21.6	930.8	27.6
0.34228	0.48975	0.01156	2569.6	50	2572.3	34.8
0.3254	0.48136	0.01124	2533.2	49	2534.2	34.4
0.2774	0.41272	0.00966	2227.3	44	2382.3	34
0.16876	0.27712	0.00646	1576.8	32.6	1936.1	32.2
0.3313	0.4737	0.01124	2499.8	49.2	2531.7	35

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2511.6	40.2	-4.7	-8.4	2511.6	40.2
2538	46.4	-8.4	-14.8	2538	46.4
2624	39.6	1.3	2.3	2624	39.6
2421.4	40.6	-14.5	-25.6		
2337.6	41	-16.4	-29.3		
530.5	52.8	2.1	11.2	589.9	12.4
2508.5	40.4	-8.3	-14.7	2508.5	40.4
2582	40.2	0.3	0.5	2582	40.2
2502.3	41.4	-6.1	-10.9	2502.3	41.4
2573.5	39.4	-4.7	-8.4	2573.5	39.4
2577.8	39.6	-0.7	-1.4	2577.8	39.6
2565.4	46.4	2.2	3.9	2565.4	46.4
2558.2	40.6	-3	-5.4	2558.2	40.6
2547.5	39.8	-2.4	-4.4	2547.5	39.8
2487.1	40.2	-11.6	-20.4		
2533.4	39.4	-4.8	-8.6	2533.4	39.4
2122	41.8	-25.4	-46.1		
2521.9	56.8	1.8	3.2	2521.9	56.8
632.5	63	-1	-4.5	603.9	13.4
2970	38.4	-1.5	-2.5	2970	38.4
2490.8	41.6	-8.4	-15	2490.8	41.6
2549.2	42.6	-1.6	-2.9	2549.2	42.6
2702.9	40.6	-7.6	-13.1	2702.9	40.6
2573.4	50.2	-0.3	-0.5	2573.4	50.2
3489.6	432.8	-59.3	-78.4		
2558.6	41.2	-2.5	-4.5	2558.6	41.2
2586.5	41.4	-4.9	-8.6	2586.5	41.4
2600.7	41.6	3	5.3		
801.9	55.4	-0.5	-1.9	786.3	16.8
2547.9	44.8	0.9	1.7	2547.9	44.8
2356.6	71.2	-10.1	-18.3		
2540	41.6	-1.8	-3.2	2540	41.6
2607.1	40.4	-7.1	-12.4	2607.1	40.4
2553.9	42.4	-3.2	-5.8	2553.9	42.4
2536.2	41.4	-2.7	-4.8	2536.2	41.4
2384.8	45.8	-13.3	-23.7		
2580.1	40.6	-2.2	-4	2580.1	40.6
2550.4	40.6	-1	-1.7	2550.4	40.6
2496.1	41.8	-5.1	-9.1	2496.1	41.8
2577.9	41	0.8	1.4	2577.9	41
2574.8	40.8	-8.1	-14.1	2574.8	40.8

2591.3	41.8	-0.1	-0.2	2591.3	41.8
2544.4	42.6	-4	-7.1	2544.4	42.6
2529.9	40.8	-7.5	-13.2	2529.9	40.8
2581.5	42	-4.7	-8.4	2581.5	42
2622.5	41.6	-0.6	-1.1	2622.5	41.6
2583.4	42.2	0.5	0.8	2583.4	42.2
2548.4	42.8	-2.1	-3.9	2548.4	42.8
882.5	111.8	-7.5	-25.6	656.2	18.6
1144.1	66.4	-7.3	-20.6	908.2	20.8
1005.9	64.2	-3.8	-11.9	886.4	20
2519.2	45.6	-3.6	-6.4	2519.2	45.6
2456.7	44.8	-2.8	-5	2456.7	44.8
2533.6	42.6	-6.7	-11.9	2533.6	42.6
2534.3	43.6	-9.9	-17.3		
2559.7	50.4	3.3	6		
2539.3	46.6	3.8	6.9		
1947.9	60.2	-12.2	-24.2		
2969.4	40.6	-4.8	-8	2969.4	40.6
2525.7	43.4	0.4	0.7	2525.7	43.4
2550	43.4	-2.2	-3.9	2550	43.4
2686.8	41	-4.2	-7.2	2686.8	41
2569.5	44.4	-4.6	-8.1	2569.5	44.4
2514.7	43.4	-2.4	-4.4	2514.7	43.4
2498.5	47	-6.4	-11.4	2498.5	47
2277.4	46.6	-8.7	-16.2		
4715.9	235	-73.8	-86.6		
2550.6	46.6	-1	-1.9	2550.6	46.6
2490.4	43.6	-5.4	-9.6	2490.4	43.6
2475.8	44.4	-3.9	-7.1	2475.8	44.4
2510	42.6	1.3	2.3	2510	42.6
2505.6	43.8	-0.5	-0.9	2505.6	43.8
2555.2	43.4	-5.7	-10.1	2555.2	43.4
2550.5	50.6	-2.5	-4.6	2550.5	50.6
2582.6	43.4	-5.7	-10.1	2582.6	43.4
1900	50.6	-17.5	-34.6		
2453.3	42.8	-3	-5.5	2453.3	42.8
2577.4	65.8	0.6	1	2577.4	65.8
2387.7	44	-7.9	-14.4	2387.7	44
2627.2	81.6	-1.5	-2.7	2627.2	81.6
2571.8	44.8	-3.6	-6.3	2571.8	44.8
2486.8	43.4	-3.6	-6.5	2486.8	43.4
954.5	55.4	-9.5	-30.3	665.2	14.4
2559.3	43	-10.3	-17.9		
2527	43.6	-4	-7.1	2527	43.6
2447.5	46.4	-4.1	-7.5	2447.5	46.4
2523.3	44.8	-4	-7.1	2523.3	44.8
2434.9	49.8	-2.1	-3.9	2434.9	49.8
2449.9	50.8	-7.1	-12.7	2449.9	50.8
2508.3	44.4	-4.1	-7.3	2508.3	44.4
2648.6	44.2	1.4	2.5	2648.6	44.2
2589.2	44.4	-6.9	-12	2589.2	44.4
2555.6	44.6	-1.1	-1.9	2555.6	44.6

2465	45.6	-2	-3.6	2465	45.6
2543.6	49.6	1.1	2	2543.6	49.6
2601.9	49.4	1.6	2.8	2601.9	49.4
820	62.2	-6	-21.7	641.8	14.2
585.4	65.6	3.5	17.1	685.3	15.2
2529	47.4	-16	-27.6		
2767.1	44	-2.9	-5	2767.1	44
2511.1	45.4	-2.4	-4.3	2511.1	45.4
2512.2	45.8	-5.4	-9.6	2512.2	45.8
2562.6	84.2	-0.5	-0.9	2562.6	84.2
2535.6	46.4	0.3	0.6	2535.6	46.4
2547.1	45.4	0	0	2547.1	45.4
2549.9	44.6	-4.6	-8.1	2549.9	44.6
2532.1	45.6	-3.3	-6	2532.1	45.6
2415.8	45.8	-20.3	-35.1		
2615.2	45	-4.4	-7.7	2615.2	45
2536.2	50	-0.6	-1.1	2536.2	50
808	339.6	-5.8	-21.6	633.8	38
2487.3	45.6	-8.7	-15.4		
2534.7	46.6	-2.5	-4.4	2534.7	46.6
2940.7	44.8	-45.3	-66.6		
2535.8	46.2	-4.1	-7.2	2535.8	46.2
2519.8	47.8	0.1	0.1	2519.8	47.8
2557.7	46.2	-3.3	-5.9	2557.7	46.2
2461	46.6	-0.3	-0.6	2461	46.6
2557	46.8	0.4	0.7	2557	46.8
2173.3	64.6	-11.9	-22.2		
917.5	58.4	1.2	3.8	952.7	20.4
2529.8	53.6	-6.1	-10.8	2529.8	53.6
2575.2	46.6	0.4	0.8	2575.2	46.6
2578.8	50	0.6	1.1	2578.8	50
2441	48.4	-18	-31.2		
2590.5	47.2	1.6	2.8	2590.5	47.2
2570.9	46.6	-11.5	-19.9		
2583.1	46.8	-7.8	-13.7	2583.1	46.8
2532.2	51.6	1.2	2.1	2532.2	51.6
2517.3	52.2	-3.4	-6.1	2517.3	52.2
2472.4	47.6	0.9	1.6	2472.4	47.6
976.9	76.2	-2	-6.7	911.8	21.6
2575.1	48.2	-0.1	-0.2	2575.1	48.2
2535.7	48	0	-0.1	2535.7	48
2518.3	48.4	-6.5	-11.6	2518.3	48.4
2346.5	49.4	-18.6	-32.8		
2557.9	48.8	-1.3	-2.3	2557.9	48.8

Sample 4052S Bahr El Jebel @ Juba 52 grain analysed 40 concordant ages

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X4052S_G001	68.6	12.1	1.0249	0.06876	0.00306	1.37469
X4052S_G002				0.58916	0.06566	18.31006
X4052S_G003	1039.6	219.5	0.077	0.14836	0.00352	4.5556
X4052S_G004	693.7	154.6	1.6391	0.072	0.0019	1.60651
X4052S_G005	527.8	298.6	0.2434	0.18353	0.00436	13.09815
X4052S_G006	204.6	160.7	2.2227	0.16725	0.00416	11.07086
X4052S_G007	72.6	12.1	0.9626	0.06839	0.00328	1.31825
X4052S_G008	74	15.2	0.6794	0.13367	0.00502	3.22436
X4052S_G009	92.6	16.9	0.6582	0.06818	0.00308	1.53597
X4052S_G010	3.3	0.7	0.3557	0.26404	0.05876	7.33716
X4052S_G011	80	14.1	0.7824	0.07216	0.0031	1.50923
X4052S_G012	283.2	200	0.1092	0.26838	0.0064	24.15015
X4052S_G013	84	13.7	0.4103	0.16526	0.00562	3.68886
X4052S_G014	372.5	188.3	0.6898	0.163	0.00402	9.75351
X4052S_G015	108.6	56.3	1.0254	0.16069	0.00442	9.23518
X4052S_G016	195.9	17.5	0.3004	0.05887	0.00242	0.72412
X4052S_G017	282.6	152.2	0.6927	0.17126	0.00424	10.88511
X4052S_G018	300.5	252.1	0.7378	0.32179	0.0077	31.62114
X4052S_G019	17.3	7.5	0.7306	0.12761	0.0066	6.53543
X4052S_G020	2	0.2	0.0468	0.62611	0.05456	28.01887
X4052S_G021	161.3	110.9	1.5472	0.1717	0.0044	11.55434
X4052S_G022	110.6	19.7	0.5596	0.06928	0.00268	1.55692
X4052S_G023	137.9	76.7	0.8222	0.17153	0.00452	10.90618
X4052S_G024	96.6	18.7	0.7735	0.07266	0.00284	1.69488
X4052S_G025	90.6	17.4	0.7993	0.07319	0.00284	1.67687
X4052S_G026	62	11.8	0.7926	0.07171	0.0033	1.63519
X4052S_G027	4496.9	663.4	0.0401	0.06903	0.0017	1.49412
X4052S_G028	245.9	103	0.4367	0.16592	0.00428	8.99493
X4052S_G029	106.6	89.5	0.7474	0.36913	0.0093	38.30989
X4052S_G030	858.3	97.1	0.4957	0.06974	0.00196	1.06667
X4052S_G031	973.6	373.1	0.5685	0.16801	0.0042	8.07637
X4052S_G032	356.5	49.1	1.5331	0.0612	0.0021	0.85597
X4052S_G033	398.5	42.2	0.1886	0.05238	0.01068	0.7736
X4052S_G034	465.2	46.2	0.3404	0.05786	0.00192	0.77917
X4052S_G035	59.3	9.6	0.88	0.07198	0.0043	1.33892
X4052S_G036	62	7.9	0.7992	0.05663	0.00376	0.86721
X4052S_G037	367.9	200.1	0.9087	0.17328	0.00444	10.67279
X4052S_G038	245.2		0.5817	0.19846	0.00508	16.58076
X4052S_G039	176.6	102.4	0.6171	0.16996	0.00452	11.49067
X4052S_G040	64.6	12.7	1.0105	0.07231	0.00352	1.60772
X4052S_G041	157.9	82.7	0.7914	0.16669	0.00472	10.11443
X4052S_G042	142.6	81.1	0.6679	0.16983	0.0046	11.26836
X4052S_G043	64	13.7	0.4035	0.09248	0.00368	2.61571
X4052S_G044	591.8	286.3	0.2757	0.1766	0.0045	11.1287
X4052S_G045	915.6	93.2	0.1889	0.07271	0.00214	1.03212
X4052S_G046	202.6	32.7	0.1536	0.07109	0.00248	1.62677
X4052S_G047	353.2	143.5	0.144	0.17201	0.00458	9.63666
X4052S_G048	77.3	44	0.6513	0.16991	0.00508	11.30002
X4052S_G049	722.4	376.3	0.5553	0.16674	0.00432	10.5357
X4052S_G050	233.2	43	0.67	0.07126	0.00238	1.61591

X4052S_G051	852.3	355.4	0.3333	0.16633	0.00436	9.19043
X4052S_G052	618.4	287.8	0.2104	0.16758	0.00442	10.32215

76.9% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.05976	0.14506	0.00392	873.2	22	878.2	30.6
1.71016	0.22549	0.023				
0.11054	0.22278	0.00488	1296.5	25.8	1741.2	26.8
0.04272	0.16188	0.00362	967.2	20	972.7	21.6
0.31922	0.5178	0.01144	2689.8	48.6	2686.7	30.6
0.28292	0.48027	0.01096	2528.4	47.8	2529.1	31.4
0.06156	0.13985	0.00392	843.8	22.2	853.7	32
0.11692	0.17501	0.00484	1039.7	26.6	1463	36.2
0.06756	0.16344	0.00444	975.9	24.6	944.9	32.4
1.47738	0.20162	0.0276	1184	148	2153.3	233.4
0.06322	0.15175	0.00406	910.8	22.8	934.1	31
0.59444	0.65287	0.0146	3239.4	57	3274.5	31.8
0.12104	0.16195	0.00432	967.6	24	1569	34.6
0.24572	0.43414	0.00976	2324.4	43.8	2411.8	30.8
0.25812	0.41699	0.01008	2246.8	45.8	2361.6	33.6
0.02896	0.08924	0.00224	551	13.2	553.1	20.6
0.27548	0.46114	0.0104	2444.6	45.8	2513.4	31.2
0.78056	0.71296	0.01594	3469.6	60	3538.6	32.2
0.3356	0.37157	0.0137	2036.8	64.4	2050.7	56
2.2374	0.32469	0.02834	1812.6	138	3419.8	121
0.30334	0.48825	0.0113	2563.1	49	2569	32.2
0.059	0.16305	0.00416	973.7	23	953.2	28.6
0.29344	0.46131	0.01086	2445.3	48	2515.2	32.8
0.0648	0.16924	0.00438	1007.9	24.2	1006.6	30
0.06366	0.16623	0.00428	991.3	23.6	999.8	29.6
0.0733	0.16545	0.0046	987	25.4	983.9	33.8
0.03736	0.15704	0.00342	940.3	19	928	20
0.23638	0.39334	0.00902	2138.3	41.8	2337.5	31.6
1.00358	0.753	0.01778	3618.6	65.4	3728	34.2
0.03002	0.11098	0.0025	678.4	14.6	737.1	18.8
0.20524	0.34878	0.00776	1928.8	37	2239.6	30.2
0.02908	0.10147	0.00242	623	14.2	627.9	19.6
0.15238	0.10717	0.0077	656.3	44.8	581.8	95.8
0.02562	0.09771	0.00228	601	13.4	585	18
0.07696	0.13496	0.00428	816.1	24.4	862.8	39.4
0.05564	0.11111	0.00348	679.2	20.2	634.1	34.6
0.27898	0.44687	0.01012	2381.3	45	2495.1	31.8
0.4343	0.60616	0.01382	3054.6	55.4	2910.9	32.8
0.31232	0.49052	0.01144	2572.9	49.4	2563.8	33
0.07608	0.16132	0.00462	964.1	25.6	973.2	35.4
0.29126	0.44024	0.0107	2351.7	47.8	2445.3	34.4
0.31122	0.4814	0.01132	2533.4	49.2	2545.6	33.4
0.10188	0.20521	0.00554	1203.2	29.6	1305.1	35.4
0.2887	0.4572	0.0102	2427.2	45.2	2534	31.6
0.03038	0.10299	0.00236	631.9	13.8	720	19.2
0.05608	0.16603	0.00406	990.2	22.4	980.6	26.8
0.26004	0.40648	0.0093	2198.8	42.6	2400.7	32.2
0.34394	0.48254	0.01222	2538.3	53.2	2548.2	36.6
0.27734	0.45844	0.01024	2432.7	45.2	2483.1	31.8
0.05346	0.16452	0.00394	981.8	21.8	976.4	25.8

0.24404	0.40089	0.00896	2173.1	41.2	2357.2	31.6
0.27612	0.44689	0.01004	2381.4	44.8	2464.1	32

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
891.5	92	-0.6	-2.1	873.2	22
2327.1	40.6	-25.5	-44.3		
985.9	53.8	-0.6	-1.9	967.2	20
2685	39.2	0.1	0.2	2685	39.2
2530.3	41.8	0	-0.1	2530.3	41.8
880.4	99.2	-1.2	-4.2	843.8	22.2
2146.7	65.6	-28.9	-51.6		
874	93.6	3.3	11.7	975.9	24.6
3271	350	-45	-63.8		
990.5	87.4	-2.5	-8	910.8	22.8
3296.6	37.4	-1.1	-1.7	3296.6	37.4
2510.2	57.2	-38.3	-61.5		
2487	41.6	-3.6	-6.5	2487	41.6
2462.9	46.4	-4.9	-8.8	2462.9	46.4
562.3	89.6	-0.4	-2	551	13.2
2570	41.4	-2.7	-4.9	2570	41.4
3578.4	36.8	-1.9	-3	3578.4	36.8
2065.3	91.2	-0.7	-1.4	2065.3	91.2
4569.8	126.2	-47	-60.3		
2574.3	42.8	-0.2	-0.4	2574.3	42.8
907.1	79.6	2.1	7.3	973.7	23
2572.6	44	-2.8	-4.9	2572.6	44
1004.5	79.4	0.1	0.3	1007.9	24.2
1019.2	78.6	-0.8	-2.7	991.3	23.6
977.7	93.8	0.3	0.9	987	25.4
899.6	50.8	1.3	4.5	940.3	19
2516.9	43.4	-8.5	-15		
3787.9	38.2	-2.9	-4.5	3787.9	38.2
920.7	57.8	-8	-26.3	678.4	14.6
2537.9	42	-13.9	-24		
646.3	73.8	-0.8	-3.6	623	14.2
302	464.8	12.8	117.3		
524.5	72.8	2.7	14.6	601	13.4
985.4	121.6	-5.4	-17.2	816.1	24.4
477.2	146.8	7.1	42.3		
2589.6	42.8	-4.6	-8	2589.6	42.8
2813.6	41.8	4.9	8.6		
2557.2	44.6	0.4	0.6	2557.2	44.6
994.7	99	-0.9	-3.1	964.1	25.6
2524.7	47.6	-3.8	-6.9	2524.7	47.6
2556	45.4	-0.5	-0.9	2556	45.4
1477.3	75.4	-7.8	-18.5		
2621.2	42.4	-4.2	-7.4	2621.2	42.4
1005.9	59.8	-12.2	-37.2	631.9	13.8
960	71.2	1	3.1	990.2	22.4
2577.3	44.4	-8.4	-14.7	2577.3	44.4
2556.8	50	-0.4	-0.7	2556.8	50
2525.2	43.6	-2	-3.7	2525.2	43.6
964.9	68.2	0.6	1.8	981.8	21.8

2521	44	-7.8	-13.8	2521	44
2533.6	44.2	-3.4	-6	2533.6	44.2

Sample 13 Bahr el Jebel @ Bor 22 grain analysed 18 concordant ages 81

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X13_G001	98.1	62.5	0.6506	0.20518	0.00556	15.19762
X13_G002	99.2	11.1	0.392	0.06013	0.00296	0.89368
X13_G003	363.4	209	0.753	0.16872	0.00428	11.11128
X13_G004	117.3	19.6	0.5478	0.07109	0.00314	1.50656
X13_G005				-0.20432	3.23534	3.91885
X13_G006	115.1	12.1	0.1311	0.06235	0.00334	0.93549
X13_G007	213.2	28.5	0.506	0.06297	0.00232	1.07969
X13_G008	266.4	146.9	0.6282	0.16977	0.00448	11.0656
X13_G009	227.5	38	0.442	0.06942	0.00244	1.51598
X13_G010	119.5	13.8	0.5374	0.05877	0.00286	0.8668
X13_G011	177.1	18.5	0.2205	0.05754	0.00258	0.84253
X13_G012	15.9	5	0.3869	0.13864	0.00786	5.76878
X13_G013	38.9	5	0.7682	0.06006	0.0044	0.92527
X13_G014	411.7	54.6	0.4179	0.06301	0.00204	1.0995
X13_G015	214.9	128.7	0.8528	0.16734	0.0048	11.12812
X13_G016				-14.69411	486.05422	283.38635
X13_G017	169.9	18.2	0.1252	0.05892	0.0026	0.90866
X13_G018	1491	692.8	0.1006	0.16633	0.00476	10.43826
X13_G019	200.6	36.8	0.8992	0.06843	0.00264	1.45307
X13_G020	180.3	90.9	1.8862	0.15092	0.00488	7.11264
X13_G021	323.4	32.1	0.2161	0.05944	0.00236	0.82656
X13_G022	154	92	0.6832	0.16907	0.00544	11.55639

.8% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.41942	0.53742	0.01292	2772.6	54.2	2827.7	34.6
0.04264	0.10783	0.00294	660.1	17.2	648.3	27
0.28568	0.47783	0.01066	2517.8	46.4	2532.5	31.4
0.06458	0.15375	0.00414	922	23.2	933	31.6
60.54912	-0.13915	0.55662				
0.04832	0.10886	0.0031	666.1	18	670.5	29.8
0.03892	0.1244	0.00302	755.8	17.4	743.5	23.2
0.29566	0.4729	0.01068	2496.3	46.8	2528.7	32.4
0.05254	0.15844	0.00384	948.1	21.4	936.9	26.2
0.04102	0.10701	0.0029	655.4	16.8	633.8	26.2
0.03676	0.10624	0.00276	650.9	16	620.5	24
0.31888	0.30189	0.01168	1700.7	57.8	1941.7	59.4
0.0653	0.11178	0.00376	683.1	21.8	665.1	39.4
0.03514	0.1266	0.00294	768.4	16.8	753.1	21.2
0.32106	0.48247	0.01116	2538	48.6	2533.9	34.4
417.20666	-0.13992	4.63212				
0.03908	0.11188	0.0029	683.7	16.8	656.3	24.8
0.2996	0.45529	0.01024	2418.7	45.4	2474.5	33.8
0.05494	0.15406	0.00386	923.7	21.6	911.1	27.6
0.22848	0.34191	0.00834	1895.9	40	2125.6	36
0.03222	0.10089	0.0025	619.6	14.6	611.7	21.6
0.37304	0.49588	0.01212	2596.1	52.2	2569.2	37.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2867.9	44	-1.9	-3.3	2867.9	44
608.3	106.4	1.8	8.5	660.1	17.2
2545	42.6	-0.6	-1.1	2545	42.6
960	90.2	-1.2	-4	922	23.2
686.1	114.4	-0.7	-2.9	666.1	18
707.2	78.4	1.7	6.9	755.8	17.4
2555.4	44.2	-1.3	-2.3	2555.4	44.2
911.2	72.4	1.2	4	948.1	21.4
558.6	106	3.4	17.3	655.4	16.8
512.3	98.6	4.9	27.1	650.9	16
2210.3	98.4	-12.4	-23.1		
605.7	158.4	2.7	12.8	683.1	21.8
708.6	68.8	2	8.4	768.4	16.8
2531.2	48.2	0.2	0.3	2531.2	48.2
564.1	96.2	4.2	21.2	683.7	16.8
2521	48	-2.3	-4.1	2521	48
881.6	79.8	1.4	4.8	923.7	21.6
2356.4	55.2	-10.8	-19.5		
583.2	86.2	1.3	6.2	619.6	14.6
2548.5	54	1	1.9	2548.5	54

Sample 7 Lol @ Nyamlell 295 grain analysed 207 concordant ages 70.2

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X7_G001	149.7	116	1.7126	0.20089	0.00444	14.83058
X7_G002	653.6	192.2	0.8217	0.15866	0.00346	5.61013
X7_G003	434.9	143.7	0.7639	0.1642	0.0036	6.7053
X7_G004	84	44.4	0.4825	0.17389	0.00406	11.2557
X7_G005	57.4	31.7	1.1044	0.17619	0.0043	10.52598
X7_G006	514.9	50.3	0.2409	0.05932	0.00148	0.80549
X7_G007	759.2	33.5	0.8744	0.06284	0.00172	0.32302
X7_G008	120.3	23.8	0.7628	0.07512	0.00214	1.78212
X7_G009	197.9	125.3	1.059	0.17524	0.00388	11.80587
X7_G010	143.3	66.8	0.4777	0.17271	0.0039	10.10445
X7_G011	190.6	31	0.5197	0.06978	0.0019	1.45086
X7_G012	282.9	36.9	0.3254	0.06631	0.00172	1.16196
X7_G013	74.9	14.9	1.2531	0.07237	0.00242	1.52509
X7_G014	662.3	59.9	0.0292	0.06195	0.00148	0.83322
X7_G015	340.3	39.2	0.4423	0.0627	0.00166	0.94527
X7_G016	244.8	29.7	0.3251	0.06295	0.0017	1.03197
X7_G017	400	44.7	0.3559	0.06149	0.00158	0.92078
X7_G018	198.4	150.5	0.6983	0.24286	0.00528	20.61989
X7_G019	363.7	188.6	0.4693	0.17416	0.00378	11.13243
X7_G020	418.4	45.7	0.1894	0.06375	0.00158	0.98144
X7_G021	341.7	177.1	1.2534	0.17004	0.0037	10.41065
X7_G022	513.9	69.1	0.5796	0.06413	0.00156	1.08895
X7_G023	159.8	109.4	1.8922	0.17248	0.00388	10.658
X7_G024	815.2	104.4	0.3055	0.06784	0.00156	1.17091
X7_G025	73.5	13	0.6031	0.07364	0.00248	1.6173
X7_G026	70.3	0.4	0.681	0.09078	0.01736	0.06832
X7_G027	536	317.3	2.9515	0.16716	0.00366	8.02169
X7_G028	1770.1	546.1	0.0952	0.18474	0.00396	8.04218
X7_G029	154.3	92.6	0.7916	0.17857	0.004	12.10458
X7_G030	81.8	10	0.5685	0.06595	0.00254	1.01424
X7_G031	215.9	24.6	0.3413	0.06195	0.0018	0.95098
X7_G032	445.5	233.7	1.0473	0.17611	0.00382	10.39842
X7_G033	60.2	6.2	0.6394	0.06174	0.00292	0.78885
X7_G034	77.6	8.2	0.5754	0.05661	0.00242	0.75472
X7_G035	131.4	67	0.5342	0.17021	0.00386	10.56879
X7_G036	138.7	78.7	0.9657	0.17071	0.00388	10.69012
X7_G037				0.78318	0.02462	52.28482
X7_G038	693.5	365.4	0.6926	0.17369	0.00374	10.79994
X7_G039	270.5	122	0.778	0.16429	0.00364	9.02631
X7_G040	53.7	6.6	0.6145	0.06149	0.00288	0.93488
X7_G041	27.1	3.2	0.6197	0.06135	0.00422	0.91409
X7_G042	145.1	20.2	0.6416	0.07158	0.00214	1.23102
X7_G043	363.7	148.5	0.3393	0.16722	0.00368	9.00673
X7_G044	383	40.3	0.2527	0.06007	0.00158	0.8771
X7_G045	203.5	28.3	1.2847	0.06478	0.00192	0.91865
X7_G046	450.1	209.8	0.3999	0.17725	0.00384	10.6853
X7_G047	425.3	252.2	0.978	0.17092	0.00372	11.07587
X7_G048	147	17.1	0.48	0.06173	0.00198	0.93133
X7_G049	934.2	412.6	0.5087	0.17124	0.00368	9.72252
X7_G050	270.1	131.5	0.3666	0.17039	0.00374	10.55239

X7_G051	54.7	8.2	0.8226	0.06567	0.00282	1.15497
X7_G052	306.8	38.8	0.8292	0.0612	0.00166	0.91056
X7_G053	82.2	45.3	0.9124	0.17771	0.0042	11.0523
X7_G054	264.1	112.2	0.3685	0.17776	0.00394	9.98567
X7_G055	263.2	39.7	0.5323	0.06686	0.0018	1.26474
X7_G056	193.4	22.6	0.4202	0.06573	0.00194	1.01907
X7_G057	216.3	28.3	0.8717	0.0604	0.00178	0.92217
X7_G058	1589.6	149.6	0.1594	0.14635	0.00324	1.82064
X7_G059	217.7	21.1	0.2561	0.06098	0.00184	0.82065
X7_G060	1114.2	238.5	0.4597	0.12977	0.00282	3.63585
X7_G061	500.2	257.5	0.5322	0.17325	0.00378	10.90497
X7_G062	128.1	19.8	0.4607	0.06936	0.00208	1.38967
X7_G063	928.2	387.8	0.3683	0.20583	0.00444	11.81014
X7_G064	169	75.4	0.6425	0.16927	0.00384	9.19727
X7_G065	103.8	49.2	0.8767	0.17337	0.00406	9.38113
X7_G066	56.5	9	0.6119	0.07316	0.00284	1.44571
X7_G067	64.3	7.7	1.1419	0.06218	0.00288	0.80923
X7_G068	74.4	9.6	0.4782	0.06517	0.00252	1.08387
X7_G069	196.6	23.2	0.4904	0.06304	0.00188	0.96239
X7_G070	302.7	29.7	0.2498	0.06051	0.00168	0.82344
X7_G071	277.9	199.9	0.1748	0.25098	0.00546	22.12582
X7_G072	513.9	184.4	0.7403	0.16239	0.00358	7.10723
X7_G073	345.8	169.4	0.3569	0.17073	0.00376	10.64455
X7_G074	172.2	93.1	0.6377	0.17324	0.0039	11.08506
X7_G075	487.8	261.2	0.7433	0.17409	0.0038	11.04255
X7_G076	662.7	96.4	0.6663	0.06894	0.00162	1.25436
X7_G077	589.3	97.7	0.274	0.09913	0.00226	2.27616
X7_G078	247.1	33.3	0.125	0.06641	0.00178	1.28107
X7_G079	153.4	18.3	0.7428	0.06233	0.00204	0.89221
X7_G080	835	464.5	0.8196	0.24681	0.00532	16.74857
X7_G081	145.1	74.8	0.5374	0.1708	0.0039	10.70922
X7_G082	73.5	12.2	0.6417	0.075	0.00264	1.52394
X7_G083	23	2.4	0.4061	0.05659	0.00454	0.78023
X7_G084	274.6	155.9	1.3585	0.17265	0.00384	10.21463
X7_G085				-3.02419	12.77544	319.47839
X7_G086	127.7	30.4	0.7342	0.11791	0.00304	3.60419
X7_G087	1581.8	274.1	0.8267	0.15215	0.00334	3.36474
X7_G088	176.8	73.9	0.4752	0.16039	0.00366	8.49567
X7_G089	474	184.5	0.2964	0.15074	0.00332	7.71928
X7_G090	141	16.8	0.3002	0.06368	0.00204	1.03454
X7_G091	162.1	93	0.7618	0.17484	0.00396	11.47642
X7_G092	135	49	0.4932	0.16556	0.0039	7.65792
X7_G093	74.4	33.4	0.5659	0.17256	0.00426	9.49809
X7_G094	213.1	101.3	0.8681	0.16276	0.00368	8.92614
X7_G095	175.4	94.8	1.0666	0.16584	0.00378	9.78676
X7_G096	667.8	72.1	0.2592	0.06324	0.00154	0.94353
X7_G097	110.7	13.6	0.3376	0.08138	0.00266	1.31966
X7_G098	215.9	39.7	0.5105	0.07298	0.00192	1.71236
X7_G099				3.46795	15.13388	322.16617
X7_G100	273.3	26.4	0.1305	0.06048	0.00174	0.83916
X7_G101	173.1	20	0.4134	0.0619	0.00194	0.94347
X7_G102	112.1	46.6	0.7139	0.17366	0.00414	8.64961
X7_G103	78.5	49.1	1.3903	0.17047	0.00412	10.76961
X7_G104	201.6	27.7	0.4317	0.06698	0.0019	1.20365
X7_G105	3591.1	877	0.1092	0.16242	0.00352	5.75666

X7_G106	225.5	26.6	0.4136	0.06212	0.00182	0.96788
X7_G107	181	72.7	0.2449	0.19563	0.00444	10.85787
X7_G108	386.3	42.4	0.4365	0.07758	0.002	1.12532
X7_G109	130.4	16	0.4932	0.07413	0.00236	1.16216
X7_G110	250.3	134.4	1.0503	0.17422	0.00392	10.74296
X7_G111	575.9	70.3	0.6141	0.06261	0.00156	0.95362
X7_G112	276.5	134.6	0.629	0.17186	0.00386	10.1107
X7_G113	126.8	73.2	0.6336	0.1747	0.00404	11.78505
X7_G114	823.9	94.7	0.4974	0.07317	0.00176	1.08205
X7_G115	254.4	129.2	0.5977	0.17144	0.00384	10.50725
X7_G116	34.9	25.2	1.7771	0.17249	0.00462	11.5195
X7_G117	565.8	113.9	0.233	0.14901	0.00336	4.10789
X7_G118	165.3	91	1.5532	0.16735	0.00386	9.24343
X7_G119	67.5	7.5	0.3639	0.06166	0.0027	0.91397
X7_G120	127.2	22.2	0.4831	0.07004	0.0021	1.57197
X7_G121	660.4	276	0.1104	0.17908	0.00394	10.41416
X7_G122	108.4	14	0.6774	0.06174	0.0022	0.98198
X7_G123	158.5	86	0.769	0.17255	0.00396	10.80832
X7_G124	276.9	36.4	1.4189	0.05976	0.00174	0.80321
X7_G125	260.4	148.1	0.8241	0.17784	0.004	11.53297
X7_G126	575	55	0.0994	0.0605	0.00154	0.84201
X7_G127	21.6	9.5	2.1946	0.15696	0.0056	6.27577
X7_G128	389	138.4	0.754	0.18431	0.00416	7.97672
X7_G129	231.9	35.4	0.4527	0.15401	0.00384	2.87498
X7_G130	223.2	48.2	1.4331	0.07215	0.00198	1.57705
X7_G131	178.2	99.1	0.4969	0.17387	0.00398	11.65317
X7_G132	147.9	15.6	0.2825	0.06047	0.00212	0.8774
X7_G133	42.7	4.9	0.4282	0.06498	0.00332	0.97745
X7_G134	620.5	63.8	0.1146	0.06223	0.00156	0.92417
X7_G135	10.6	3.2	0.2492	0.1464	0.00656	6.05922
X7_G136	213.1	37.6	0.6099	0.07212	0.00196	1.58265
X7_G137				0.97411	0.0321	
X7_G138	530	261.5	0.5319	0.17449	0.00388	10.69594
X7_G139	530	228.6	0.4442	0.16624	0.0037	9.14035
X7_G140	967.2	129.2	1.4445	0.0888	0.0021	1.18909
X7_G141	85	9.6	0.4479	0.06391	0.00256	0.94869
X7_G142	189.2	23	0.5164	0.06424	0.002	0.9992
X7_G143	80.8	10.3	0.5895	0.06226	0.00252	0.99531
X7_G144	75.8	15.5	1.1747	0.06916	0.00248	1.52349
X7_G145	252.1	170.1	1.8928	0.17443	0.00396	10.89108
X7_G146	1573	444.6	0.4368	0.16326	0.00362	6.10929
X7_G147	272.8	155.5	1.0073	0.17473	0.00396	11.06745
X7_G148	685.2	126.4	0.9142	0.07212	0.00172	1.54003
X7_G149	446.9	166.4	1.0154	0.16252	0.00368	6.9253
X7_G150	1442.6	225.9	1.7708	0.18896	0.00424	3.29606
X7_G001	313.3	36.1	0.3386	0.06002	0.0018	0.93075
X7_G002	227.4	31.7	0.241	0.08722	0.00258	1.64426
X7_G003	204.4	121.6	1.2799	0.16908	0.00422	10.409
X7_G004	124.6	15.4	0.5888	0.06296	0.0025	0.97819
X7_G005	672.3	78.4	0.3039	0.08369	0.0022	1.32976
X7_G006	57.5	9	0.3865	0.10064	0.00416	1.92922
X7_G007				0.83037	0.0279	
X7_G008	198.7	24.2	0.1623	0.06474	0.00216	1.1213
X7_G009	127.2	14.7	0.3213	0.05786	0.00252	0.88311
X7_G010	283.2	33.5	0.4764	0.06524	0.0023	1.00122

X7_G011	304.6	92.8	0.054	0.15375	0.00406	6.74101
X7_G012	285.4	49.6	0.5108	0.07126	0.0021	1.58925
X7_G013	1379.1	119	0.1481	0.11328	0.00328	1.33231
X7_G014	295.4	38.2	0.384	0.12834	0.00358	2.0756
X7_G015	203.9		1.8866	0.0609	0.00208	0.90554
X7_G016	401.7	49.5	0.7973	0.04695	0.00164	0.68557
X7_G017	557.3	259.5	0.6428	0.17026	0.00418	9.74217
X7_G018	154.2	18.1	0.1597	0.06104	0.0022	1.01596
X7_G019	241	155.6	1.4149	0.17195	0.00428	11.13504
X7_G020	247.5	36.6	0.4776	0.06606	0.002	1.26216
X7_G021				-0.1785	0.43448	-46.3695
X7_G022	1128.5	419.8	0.2023	0.1536	0.00372	7.83813
X7_G023				0.26956	0.95424	-66.01025
X7_G024				0.80831	0.02058	
X7_G025				0.82223	0.02008	
X7_G026	177.3	97.1	1.0206	0.17279	0.00442	10.43762
X7_G027	111.5	13.4	0.4679	0.0623	0.0026	0.96946
X7_G028	104.1	49.7	1.2813	0.11798	0.00334	5.8404
X7_G029	268.8	127.7	0.4808	0.16795	0.00424	9.96411
X7_G030	27	3.3	0.4639	0.06608	0.00482	1.05337
X7_G031	861.9	412	0.0721	0.16563	0.00406	10.69979
X7_G032	478.9	110.8	0.0352	0.13185	0.00334	4.48794
X7_G033	109.4	16.8	0.6282	0.06601	0.00248	1.25746
X7_G034	356.4	52	0.908	0.06166	0.00204	1.04062
X7_G035	75.4	0.1	1.4598	0.42374	0.1795	0.05007
X7_G036				0.16395	3.71722	-4.20145
X7_G037	442.3	45.2	0.6437	0.07701	0.00234	1.01173
X7_G038	78	8.5	0.1992	0.0567	0.0032	0.86485
X7_G039	124.6	12.4	0.1223	0.06392	0.00264	0.91246
X7_G040	78.9	49.8	1.2162	0.1026	0.00412	6.38568
X7_G041	578.6	73.3	0.9108	0.09944	0.00274	1.6159
X7_G042	169.9	91.8	0.775	0.16621	0.00438	10.37772
X7_G043	260.1	32.5	0.9113	0.06084	0.00214	0.86599
X7_G044	224	143.6	0.7532	0.17234	0.00444	12.31272
X7_G045	617.9	122.3	0.6388	0.07026	0.00192	1.71787
X7_G046	309.4	167.5	0.4498	0.16827	0.0043	11.13327
X7_G047	122.9	15.7	0.8565	0.05828	0.00248	0.80351
X7_G048	288.9	175.4	1.2435	0.16639	0.00428	10.68436
X7_G049	546.4	57.5	0.2961	0.06121	0.00178	0.8784
X7_G050				-0.83379	2.6122	
X7_G051	114.2	19.1	0.9809	0.06987	0.00262	1.32798
X7_G052	186.5	17.7	0.4124	0.05711	0.00222	0.71202
X7_G053				-2.36281	15.75376	197.71669
X7_G054	224	27.3	1.0035	0.0588	0.0021	0.81156
X7_G055	327.7	26.6	0.6027	0.08278	0.00268	0.85534
X7_G056	64.9	7.8	0.9131	0.0833	0.0041	1.13901
X7_G057	208.7	127.9	0.909	0.19608	0.00516	13.1844
X7_G058	359.5	168.3	0.6859	0.17123	0.00448	9.71367
X7_G059	312.4	155	0.4061	0.16843	0.00442	10.51014
X7_G060	36.2	7.7	1.3325	0.06739	0.00386	1.5075
X7_G061	811.3	365.2	0.0762	0.15864	0.0041	9.74022
X7_G062	76.7	46.7	1.0567	0.17266	0.00504	11.33358
X7_G063	64.9	43.5	1.5547	0.15965	0.00482	10.35446
X7_G064	467.5	55.1	0.6791	0.06	0.00198	0.87163
X7_G065	156.4	30.4	0.8406	0.06872	0.00258	1.57639

X7_G066	587.8	166.1	0.4369	0.14135	0.00376	5.15638
X7_G067	315	44.2	0.6319	0.06493	0.00206	1.13189
X7_G068	135.1	15.1	0.3493	0.06283	0.00256	0.94573
X7_G069	55.8	7.9	0.9504	0.06117	0.00368	0.99921
X7_G070	208.3	118.5	0.589	0.17135	0.00466	11.50367
X7_G071	110.2	18.8	0.9504	0.06565	0.00268	1.28027
X7_G072	441	61.5	0.62	0.06371	0.00194	1.11041
X7_G073	386.5	213.1	0.6499	0.16807	0.00448	10.87795
X7_G074	157.3	27.8	0.5043	0.12165	0.00372	2.82799
X7_G075	660.1	355.9	1.7397	0.19544	0.00516	12.41644
X7_G076				-0.44886	1.24842	29.53474
X7_G077	607.8	278.4	0.2377	0.16286	0.00434	9.82078
X7_G078	208.3	116.5	0.7935	0.16689	0.00458	10.67773
X7_G079	370.4	136.3	0.2089	0.11816	0.00324	5.81632
X7_G080				0.82377	0.02262	933.68616
X7_G081	167.3	40.3	0.9936	0.1645	0.00492	4.27326
X7_G082	833.1	103.7	0.7219	0.06025	0.00178	0.91558
X7_G083				-0.00449	0.15588	-0.04885
X7_G084	197.4	84.1	0.4748	0.15904	0.00452	8.57847
X7_G085	227.4	145.3	1.0037	0.17117	0.0048	11.76639
X7_G086	575.6	252.8	0.7842	0.17685	0.0048	9.37706
X7_G087	1125	101.5	0.0819	0.06401	0.00186	0.8444
X7_G088	294.1	125.8	1.1136	0.13157	0.00372	6.30991
X7_G089	326.4	190.2	1.2821	0.17282	0.00478	10.56238
X7_G090				0.88547	0.03446	136.54172
X7_G091	213.1	30.3	0.3123	0.06443	0.00224	1.24585
X7_G092	566.4	228.7	1.1589	0.17101	0.00472	8.09241
X7_G093	446.2	221.6	0.4059	0.16989	0.00468	10.93351
X7_G094	77.1	45.7	0.5792	0.17343	0.00516	12.02997
X7_G095	550.8	73.3	0.7921	0.06236	0.00192	0.99207
X7_G096				0.89251	0.02432	
X7_G097				1.25383	8.11676	81.83141
X7_G098	407	280.4	0.7998	0.18164	0.00506	13.47494
X7_G099	114.2	35.1	0.9711	0.10298	0.00344	3.52941
X7_G100	184.7	35.1	0.8596	0.07236	0.00258	1.61004
X7_G101	878.4	108.8	0.276	0.06912	0.00206	1.16832
X7_G102	193.9	101.8	0.5473	0.17352	0.00506	11.08496
X7_G103	12.2	1.4	0.3661	0.06175	0.0104	0.90577
X7_G104	397.4	48.2	0.6056	0.06114	0.0022	0.93266
X7_G105	160.8	41.3	0.5759	0.11026	0.00364	3.589
X7_G106	290.2	158.7	0.8533	0.17493	0.0051	10.93842
X7_G107	117.6	22.7	1.1407	0.07308	0.00318	1.54009
X7_G108	460.6	282	0.5934	0.18166	0.0052	12.95529
X7_G109	155.1	94.3	0.6106	0.17484	0.00526	12.27859
X7_G110				801.42871		
X7_G111	874.9	137.5	1.3557	0.09209	0.00276	1.60035
X7_G112	227.9	149.9	1.2087	0.17155	0.005	11.62283
X7_G113	110.2	37.1	0.423	0.18103	0.00566	8.03521
X7_G114	735.1	73.3	0.0419	0.06094	0.0019	0.8992
X7_G115	768.2	355.5	1.4011	0.17817	0.00512	9.1665
X7_G116	217.9	63.9	1.0962	0.10835	0.00338	3.66615
X7_G117				-0.00017	0.96656	
X7_G118				2.09234	12.34322	-39.07341
X7_G119				0.83233	0.03732	970.76117
X7_G120	93.2	17.3	0.3749	0.07495	0.00294	1.84673

X7_G121	100.7	15.6	0.5031	0.07135	0.0029	1.42173
X7_G122				0.53392	0.64868	10.67298
X7_G123	472.8	79.7	0.669	0.06929	0.0022	1.43284
X7_G124	495.9	200	0.2689	0.16366	0.00482	8.82593
X7_G125	180.8	19.5	0.5709	0.07076	0.0028	0.95572
X7_G126	544.7	221.6	0.7699	0.18011	0.00534	9.18994
X7_G127	227.4	21	0.0399	0.06014	0.00236	0.8237
X7_G128	404.8	219.4	0.5971	0.17077	0.00512	11.07165
X7_G129	105.4	16.5	0.478	0.19145	0.0071	3.56125
X7_G130	284.5	150	0.6405	0.18187	0.00554	11.38308
X7_G131	438.3	79.3	1.3998	0.08272	0.00274	1.56556
X7_G132	73.2	14.7	1.1707	0.06911	0.00322	1.51902
X7_G133	64.1	11.9	0.8226	0.07214	0.00346	1.59218
X7_G134	324.2	34.5	0.1869	0.06024	0.00218	0.90766
X7_G135	149.9	24.9	0.5324	0.10071	0.0039	2.17408
X7_G136	1140.7	267.9	0.5448	0.1464	0.00444	4.45817
X7_G137	262.7	30.7	0.3384	0.06115	0.00254	0.96575
X7_G138	34	3.9	0.7693	0.05869	0.00528	0.82478
X7_G139	249.7	141	0.5159	0.17249	0.00532	11.68236
X7_G140	792.2	126.3	1.3085	0.13678	0.00428	2.72305
X7_G141	194.3	20.3	0.5702	0.05816	0.00246	0.77455
X7_G142	527.2	56.6	0.2271	0.06089	0.00206	0.91605
X7_G143	24	14	0.6194	0.17098	0.00652	11.64391
X7_G144	391.7	44.7	0.3599	0.06186	0.00218	0.95009
X7_G145	379.1	222.6	0.5062	0.1748	0.0054	12.19067

% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.36496	0.53556	0.0127	2764.8	53.4	2804.4	30.8
0.1359	0.25652	0.006	1472	30.8	1917.7	27.6
0.16342	0.29626	0.00694	1672.7	34.6	2073.3	28.4
0.28882	0.46957	0.01142	2481.7	50	2544.5	31.4
0.27956	0.4334	0.01078	2321	48.4	2482.2	32.4
0.02158	0.09851	0.00234	605.7	13.8	599.9	15.6
0.0093	0.03729	0.0009	236	5.6	284.2	9
0.05342	0.17211	0.00426	1023.7	23.4	1039	24.6
0.29094	0.48875	0.01158	2565.3	50.2	2589.1	30.4
0.25194	0.42443	0.01012	2280.6	45.8	2444.4	30.4
0.04164	0.15084	0.00366	905.7	20.6	910.2	22
0.0322	0.12712	0.00304	771.4	17.4	782.9	19.2
0.0523	0.15289	0.00394	917.1	22	940.5	25.8
0.02174	0.09757	0.0023	600.2	13.6	615.4	15.4
0.02652	0.10937	0.00262	669.1	15.2	675.6	17.6
0.02952	0.11893	0.00286	724.4	16.4	719.9	18.6
0.0252	0.10863	0.00258	664.8	15	662.8	17
0.50206	0.61596	0.01454	3093.8	58	3120.9	31
0.27036	0.46373	0.01088	2456	48	2534.3	29.8
0.0263	0.11169	0.00266	682.6	15.4	694.3	17.2
0.25324	0.44417	0.01042	2369.3	46.6	2472	29.6
0.02878	0.12319	0.00292	748.9	16.8	748	18
0.26532	0.4483	0.01068	2387.7	47.6	2493.8	30.4
0.02952	0.12522	0.00294	760.5	16.8	787.1	18
0.05564	0.15933	0.00412	953.1	23	976.9	26.6
0.01246	0.00546	0.00034	35.1	2.2	67.1	13
0.19538	0.34815	0.00818	1925.8	39.2	2233.5	29
0.19262	0.31582	0.00734	1769.3	36	2235.8	28.6
0.30082	0.49177	0.01172	2578.3	50.6	2612.5	30.6
0.03938	0.11157	0.00296	681.9	17.2	711	24
0.02882	0.11137	0.00272	680.7	15.8	678.6	18.8
0.2518	0.42836	0.01004	2298.3	45.4	2470.9	29.6
0.03692	0.09269	0.0026	571.4	15.4	590.5	24.6
0.03224	0.09671	0.0026	595.1	15.2	571	22
0.2659	0.45046	0.0108	2397.3	48	2486	30.6
0.26956	0.45429	0.01092	2414.3	48.4	2496.6	30.8
1.74854	0.48433	0.01716				
0.26058	0.45109	0.01054	2400.1	46.8	2506.1	29.6
0.22248	0.39859	0.00942	2162.5	43.4	2340.7	29.6
0.04336	0.1103	0.0031	674.5	18	670.2	26.8
0.06122	0.1081	0.00358	661.7	20.8	659.2	37
0.03826	0.12476	0.0031	757.9	17.8	814.8	21.8
0.22052	0.39075	0.0092	2126.3	42.6	2338.7	29.4
0.02458	0.10593	0.00254	649.1	14.8	639.4	16.8
0.02844	0.10288	0.00254	631.3	14.8	661.6	18.8
0.25942	0.43734	0.01026	2338.7	46	2496.1	29.6
0.26912	0.47013	0.01104	2484.1	48.4	2529.5	29.8
0.03076	0.10945	0.00274	669.6	16	668.3	20
0.2345	0.41191	0.00962	2223.6	44	2408.8	29.2
0.25906	0.44931	0.0106	2392.2	47.2	2484.5	29.8

0.0494	0.12758	0.00352	774	20.2	779.6	27.8
0.02612	0.10793	0.0026	660.7	15.2	657.4	17.6
0.28782	0.4512	0.01108	2400.6	49.2	2527.5	31.8
0.24694	0.40755	0.00966	2203.7	44.2	2433.5	30
0.03612	0.13724	0.00332	829	18.8	830	20.6
0.03142	0.11248	0.00278	687.1	16.2	713.4	19.8
0.02844	0.11077	0.00272	677.2	15.8	663.5	18.6
0.04466	0.09025	0.00212	557	12.6	1052.9	21.2
0.02572	0.09764	0.00242	600.6	14.2	608.4	17.8
0.08848	0.20326	0.00476	1192.8	25.6	1557.4	25.4
0.2657	0.45664	0.01074	2424.7	47.6	2515.1	29.8
0.04346	0.14536	0.00364	874.9	20.4	884.6	23
0.28558	0.41628	0.00974	2243.6	44.4	2589.5	29.8
0.23152	0.39418	0.00944	2142.2	43.6	2357.8	30.2
0.24214	0.39256	0.00956	2134.7	44.2	2376	31
0.05628	0.14335	0.00388	863.6	21.8	908.1	28.4
0.03718	0.09442	0.00266	581.6	15.6	602	24.6
0.04208	0.12066	0.00322	734.4	18.6	745.5	24.8
0.0298	0.11076	0.00274	677.2	16	684.5	19.2
0.02426	0.09873	0.0024	607	14	610	17
0.54088	0.63957	0.01512	3187.3	59.4	3189.3	31.2
0.17468	0.31752	0.00748	1777.6	36.6	2124.9	28.8
0.26188	0.45231	0.01068	2405.5	47.4	2492.6	30
0.27802	0.4642	0.01112	2458.1	49	2530.3	30.6
0.26978	0.46018	0.01082	2440.4	47.8	2526.7	29.8
0.03242	0.13201	0.00312	799.3	17.8	825.4	18.8
0.05744	0.16659	0.00394	993.3	21.8	1204.9	23.2
0.03668	0.13995	0.0034	844.4	19.2	837.3	20.6
0.03004	0.10384	0.00262	636.9	15.4	647.6	19.8
0.40596	0.49233	0.01154	2580.7	49.8	2920.6	30.6
0.27156	0.45488	0.01096	2416.9	48.6	2498.2	30.8
0.05468	0.14742	0.0039	886.5	22	940.1	27
0.06108	0.10003	0.00346	614.6	20.2	585.6	38.8
0.25308	0.42922	0.01018	2302.2	46	2454.4	30
719.7044	-0.76642	3.49302				
0.0998	0.22177	0.00548	1291.2	29	1550.5	28.4
0.0824	0.16044	0.00376	959.2	20.8	1496.2	25.2
0.2153	0.38428	0.00922	2096.2	43	2285.5	30
0.19008	0.37151	0.00876	2036.5	41.2	2198.8	29
0.0343	0.11786	0.00298	718.2	17.2	721.2	21
0.28992	0.4762	0.01144	2510.7	50	2562.7	30.8
0.198	0.33558	0.00816	1865.4	39.4	2191.7	30.4
0.25562	0.39934	0.00998	2166	46	2387.4	32.2
0.2244	0.39789	0.00952	2159.3	44	2330.5	30
0.24766	0.42813	0.01028	2297.3	46.4	2414.9	30.6
0.02496	0.10825	0.00258	662.6	15	674.7	16.8
0.04412	0.11764	0.00304	717	17.6	854.4	24
0.04818	0.17023	0.00414	1013.4	22.8	1013.2	23
462.39788	0.67398	2.98772				
0.0254	0.10066	0.00246	618.3	14.4	618.7	17.4
0.03068	0.11059	0.00278	676.2	16.2	674.7	19.8
0.22606	0.36136	0.00886	1988.6	42	2301.8	31.2
0.28678	0.45835	0.01138	2432.3	50.4	2503.4	32.2
0.03598	0.13038	0.0032	790	18.2	802.3	20.8
0.14006	0.25714	0.00602	1475.2	30.8	1939.9	27.6

0.02964	0.11303	0.00278	690.3	16.2	687.4	19.2
0.27404	0.40267	0.00968	2181.3	44.4	2511	30.8
0.03114	0.10523	0.00254	645	14.8	765.5	19
0.03814	0.11374	0.0029	694.4	16.8	783	22.2
0.26922	0.44737	0.01068	2383.5	47.6	2501.1	30.4
0.02564	0.1105	0.00264	675.7	15.4	680	17.2
0.25288	0.42683	0.01018	2291.4	46	2444.9	30.2
0.30216	0.48941	0.01186	2568.1	51.4	2587.5	31.4
0.02836	0.10728	0.00256	656.9	15	744.6	17.8
0.26318	0.44464	0.0106	2371.4	47.4	2480.6	30.4
0.33462	0.48453	0.0128	2547	55.6	2566.2	35.2
0.10296	0.2	0.00476	1175.3	25.6	1655.9	26.8
0.23636	0.40074	0.00968	2172.4	44.6	2362.4	30.6
0.03988	0.10754	0.00298	658.4	17.4	659.2	25.2
0.0492	0.16282	0.0041	972.4	22.8	959.2	24.4
0.2568	0.42191	0.00996	2269.1	45.2	2472.3	29.8
0.03554	0.11539	0.00298	704	17.2	694.6	22.2
0.27546	0.45444	0.01096	2415	48.6	2506.8	31
0.02456	0.09752	0.0024	599.9	14	598.6	17.2
0.28946	0.47049	0.01124	2485.7	49.2	2567.3	30.6
0.0231	0.10097	0.00242	620.1	14.2	620.3	16.2
0.22756	0.29008	0.0087	1641.9	43.4	2015.1	40.8
0.20036	0.314	0.0075	1760.4	36.8	2228.4	29.6
0.07714	0.13543	0.00332	818.8	18.8	1375.4	26.4
0.04586	0.15858	0.0039	948.9	21.6	961.2	23
0.2966	0.48624	0.01172	2554.4	50.8	2576.9	31
0.03136	0.10527	0.00272	645.2	15.8	639.6	20.6
0.04908	0.10913	0.00322	667.7	18.8	692.3	29.6
0.02502	0.10774	0.00258	659.6	15	664.6	17
0.27068	0.30028	0.01032	1692.7	51.2	1984.4	49.2
0.04568	0.15921	0.0039	952.4	21.6	963.4	22.8
	218.64545	98.02118				
0.2661	0.44472	0.01054	2371.7	47	2497.1	30.2
0.22754	0.39892	0.00946	2164.1	43.6	2352.2	29.8
0.03088	0.09715	0.00232	597.7	13.6	795.5	18.6
0.03822	0.10769	0.0029	659.3	16.8	677.4	23.8
0.0322	0.11285	0.00284	689.3	16.4	703.4	20.4
0.04056	0.11599	0.00314	707.4	18.2	701.4	24.6
0.0559	0.15983	0.00424	955.8	23.6	939.9	27.4
0.27608	0.453	0.01086	2408.6	48.2	2513.9	30.8
0.15148	0.27149	0.00642	1548.4	32.6	1991.6	28.2
0.28022	0.45955	0.01102	2437.6	48.6	2528.8	30.8
0.04028	0.15493	0.0037	928.5	20.6	946.5	20.8
0.17482	0.30916	0.00738	1736.6	36.4	2101.9	29.2
0.08242	0.12655	0.003	768.2	17.2	1480.1	25.4
0.02718	0.11251	0.00246	687.3	14.2	668	18.2
0.04752	0.13676	0.00306	826.3	17.4	987.3	23.4
0.25836	0.44662	0.00966	2380.2	43	2471.9	30.6
0.03762	0.11271	0.00276	688.5	16	692.7	23.4
0.03422	0.11528	0.00246	703.3	14.2	858.8	19.6
0.07628	0.13907	0.00374	839.4	21.2	1091.3	33
884.23328	37.88874	7.73188				
0.0365	0.12565	0.00288	763	16.4	763.6	21.8
0.03714	0.11073	0.00276	677	16	642.7	23.8
0.03424	0.11134	0.0026	680.5	15	704.4	21.4

0.17602	0.31808	0.00706	1780.3	34.6	2078	30.6
0.04594	0.1618	0.00358	966.8	19.8	966	23
0.03732	0.08532	0.0019	527.8	11.2	859.9	21.2
0.05616	0.11733	0.0026	715.2	15	1140.8	24.4
0.03008	0.10788	0.00246	660.4	14.4	654.7	19.8
0.0235	0.10594	0.00232	649.1	13.6	530.1	17
0.23802	0.41511	0.00882	2238.2	40.2	2410.7	29.8
0.03568	0.12075	0.00282	734.9	16.2	711.9	22
0.27592	0.46982	0.01008	2482.8	44.2	2534.5	30.6
0.03732	0.13862	0.00308	836.9	17.4	828.9	21.2
136.4517	1.88467	4.32478				
0.1887	0.37021	0.00774	2030.4	36.4	2212.6	28.8
225.86502	-1.77661	3.31936				
103.49984	17.93616	0.90882				
60.59224	16.4647	0.49974				
0.26526	0.43825	0.00956	2342.8	42.8	2474.4	31.2
0.03898	0.1129	0.0028	689.6	16.2	688.2	24.2
0.1642	0.35914	0.00822	1978.1	39	1952.4	31.6
0.25	0.43042	0.00926	2307.6	41.8	2431.5	30.6
0.07358	0.11565	0.00394	705.5	22.8	730.6	42
0.26052	0.46869	0.00984	2477.8	43.2	2497.4	30
0.11258	0.24694	0.00526	1422.7	27.2	1728.7	27.4
0.04584	0.13821	0.00332	834.5	18.8	826.8	25.2
0.0334	0.12244	0.00278	744.6	16	724.2	20.8
0.01608	0.00086	0.00024	5.5	1.6	49.6	24.6
91.19034	-0.18592	1.25776				
0.02982	0.09532	0.00212	586.9	12.4	709.7	19.2
0.0472	0.11067	0.00312	676.6	18.2	632.8	29.8
0.03632	0.10356	0.00256	635.2	15	658.4	23.4
0.25694	0.45153	0.01142	2402.1	50.8	2030.3	41.6
0.04368	0.11789	0.00256	718.4	14.8	976.4	22
0.27238	0.45298	0.01002	2408.5	44.4	2469.1	31.8
0.0297	0.10327	0.00238	633.5	14	633.4	19.8
0.31568	0.51833	0.01126	2692.1	47.8	2628.5	31.6
0.04614	0.17738	0.00382	1052.6	21	1015.2	22.4
0.28324	0.48002	0.01032	2527.4	45	2534.3	31.2
0.03306	0.10002	0.00246	614.5	14.4	598.8	22.2
0.27266	0.46586	0.01002	2465.4	44	2496.1	31.2
0.02506	0.10412	0.00226	638.5	13.2	640.1	17.2
0.04816	0.1379	0.00332	832.8	18.8	858	25.8
0.02672	0.09045	0.00214	558.2	12.6	545.9	19.2
361.5033	-0.6071	4.07758				
0.02816	0.10013	0.00232	615.2	13.6	603.3	19.4
0.02682	0.07497	0.0017	466	10.2	627.6	18.6
0.05346	0.09921	0.00278	609.8	16.4	772	30.6
0.34502	0.48782	0.01066	2561.2	46.2	2692.9	32.2
0.25134	0.41157	0.00886	2222.1	40.4	2408	31.2
0.27358	0.45272	0.00978	2407.3	43.4	2480.8	31.6
0.08338	0.1623	0.00488	969.5	27	933.4	39.4
0.24926	0.44546	0.00948	2375	42.2	2410.5	30.8
0.33086	0.47623	0.01138	2510.8	49.6	2551	35.2
0.3126	0.47054	0.0115	2485.9	50.4	2467	36
0.02816	0.10539	0.00238	645.9	13.8	636.5	19
0.05754	0.16642	0.00404	992.4	22.4	960.9	27.8

0.13522	0.26467	0.00568	1513.7	29	1845.4	29
0.03512	0.12648	0.00284	767.8	16.2	768.7	21
0.0373	0.1092	0.00268	668.1	15.6	675.9	23.4
0.05788	0.11852	0.00354	722	20.4	703.4	34
0.31006	0.48707	0.01074	2558	46.6	2564.9	32.8
0.05058	0.14149	0.00352	853.1	19.8	837	27.2
0.03312	0.12646	0.0028	767.6	16	758.4	20.2
0.287	0.46956	0.01012	2481.6	44.4	2512.8	31.8
0.08422	0.16866	0.00386	1004.7	21.2	1363	28.6
0.3247	0.46093	0.00986	2443.7	43.6	2636.4	32
76.2161	-0.47738	0.89392				
0.25876	0.43752	0.00938	2339.5	42	2418.1	31.6
0.29074	0.46421	0.01024	2458.1	45	2495.5	32.6
0.15776	0.35713	0.00776	1968.6	36.8	1948.8	30.4
36.13388	8.22324	0.29486				
0.12456	0.18847	0.00434	1113.1	23.6	1688.2	31
0.02664	0.11025	0.0024	674.2	14	660	17.8
1.69364	0.07885	0.0811				
0.2407	0.39134	0.00878	2129	40.6	2294.3	33
0.32754	0.49874	0.01116	2608.4	48	2586	33.6
0.25204	0.38469	0.0083	2098.2	38.6	2375.6	31.8
0.02414	0.0957	0.00208	589.2	12.2	621.6	16.8
0.17588	0.34795	0.00768	1924.8	36.8	2019.8	31.4
0.28924	0.44341	0.0097	2365.9	43.4	2485.4	32.8
6.7263	1.11878	0.05548				
0.0421	0.14028	0.00324	846.2	18.4	821.5	23.6
0.22038	0.34333	0.00744	1902.7	35.8	2241.4	31.8
0.29784	0.46692	0.01012	2470	44.4	2517.5	32.6
0.35656	0.50326	0.01182	2627.8	50.6	2606.7	35.6
0.02992	0.11543	0.00256	704.2	14.8	699.8	19.2
		238.97634				
234.80584	0.47351	2.90638				
0.37218	0.53822	0.01176	2776	49.2	2713.5	33.4
0.11512	0.24866	0.00594	1431.6	30.6	1533.8	32.4
0.0561	0.16144	0.00384	964.8	21.4	974.1	26.8
0.03414	0.12264	0.00268	745.7	15.4	785.9	20.2
0.32012	0.46347	0.01048	2454.9	46.2	2530.3	34.4
0.1478	0.10642	0.00614	651.9	35.8	654.8	86
0.0327	0.11068	0.00258	676.7	15	669	21
0.11576	0.23615	0.0056	1366.7	29.2	1547.1	32.2
0.31522	0.45367	0.01018	2411.5	45.2	2517.9	34.2
0.06472	0.15289	0.00398	917.1	22.2	946.5	31.2
0.36624	0.51743	0.01136	2688.3	48.2	2676.4	34
0.3675	0.50951	0.01184	2654.5	50.6	2625.9	35.6
	-0.05533	0.69806				
0.047	0.12608	0.00278	765.5	16	970.3	23.2
0.33546	0.49157	0.01096	2577.5	47.4	2574.5	34.4
0.24566	0.32203	0.00764	1799.6	37.2	2235	35.4
0.0276	0.10706	0.00238	655.7	13.8	651.3	18.4
0.26012	0.37327	0.00814	2044.8	38.2	2354.8	33
0.11248	0.2455	0.00558	1415.2	28.8	1564	30.8
65.3931	-0.13549	0.81294				
128.9943	8.46201	1.12632				
0.07062	0.17877	0.00446	1060.3	24.4	1062.3	30.6

0.05594	0.14457	0.00362	870.5	20.4	898.1	28.4
10.26214	0.14503	0.12102				
0.04458	0.15004	0.00336	901.2	18.8	902.7	23.2
0.2568	0.39127	0.00862	2128.7	40	2320.2	33.6
0.03646	0.098	0.00238	602.7	14	681.1	23
0.26854	0.3702	0.00816	2030.3	38.4	2357.1	33.8
0.03128	0.09936	0.00238	610.7	14	610.1	21
0.32714	0.47038	0.01048	2485.2	46	2529.2	34.8
0.12564	0.13496	0.00354	816.1	20.2	1540.9	36
0.34206	0.45409	0.01026	2413.4	45.4	2555	35.4
0.0507	0.13732	0.00314	829.5	17.8	956.7	25
0.06838	0.15947	0.00426	953.8	23.6	938.1	32.8
0.07392	0.16013	0.0044	957.5	24.4	967.2	34.4
0.03214	0.10931	0.00254	668.7	14.8	655.8	20.8
0.08136	0.15662	0.00396	938	22	1172.8	32.2
0.13296	0.22095	0.00488	1286.9	25.8	1723.2	31.2
0.03896	0.11458	0.00282	699.3	16.4	686.3	24
0.07142	0.10196	0.00378	625.9	22.2	610.7	44.6
0.35562	0.49139	0.0111	2576.7	48	2579.3	35.8
0.08332	0.14444	0.00324	869.7	18.2	1334.8	28.6
0.03166	0.09662	0.00238	594.6	14	582.4	21.6
0.03042	0.10915	0.00248	667.8	14.4	660.3	19.8
0.44476	0.49409	0.01416	2588.3	61	2576.2	44.6
0.03266	0.11144	0.00256	681.1	14.8	678.1	20.8
0.3712	0.50599	0.01132	2639.5	48.4	2619.2	35.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2833.4	36	-1.4	-2.4	2833.4	36
2441.4	37	-23.2	-39.7		
2499.4	37	-19.3	-33.1		
2595.4	39	-2.5	-4.4	2595.4	39
2617.3	40.6	-6.5	-11.3	2617.3	40.6
578.9	54.2	1	4.6	605.7	13.8
702.8	58.2	-17	-66.4		
1071.7	57.2	-1.5	-4.5	1023.7	23.4
2608.3	36.8	-0.9	-1.7	2608.3	36.8
2584.1	37.6	-6.7	-11.7	2584.1	37.6
921.9	56	-0.5	-1.8	905.7	20.6
816.2	54.2	-1.5	-5.5	771.4	17.4
996.4	68	-2.5	-8	917.1	22
672.4	51.2	-2.5	-10.7	600.2	13.6
698.1	56.4	-1	-4.2	669.1	15.2
706.5	57.4	0.6	2.5	724.4	16.4
656.4	55.2	0.3	1.3	664.8	15
3138.8	34.6	-0.9	-1.4	3138.8	34.6
2598	36.2	-3.1	-5.5	2598	36.2
733.3	52.4	-1.7	-6.9	682.6	15.4
2558	36.4	-4.2	-7.4	2558	36.4
745.9	51.4	0.1	0.4	748.9	16.8
2581.9	37.6	-4.3	-7.5	2581.9	37.6
863.7	47.6	-3.4	-11.9	760.5	16.8
1031.6	68	-2.4	-7.6	953.1	23
1442	364.4	-47.7	-97.6		
2529.4	36.8	-13.8	-23.9		
2695.9	35.4	-20.9	-34.4		
2639.6	37.2	-1.3	-2.3	2639.6	37.2
804.8	80.6	-4.1	-15.3	681.9	17.2
672.4	62.2	0.3	1.2	680.7	15.8
2616.6	36	-7	-12.2	2616.6	36
665.1	101.2	-3.2	-14.1	571.4	15.4
476.4	94.6	4.2	24.9	595.1	15.2
2559.7	38	-3.6	-6.3	2559.7	38
2564.6	38	-3.3	-5.9	2564.6	38
2593.5	36	-4.2	-7.5	2593.5	36
2500.3	37.2	-7.6	-13.5	2500.3	37.2
656.4	100.4	0.6	2.8	674.5	18
651.5	147.6	0.4	1.6	661.7	20.8
974	61	-7	-22.2	757.9	17.8
2530	37	-9.1	-16		
606.1	56.8	1.5	7.1	649.1	14.8
767.2	62.4	-4.6	-17.7	631.3	14.8
2627.3	36	-6.3	-11	2627.3	36
2566.7	36.4	-1.8	-3.2	2566.7	36.4
664.8	68.8	0.2	0.7	669.6	16
2569.8	36	-7.7	-13.5	2569.8	36
2561.5	36.8	-3.7	-6.6	2561.5	36.8

795.9	90	-0.7	-2.7	774	20.2
646.3	58.2	0.5	2.2	660.7	15.2
2631.6	39.2	-5	-8.8	2631.6	39.2
2632.1	36.8	-9.4	-16.3		
833.4	56.2	-0.1	-0.5	829	18.8
797.8	61.8	-3.7	-13.9	687.1	16.2
617.9	63.6	2.1	9.6	677.2	15.8
2303.7	38	-47.1	-75.8		
638.5	65	-1.3	-5.9	600.6	14.2
2094.9	38.2	-23.4	-43.1		
2589.3	36.4	-3.6	-6.4	2589.3	36.4
909.5	61.8	-1.1	-3.8	874.9	20.4
2873	35	-13.4	-21.9		
2550.4	38	-9.1	-16		
2590.4	39	-10.2	-17.6		
1018.4	78.6	-4.9	-15.2	863.6	21.8
680.3	99	-3.4	-14.5	581.6	15.6
779.8	81.2	-1.5	-5.8	734.4	18.6
709.6	63.4	-1.1	-4.6	677.2	16
621.9	59.8	-0.5	-2.4	607	14
3191	34.4	-0.1	-0.1	3191	34.4
2480.7	37.2	-16.3	-28.3		
2564.8	36.8	-3.5	-6.2	2564.8	36.8
2589.2	37.6	-2.9	-5.1	2589.2	37.6
2597.4	36.4	-3.4	-6	2597.4	36.4
896.9	48.4	-3.2	-10.9	799.3	17.8
1607.8	42.4	-17.6	-38.2		
819.3	56	0.8	3.1	844.4	19.2
685.5	69.8	-1.6	-7.1	636.9	15.4
3164.4	34.2	-11.6	-18.4		
2565.5	38.2	-3.3	-5.8	2565.5	38.2
1068.5	70.8	-5.7	-17	886.5	22
475.6	177.4	4.9	29.2	614.6	20.2
2583.5	37.2	-6.2	-10.9	2583.5	37.2
1924.8	46.2	-16.7	-32.9		
2370.2	37.4	-35.9	-59.5		
2459.8	38.6	-8.3	-14.8	2459.8	38.6
2354.3	37.6	-7.4	-13.5	2354.3	37.6
731	67.8	-0.4	-1.7	718.2	17.2
2604.5	37.8	-2	-3.6	2604.5	37.8
2513.3	39.6	-14.9	-25.8		
2582.6	41.2	-9.3	-16.1		
2484.5	38.2	-7.3	-13.1	2484.5	38.2
2516.1	38.4	-4.9	-8.7	2516.1	38.4
716.3	51.8	-1.8	-7.5	662.6	15
1230.6	64.2	-16.1	-41.7		
1013.4	53.4	0	0	1013.4	22.8
620.8	62	-0.1	-0.4	618.3	14.4
670.7	67	0.2	0.8	676.2	16.2
2593.2	39.8	-13.6	-23.3		
2562.3	40.4	-2.8	-5.1	2562.3	40.4
837.2	59	-1.5	-5.6	790	18.2
2481	36.6	-24	-40.5		

678.2	62.6	0.4	1.8	690.3	16.2
2790.1	37.2	-13.1	-21.8		
1136.1	51.2	-15.7	-43.2		
1045	64.2	-11.3	-33.5	694.4	16.8
2598.6	37.6	-4.7	-8.3	2598.6	37.6
695	53.2	-0.6	-2.8	675.7	15.4
2575.8	37.6	-6.3	-11	2575.8	37.6
2603.2	38.6	-0.7	-1.3	2603.2	38.6
1018.7	48.8	-11.8	-35.5	656.9	15
2571.8	37.4	-4.4	-7.8	2571.8	37.4
2582	44.8	-0.7	-1.4	2582	44.8
2334.6	38.6	-29	-49.7		
2531.3	38.8	-8	-14.2	2531.3	38.8
662.3	93.8	-0.1	-0.6	658.4	17.4
929.5	61.6	1.4	4.6	972.4	22.8
2644.4	36.6	-8.2	-14.2	2644.4	36.6
665.1	76.4	1.3	5.8	704	17.2
2582.5	38.4	-3.7	-6.5	2582.5	38.4
594.9	63	0.2	0.8	599.9	14
2632.8	37.4	-3.2	-5.6	2632.8	37.4
621.5	55	0	-0.2	620.1	14.2
2423.2	60.6	-18.5	-32.2		
2692	37.2	-21	-34.6		
2390.9	42.4	-40.5	-65.8		
990.2	55.8	-1.3	-4.2	948.9	21.6
2595.2	38.2	-0.9	-1.6	2595.2	38.2
620.4	75.6	0.9	4	645.2	15.8
773.7	107.6	-3.6	-13.7	667.7	18.8
682	53.6	-0.7	-3.3	659.6	15
2304.3	77	-14.7	-26.5		
989.3	55.2	-1.1	-3.7	952.4	21.6
2601.2	37	-5	-8.8	2601.2	37
2520.1	37.4	-8	-14.1	2520.1	37.4
1399.8	45.4	-24.9	-57.3		
738.7	84.8	-2.7	-10.7	659.3	16.8
749.5	65.8	-2	-8	689.3	16.4
683.1	86.4	0.9	3.6	707.4	18.2
903.5	74	1.7	5.8	955.8	23.6
2600.6	37.8	-4.2	-7.4	2600.6	37.8
2489.7	37.4	-22.3	-37.8		
2603.5	37.8	-3.6	-6.4	2603.5	37.8
989.3	48.6	-1.9	-6.1	928.5	20.6
2482	38.2	-17.4	-30		
2733.1	37	-48.1	-71.9		
604.3	64.8	2.9	13.7	687.3	14.2
1365.4	57	-16.3	-39.5		
2548.6	41.8	-3.7	-6.6	2548.6	41.8
706.9	84.4	-0.6	-2.6	688.5	16
1285.4	51.2	-18.1	-45.3		
1635.9	76.8	-23.1	-48.7		
765.9	70.2	-0.1	-0.4	763	16.4
524.5	95.6	5.3	29.1		
782.1	74	-3.4	-13	680.5	15

2388.1	45	-14.3	-25.4		
964.9	60.2	0.1	0.2	966.8	19.8
1852.7	52.4	-38.6	-71.5		
2075.4	49.2	-37.3	-65.5		
635.7	73.6	0.9	3.9	660.4	14.4
46.7	83.4	22.4	1290.5		
2560.2	41	-7.2	-12.6	2560.2	41
640.6	77.6	3.2	14.7	734.9	16.2
2576.7	41.6	-2	-3.6	2576.7	41.6
808.3	63.4	1	3.5	836.9	17.4
2386.4	41.2	-8.2	-14.9	2386.4	41.2
2584.9	42.8	-5.3	-9.4	2584.9	42.8
684.4	89	0.2	0.8	689.6	16.2
1925.9	50.8	1.3	2.7	1925.9	50.8
2537.3	42.4	-5.1	-9.1	2537.3	42.4
808.9	152.6	-3.4	-12.8	705.5	22.8
2514	41.2	-0.8	-1.4	2514	41.2
2122.7	44.4	-17.7	-33		
806.7	78.6	0.9	3.5	834.5	18.8
662.3	70.8	2.8	12.4	744.6	16
3995.5	633.6	-88.8	-99.9		
1121.4	60.6	-17.3	-47.7		
479.9	124.8	6.9	41		
739	87.4	-3.5	-14	635.2	15
1671.7	74.2	18.3	43.7		
1613.6	51.4	-26.4	-55.5		
2519.8	44.2	-2.5	-4.4	2519.8	44.2
633.6	75.8	0	0	633.5	14
2580.5	43	2.4	4.3	2580.5	43
936	56	3.7	12.5	1052.6	21
2540.5	42.8	-0.3	-0.5	2540.5	42.8
540.3	93	2.6	13.7	614.5	14.4
2521.7	43.2	-1.2	-2.2	2521.7	43.2
646.6	62.4	-0.3	-1.3	638.5	13.2
924.5	77	-2.9	-9.9	832.8	18.8
495.8	85.6	2.2	12.6	558.2	12.6
559.7	77.8	2	9.9	615.2	13.6
1264	63.2	-25.7	-63.1		
1276.3	96	-21	-52.2		
2793.8	43	-4.9	-8.3	2793.8	43
2569.7	43.8	-7.7	-13.5	2569.7	43.8
2542.1	44	-3	-5.3	2542.1	44
849.9	119	3.9	14.1	969.5	27
2441.2	43.8	-1.5	-2.7	2441.2	43.8
2583.6	48.8	-1.6	-2.8	2583.6	48.8
2452	51	0.8	1.4	2452	51
603.6	71.4	1.5	7	645.9	13.8
890.3	77.6	3.3	11.5	992.4	22.4

2243.8	46	-18	-32.5		
772.1	66.8	-0.1	-0.6	767.8	16.2
702.5	86.8	-1.2	-4.9	668.1	15.6
645.2	129.2	2.6	11.9	722	20.4
2570.9	45.4	-0.3	-0.5	2570.9	45.4
795.2	85.6	1.9	7.3	853.1	19.8
732	64.6	1.2	4.9	767.6	16
2538.5	44.6	-1.2	-2.2	2538.5	44.6
1980.6	54.4	-26.3	-49.3		
2788.5	43.2	-7.3	-12.4	2788.5	43.2
2485.6	45	-3.2	-5.9	2485.6	45
2526.7	46	-1.5	-2.7	2526.7	46
1928.6	49.2	1	2.1	1928.6	49.2
2502.4	50.4	-34.1	-55.5		
612.6	63.8	2.1	10.1	674.2	14
2445.5	48.2	-7.2	-12.9	2445.5	48.2
2569.1	46.8	0.9	1.5	2569.1	46.8
2623.5	45.2	-11.7	-20		
742	61.4	-5.2	-20.6	589.2	12.2
2119	49.6	-4.7	-9.2	2119	49.6
2585.1	46.2	-4.8	-8.5	2585.1	46.2
755.8	73.4	3	12	846.2	18.4
2567.6	46.2	-15.1	-25.9		
2556.6	46.2	-1.9	-3.4	2556.6	46.2
2591	49.6	0.8	1.4	2591	49.6
686.5	65.8	0.6	2.6	704.2	14.8
2667.9	46.2	2.3	4.1	2667.9	46.2
1678.5	61.8	-6.7	-14.7	1678.5	61.8
996.1	72.4	-1	-3.1	964.8	21.4
902.3	61.4	-5.1	-17.4	745.7	15.4
2591.9	48.6	-3	-5.3	2591.9	48.6
665.5	360.6	-0.4	-2	651.9	35.8
644.2	77.4	1.1	5.1	676.7	15
1803.7	60	-11.7	-24.2		
2605.4	48.6	-4.2	-7.4	2605.4	48.6
1016.2	88.2	-3.1	-9.7	917.1	22.2
2668.1	47.4	0.4	0.8	2668.1	47.4
2604.5	50.2	1.1	1.9	2604.5	50.2
1469.2	56.8	-21.1	-47.9		
2572.8	48.8	0.1	0.2	2572.8	48.8
2662.3	51.8	-19.5	-32.4		
637.1	67	0.7	2.9	655.7	13.8
2635.9	47.8	-13.2	-22.4		
1771.9	57	-9.5	-20.1		
1067.2	78.8	-0.2	-0.6	1060.3	24.4

967.5	83	-3.1	-10	870.5	20.4
907.4	65.4	-0.2	-0.7	901.2	18.8
2493.8	49.6	-8.3	-14.6	2493.8	49.6
950.5	81	-11.5	-36.6	602.7	14
2653.9	49.2	-13.9	-23.5		
608.6	84.8	0.1	0.3	610.7	14
2565.2	50.2	-1.7	-3.1	2565.2	50.2
2754.7	61	-47	-70.4		
2670	50.4	-5.5	-9.6	2670	50.4
1262.6	64.8	-13.3	-34.3	829.5	17.8
902	96	1.7	5.7	953.8	23.6
989.9	97.6	-1	-3.3	957.5	24.4
612.2	78.2	2	9.2	668.7	14.8
1637.2	72	-20	-42.7		
2304.3	52	-25.3	-44.2		
644.5	89.2	1.9	8.5	699.3	16.4
555.6	196.2	2.5	12.6	625.9	22.2
2582	51.4	-0.1	-0.2	2582	51.4
2186.8	54.4	-34.8	-60.2		
535.8	92.6	2.1	11	594.6	14
635.4	72.8	1.1	5.1	667.8	14.4
2567.3	63.8	0.5	0.8	2567.3	63.8
669.3	75.4	0.4	1.8	681.1	14.8
2604.1	51.4	0.8	1.4	2604.1	51.4

Sample 24 Sobat @ Nasser 52 grain analysed 39 concordant ages 75.0%

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X24_G001	629.5	32	0.1014	0.05302	0.0019	0.39256
X24_G002				0.65344	6.06476	28.29853
X24_G003	142.8	18	0.5237	0.0638	0.00282	1.04274
X24_G004	416.7	38.3	0.1682	0.06094	0.00204	0.80873
X24_G005	458.1	63.5	0.5703	0.06295	0.00196	1.10179
X24_G006	1752	95.3	1.1919	0.10059	0.00292	0.64784
X24_G007	1121.1	124.4	0.849	0.05646	0.00168	0.73584
X24_G008	867.9	91.7	0.8186	0.06323	0.00194	0.79444
X24_G009	155.6	15.7	0.0767	0.05837	0.00254	0.86845
X24_G010	182.7	20.2	0.0618	0.07399	0.00288	1.18459
X24_G011	263	38.9	1.0559	0.06281	0.00226	1.06483
X24_G012	120.7	12	0.0915	0.05737	0.00298	0.83044
X24_G013	285.7	33.6	0.299	0.06171	0.0023	0.98244
X24_G014	1449.6	122.8	0.5496	0.1044	0.00296	1.10974
X24_G015	299.5	29.6	0.3044	0.05481	0.00224	0.73818
X24_G016	15.8	8.5	0.5739	0.16801	0.00852	10.79651
X24_G017	311.8	39.9	0.6416	0.06693	0.00246	1.06808
X24_G018	240.9	27.3	0.7461	0.05476	0.00228	0.7522
X24_G019	1037.8	134.5	0.3693	0.06438	0.0019	1.11646
X24_G020	140.4	17.6	0.3769	0.06538	0.00284	1.09351
X24_G021	1218.6	98.6	0.2377	0.06965	0.00208	0.77533
X24_G022	391.1	68.3	1.1162	0.06707	0.00214	1.29448
X24_G023	938.3	104.2	0.5614	0.05676	0.00178	0.80094
X24_G024	237.9	120.2	0.3809	0.16623	0.00462	10.5476
X24_G025	212.8	25.5	0.8927	0.0576	0.00238	0.80174
X24_G026	1012.7	94.2	0.1882	0.05592	0.00174	0.73601
X24_G027	114.8	17.8	0.7769	0.06174	0.00312	1.14656
X24_G028	198	21.2	0.7678	0.06089	0.00268	0.78487
X24_G029	589.1	101.9	1.0718	0.06435	0.002	1.24341
X24_G030	741.8	92.4	0.7394	0.06786	0.00214	1.05172
X24_G031	767.9	80.4	0.3208	0.05817	0.00188	0.85612
X24_G032	171.9	25.7	0.544	0.06334	0.00246	1.20275
X24_G033	362	38.1	0.1475	0.05987	0.00216	0.89725
X24_G034	2032.8	173.1	0.0787	0.06338	0.0019	0.782
X24_G035	813.7	131.5	0.703	0.0632	0.00188	1.24757
X24_G036	159.6	27	0.689	0.06241	0.00252	1.28474
X24_G037	192.1	29.3	0.4191	0.06456	0.0024	1.29016
X24_G038	1245.7	230.2	1.8547	0.06511	0.00206	1.12393
X24_G039	1443.2	206.2	2.6793	0.08682	0.0027	1.06632
X24_G040	241.4	37.6	0.2799	0.06685	0.00254	1.41871
X24_G041	631.5	82	0.3264	0.06069	0.002	1.06502
X24_G042	158.1	16.5	0.2415	0.06125	0.00308	0.88171
X24_G043	384.7	58.2	0.6556	0.06249	0.00214	1.16724
X24_G044	2300.7	212.7	0.2244	0.06151	0.00188	0.797
X24_G045	556.1	76.6	0.6581	0.06633	0.00218	1.16364
X24_G046	187.2	28.1	0.7672	0.06098	0.00254	1.23318
X24_G047				0.82604	0.11426	259.33405
X24_G048	271.4	38.7	0.5575	0.05938	0.00226	1.07121
X24_G049	96.5	18.1	0.3743	0.0819	0.0036	2.01301
X24_G050	321.1	46.7	0.4698	0.06336	0.00224	1.20159

X24_G051	407.3	42.2	0.5232	0.11439	0.00372	1.52573
X24_G052	367	55.2	0.4064	0.06914	0.00234	1.36853

concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.0138	0.05373	0.00126	337.4	7.8	336.2	12.2
180.49908	0.31423	2.23982				
0.04496	0.11858	0.00312	722.4	18	725.3	26.6
0.02672	0.09629	0.00226	592.6	13.2	601.7	18.6
0.03412	0.12699	0.00292	770.7	16.8	754.2	20.6
0.01866	0.04673	0.00106	294.4	6.6	507.1	14.8
0.0219	0.09457	0.00214	582.5	12.6	560	16
0.0243	0.09117	0.00208	562.5	12.2	593.7	17.2
0.03682	0.10795	0.00278	660.8	16.2	634.7	23.8
0.04512	0.11618	0.00294	708.5	17	793.4	25.6
0.03788	0.12302	0.00298	747.9	17.2	736.2	22.8
0.04178	0.10504	0.00292	643.9	17	613.9	27.2
0.0361	0.11552	0.00282	704.7	16.2	694.9	22.4
0.03144	0.07713	0.00174	479	10.4	758	19.4
0.02966	0.09772	0.00244	601	14.4	561.3	20.6
0.55468	0.46629	0.01874	2467.3	82.4	2505.8	60.2
0.03846	0.1158	0.00284	706.3	16.4	737.8	23.2
0.0306	0.09968	0.0025	612.5	14.6	569.5	21.2
0.033	0.12585	0.00286	764.1	16.4	761.3	20
0.04642	0.12137	0.0032	738.4	18.4	750.2	27
0.02306	0.08078	0.00184	500.8	11	582.8	16.6
0.04126	0.14006	0.00328	845	18.6	843.3	22.6
0.02516	0.10241	0.00236	628.5	13.8	597.4	17.6
0.29706	0.46047	0.01064	2441.6	47	2484.1	33.6
0.03246	0.10102	0.00256	620.4	15	597.8	22
0.02284	0.09551	0.0022	588	13	560.1	16.6
0.0565	0.13477	0.0038	815	21.6	775.6	31.4
0.03358	0.09355	0.00244	576.5	14.4	588.3	22.8
0.03868	0.14024	0.00326	846	18.4	820.4	21.8
0.03304	0.11248	0.00262	687.1	15.2	729.7	20.4
0.02758	0.10681	0.0025	654.2	14.6	628	18.6
0.04602	0.13782	0.00346	832.3	19.6	801.9	25.6
0.03206	0.10877	0.00264	665.6	15.4	650.3	20.8
0.02352	0.08956	0.00206	552.9	12.2	586.6	16.8
0.03736	0.14327	0.00328	863.1	18.4	822.3	21.2
0.05116	0.14942	0.00382	897.7	21.4	839	27.2
0.04748	0.14505	0.0036	873.2	20.2	841.4	25.6
0.03566	0.12531	0.00294	761.1	16.8	764.9	21.2
0.0331	0.08915	0.00208	550.5	12.4	736.9	20.4
0.05312	0.15406	0.00388	923.7	21.6	896.8	27.2
0.03504	0.1274	0.00302	773	17.2	736.3	21.2
0.04306	0.1045	0.00292	640.7	17	641.9	27.4
0.03976	0.13559	0.00326	819.7	18.6	785.4	22.8
0.02436	0.09406	0.00218	579.5	12.8	595.1	17.2
0.0383	0.12736	0.00304	772.8	17.4	783.7	22.2
0.05038	0.14682	0.0038	883.1	21.4	815.8	27.6
70.037	2.27931	0.64052				
0.04044	0.13098	0.00326	793.5	18.6	739.3	23.8
0.08646	0.17845	0.00496	1058.5	27.2	1119.9	35.2
0.04222	0.1377	0.00336	831.6	19	801.3	23.8

0.04932	0.09684	0.00234	595.9	13.8	940.8	24.8
0.04616	0.14371	0.00346	865.6	19.6	875.5	24.4

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
329.7	81.2	0.3	2.3	337.4	7.8
735	93.6	-0.4	-1.7	722.4	18
637.1	72	-1.5	-7	592.6	13.2
706.5	66.2	2.2	9.1	770.7	16.8
1635	54	-41.9	-82		
470.5	65.8	4	23.8	582.5	12.6
716	65.2	-5.3	-21.4	562.5	12.2
543.7	95.2	4.1	21.5	660.8	16.2
1041.2	78.6	-10.7	-31.9	708.5	17
701.8	76.6	1.6	6.6	747.9	17.2
505.8	114.2	4.9	27.3	643.9	17
664.1	79.8	1.4	6.1	704.7	16.2
1703.8	52.2	-36.8	-71.9		
404.5	91.4	7.1	48.6		
2537.9	85	-1.5	-2.8	2537.9	85
835.6	76.6	-4.3	-15.5	706.3	16.4
402.4	93.2	7.6	52.2		
754.1	62.2	0.4	1.3	764.1	16.4
786.6	91.2	-1.6	-6.1	738.4	18.4
918.1	61.4	-14.1	-45.5	500.8	11
839.9	66.4	0.2	0.6	845	18.6
482.2	69.2	5.2	30.3		
2520	46.6	-1.7	-3.1	2520	46.6
514.6	90.8	3.8	20.6	620.4	15
449.2	69.2	5	30.9	588	13
665.1	108.2	5.1	22.5		
635.4	94.8	-2	-9.3	576.5	14.4
753.2	65.6	3.1	12.3	846	18.4
864.3	65.4	-5.8	-20.5	687.1	15.2
536.2	70.8	4.2	22	654.2	14.6
719.7	82.4	3.8	15.7	832.3	19.6
598.9	78.2	2.4	11.1	665.6	15.4
721	63.6	-5.7	-23.3	552.9	12.2
715	63.2	5	20.7	863.1	18.4
688.2	86.2	7	30.4		
760	78.4	3.8	14.9	873.2	20.2
777.9	66.6	-0.5	-2.2	761.1	16.8
1356.5	60	-25.3	-59.4		
833.1	79.2	3	10.9	923.7	21.6
628.3	71	5	23	773	17.2
648	108	-0.2	-1.1	640.7	17
690.9	73	4.4	18.6	819.7	18.6
657.1	65.6	-2.6	-11.8	579.5	12.8
816.8	68.6	-1.4	-5.4	772.8	17.4
638.5	89.6	8.3	38.3		
581.1	82.6	7.3	36.6		
1243.1	86.2	-5.5	-14.9	1058.5	27.2
720.3	75	3.8	15.5	831.6	19

1870.3	58.6	-36.7	-68.1		
902.9	69.8	-1.1	-4.1	865.6	19.6

Sample 2878S White Nile @ Rabak 150 grain analysed 123 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2878S_G001	113.4	18	0.5163	0.07024	0.00272	1.42799
X2878S_G002	185.2	22.1	0.9463	0.08513	0.00314	1.14183
X2878S_G003	86.9	11	0.7613	0.06001	0.00312	0.91014
X2878S_G004	20.2	2.2	0.567	0.06694	0.00746	0.93147
X2878S_G005	80.6	16.2	0.4477	0.07769	0.00302	2.01204
X2878S_G006	492.7	64.6	0.4902	0.07818	0.00196	1.32361
X2878S_G007	160.8	23.2	0.3492	0.06818	0.0023	1.31928
X2878S_G008				32.52293		
X2878S_G009	101.5	11.4	0.6448	0.06193	0.0027	0.86597
X2878S_G010	181.2	20.6	0.7388	0.05883	0.00232	0.80538
X2878S_G011	623.2	77.2	0.2526	0.06605	0.00168	1.12818
X2878S_G012	914.4	63.3	0.0874	0.08442	0.00224	0.83773
X2878S_G013	431.9	8.9	0.6148	0.04805	0.00302	0.12324
X2878S_G014	98.4	19.6	0.7952	0.07284	0.00266	1.71745
X2878S_G015	153.9	23.1	0.4548	0.06745	0.0023	1.31471
X2878S_G016	319.8	33.8	0.3465	0.06037	0.0019	0.85708
X2878S_G017	101.2	13.4	0.5948	0.06307	0.0029	1.04671
X2878S_G018	82.7	11.2	0.526	0.06125	0.00306	1.05645
X2878S_G019	83.2	14.9	0.507	0.0705	0.00282	1.6111
X2878S_G020	608.3	74.3	0.14	0.06588	0.00158	1.14921
X2878S_G021	83.9	8	0.3333	0.17576	0.00616	2.35055
X2878S_G022	350	55	0.6601	0.0669	0.00176	1.2911
X2878S_G023	29.3	5.9	0.554	0.07113	0.00398	1.80758
X2878S_G024	177.4	26.4	0.4048	0.07404	0.00244	1.43909
X2878S_G025	54.4	12	0.811	0.07422	0.00332	1.92974
X2878S_G026	76.8	17.3	0.9421	0.07517	0.0029	1.92786
X2878S_G027	231.4	35.5	0.7283	0.06426	0.002	1.19049
X2878S_G028	77.4	34.3	0.3971	0.16562	0.00424	9.42031
X2878S_G029	157.5	16.5	0.448	0.06081	0.00238	0.83563
X2878S_G030	655.9	77.5	0.1538	0.08252	0.002	1.35188
X2878S_G031	321.1	34.1	0.3385	0.06	0.00182	0.86008
X2878S_G032	145.8	17.4	0.9154	0.05731	0.0023	0.78738
X2878S_G033	158.2	23.2	0.4753	0.06571	0.0023	1.24621
X2878S_G034	251.2	29.4	0.3861	0.05908	0.00186	0.92187
X2878S_G035				0.50644	0.92864	
X2878S_G036	155.5	20.7	0.4103	0.06502	0.00248	1.14046
X2878S_G037	130.4	13.5	0.3051	0.06099	0.00246	0.86108
X2878S_G038	386.8	37.3	0.1267	0.05779	0.0017	0.80426
X2878S_G039	74.7	13.2	0.4033	0.07262	0.00294	1.69139
X2878S_G040	106.4	11.9	0.3024	0.06143	0.0026	0.93858
X2878S_G041	302.9	164.2	0.7643	0.17304	0.00376	10.86369
X2878S_G042	443.5	54.4	1.0003	0.05901	0.00162	0.81358
X2878S_G043	135.2	14.6	0.4163	0.05902	0.00228	0.84012
X2878S_G044	121.9	2.9	-0.2604	2.13708	0.15144	7.24328
X2878S_G045	1109.4	108.3	0.0256	0.06287	0.00152	0.91399
X2878S_G046	67.9	14.3	0.5449	0.07421	0.00302	1.97496
X2878S_G047	238.9	41.1	0.874	0.06644	0.00198	1.33113
X2878S_G048	226.9	26.5	0.759	0.05965	0.00204	0.8385
X2878S_G049	79.9	8.5	0.4866	0.05739	0.00308	0.79289
X2878S_G050	74.8	8.2	0.5084	0.06112	0.0032	0.86482

X2878S_G051	263.3	32.1	0.2006	0.06296	0.0019	1.07748
X2878S_G052	488.7	82.9	0.262	0.07364	0.00176	1.71097
X2878S_G053	263	34.6	0.7843	0.06246	0.00188	0.97698
X2878S_G054	172.7	17.8	0.2762	0.05948	0.00218	0.84605
X2878S_G055	2271.1	166.7	0.9069	0.09761	0.00242	0.91855
X2878S_G056	259.8	26.7	0.2593	0.06461	0.00206	0.92134
X2878S_G057	173	17.8	0.5517	0.0573	0.00258	0.74846
X2878S_G058	402.2	51	0.222	0.06327	0.00174	1.11348
X2878S_G059	552	100	2.4974	0.06062	0.00158	0.90083
X2878S_G060	111.9	13.1	0.9169	0.05724	0.00272	0.76873
X2878S_G061	210.6	26.3	0.2491	0.06329	0.00206	1.09139
X2878S_G062	205.4	24.9	0.2321	0.0627	0.00204	1.05517
X2878S_G063	186.8	29.3	0.4832	0.06993	0.00222	1.39449
X2878S_G064	121.1	25.7	1.3368	0.07158	0.00254	1.58571
X2878S_G065	471.1	50.7	0.9954	0.09634	0.00274	1.30468
X2878S_G066	52.7	6	0.9197	0.05791	0.004	0.76623
X2878S_G067	40.4	8.5	0.5984	0.07659	0.00388	1.9944
X2878S_G068	323.4	44.7	0.4297	0.0726	0.00228	1.25706
X2878S_G069	59.9	7.6	0.6048	0.05949	0.00344	0.93888
X2878S_G070	1108.3	119.7	1.3608	0.17279	0.00392	2.14816
X2878S_G071	46.5	6.9	0.6293	0.04444	0.00316	0.83798
X2878S_G072	285	31.9	0.1543	0.07068	0.00214	1.10994
X2878S_G073	199.3	20.8	0.3152	0.05837	0.00204	0.8272
X2878S_G074	1338.9	140.8	0.1801	0.12864	0.00304	1.79863
X2878S_G075	518.7	53.7	0.1786	0.0611	0.00162	0.89632
X2878S_G076	77.4	16.1	0.7584	0.07066	0.00276	1.75291
X2878S_G077				0.82565	0.02662	
X2878S_G078	110	-2800.9	0.3192	-0.04428	0.00416	-0.83483
X2878S_G079	1689.9	637	0.0225	0.14847	0.00308	7.92402
X2878S_G080	94.9	18.5	0.6969	0.07339	0.00274	1.7426
X2878S_G081	73.5	7.7	0.3899	0.06457	0.00336	0.9575
X2878S_G082	231.7	20.7	0.0177	0.05933	0.00204	0.79047
X2878S_G083	607.9	77.7	0.4793	0.08058	0.00232	1.32316
X2878S_G084	258.4	25.4	0.0932	0.06018	0.00198	0.86231
X2878S_G085	104.2	12.1	0.6395	0.05963	0.00282	0.8607
X2878S_G086	38.5	7.4	0.4456	0.07443	0.00374	1.84571
X2878S_G087	243.9	28.1	0.1522	0.06318	0.00204	1.03736
X2878S_G088	912.8	113.2	0.4508	0.07181	0.00172	1.15078
X2878S_G089	82.2	20.6	1.0648	0.07685	0.00278	2.12453
X2878S_G090				0.55281	1.16062	121.59718
X2878S_G091	104.7	17.5	0.6705	0.06779	0.00292	1.38264
X2878S_G092	538.7	59.5	0.6688	0.05964	0.00162	0.81372
X2878S_G093	95.1	10.8	0.4945	0.06011	0.0028	0.88297
X2878S_G094	81	8.9	0.231	0.06437	0.00318	0.98279
X2878S_G095	337.9	42.1	0.7422	0.06078	0.0018	0.91288
X2878S_G096	159.8	15.1	0.2042	0.05699	0.00238	0.75825
X2878S_G097	176.7	23.1	0.8392	0.06214	0.00234	0.95855
X2878S_G098	204.7	32.4	0.7025	0.06941	0.00214	1.33725
X2878S_G099	423.6	44	0.5941	0.05861	0.00174	0.76467
X2878S_G100	894.1	45.8	0.0936	0.05317	0.00148	0.39889
X2878S_G101	51.2	11.8	1.0493	0.07787	0.00364	2.01761
X2878S_G102	194.4	26.4	0.6644	0.06216	0.00204	1.03782
X2878S_G103	91.5	11.4	0.4664	0.06236	0.0027	1.01439
X2878S_G104	191.6	24	0.741	0.06318	0.00218	0.95413
X2878S_G105	3187.6	112.9	0.2651	0.18077	0.00416	0.82763

X2878S_G106	231.5	21.2	0.3138	0.0596	0.00204	0.74341
X2878S_G107	101.8	13.2	0.8221	0.06181	0.00292	0.95305
X2878S_G108	236.5	62.2	1.7188	0.07253	0.00198	1.82639
X2878S_G109	1049	159.8	3.0484	0.10005	0.00232	1.26873
X2878S_G110	154.6	20.3	0.8123	0.06067	0.00222	0.94039
X2878S_G111	40.6	4.8	0.8422	0.05888	0.00424	0.8154
X2878S_G112	85.3	9.6	0.6637	0.0613	0.00348	0.85058
X2878S_G113	261.5	28	0.5539	0.05984	0.00194	0.81253
X2878S_G114	122.4	14.2	0.3036	0.06092	0.0026	0.96349
X2878S_G115	108.5	19.4	0.4481	0.07271	0.00248	1.69019
X2878S_G116	123.1	13.7	0.7152	0.05638	0.00264	0.76977
X2878S_G117				0.06277	0.00786	0.95049
X2878S_G118	55.5	11.8	0.8312	0.09111	0.00366	2.25453
X2878S_G119	263.7	38.4	0.2616	0.06889	0.00194	1.38099
X2878S_G120	344.2	90	2.3469	0.16663	0.00402	3.86674
X2878S_G121	143.8	16.4	0.3753	0.06036	0.00226	0.92153
X2878S_G122	87.6	10.9	0.5953	0.06207	0.00294	0.9736
X2878S_G123	695	68.7	0.2068	0.05908	0.00154	0.82191
X2878S_G124	252.8	38.4	0.3232	0.06671	0.0019	1.36832
X2878S_G125	94.2	10.8	0.5734	0.06137	0.00278	0.89057
X2878S_G126	191.7	21.8	0.3269	0.0616	0.00214	0.95166
X2878S_G127	173.1	26.9	0.5299	0.065	0.00214	1.28619
X2878S_G128	66	8.1	0.5819	0.06048	0.00356	0.93673
X2878S_G129				-0.95313	1.71592	
X2878S_G130	90.1	57	0.9814	0.17089	0.0041	11.62015
X2878S_G131	151.4	18.9	0.6511	0.06216	0.00232	0.96358
X2878S_G132				-0.14935	0.65782	214.00204
X2878S_G133	61	13.1	0.647	0.07663	0.00322	2.01807
X2878S_G134	1673.4	174	0.0921	0.06126	0.00138	0.92764
X2878S_G135	214.5	23.5	0.2609	0.0606	0.00208	0.91617
X2878S_G136	390.8	41.6	0.3475	0.06034	0.00172	0.86732
X2878S_G137	59.6	12.2	0.6702	0.07254	0.00314	1.81792
X2878S_G138	294.5	37.4	1.0697	0.0575	0.00184	0.80977
X2878S_G139	330.1	36.5	0.3825	0.06015	0.00178	0.88655
X2878S_G140	406.7	46.4	0.3163	0.06011	0.00168	0.9292
X2878S_G141	577.1	119.6	0.5443	0.07613	0.00176	1.99201
X2878S_G142	374.9	43.9	0.2618	0.06687	0.00186	1.07567
X2878S_G143	327.1	36.6	0.3756	0.05951	0.00178	0.89011
X2878S_G144	327.6	32.7	0.3882	0.0627	0.0019	0.83144
X2878S_G145	558.4	77.9	0.9048	0.06172	0.00158	0.99352
X2878S_G146	2044.9	198.4	0.3634	0.10954	0.00238	1.39268
X2878S_G147	199.3	21.4	0.314	0.06009	0.0021	0.87547
X2878S_G148	20.2	6.5	235.5725	0.47216	0.04498	1.69132
X2878S_G149	48.1	5.6	0.5676	0.06175	0.00378	0.91596
X2878S_G150	54	10.4	1.0238	0.07287	0.00388	1.58099

82.0% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.05484	0.14737	0.00386	886.2	21.6	900.7	28
0.04156	0.09722	0.00254	598.1	15	773.4	24.4
0.04616	0.10992	0.00314	672.3	18.2	657.1	28.6
0.09984	0.10086	0.00462	619.4	27	668.4	59
0.07798	0.18771	0.00506	1109	27.4	1119.6	32
0.0347	0.12272	0.00282	746.2	16.2	856.1	19.6
0.0449	0.14025	0.0035	846.1	19.8	854.2	24.2
	-0.1101	16.02776				
0.0372	0.10135	0.00272	622.3	16	633.4	24.2
0.03162	0.09923	0.00254	609.9	14.8	599.9	21.2
0.02996	0.12381	0.00284	752.5	16.2	766.9	18.4
0.02296	0.07193	0.00168	447.8	10.2	617.9	16.4
0.00752	0.01859	0.00054	118.7	3.4	118	7.8
0.06258	0.17089	0.00444	1017	24.4	1015.1	28.8
0.0452	0.14128	0.00352	851.9	19.8	852.2	24.4
0.0274	0.1029	0.00248	631.4	14.4	628.5	18.6
0.0473	0.1203	0.0033	732.3	19	727.3	27.8
0.05184	0.12502	0.00356	759.4	20.4	732.1	30
0.06404	0.16565	0.00444	988.1	24.6	974.5	30.2
0.02924	0.12643	0.00288	767.5	16.4	776.9	18
0.07882	0.09694	0.0027	596.5	15.8	1227.7	31.8
0.0354	0.13988	0.00324	844	18.4	841.8	20
0.09918	0.1842	0.00584	1089.9	31.8	1048.2	42
0.04774	0.14088	0.0035	849.6	19.8	905.3	24.8
0.08522	0.18846	0.00538	1113	29.2	1091.4	35.4
0.07428	0.18589	0.00498	1099.1	27	1090.8	31.4
0.03764	0.13429	0.00324	812.3	18.4	796.2	21.8
0.25558	0.41227	0.01028	2225.3	47	2379.8	32.8
0.03236	0.0996	0.00256	612.1	15	616.7	21.6
0.0345	0.11875	0.00272	723.4	15.6	868.4	19.4
0.02646	0.1039	0.00246	637.2	14.4	630.2	18
0.03134	0.09958	0.00256	611.9	15	589.7	21.4
0.04368	0.13747	0.00344	830.3	19.4	821.7	24.2
0.02952	0.1131	0.00272	690.7	15.8	663.3	19.2
0.04328	0.12713	0.00328	771.5	18.8	772.7	25
0.0343	0.10234	0.00266	628.1	15.6	630.7	22.6
0.02418	0.10087	0.00238	619.5	14	599.2	17
0.06782	0.16882	0.00458	1005.6	25.2	1005.3	31
0.03916	0.11074	0.00292	677	17	672.1	24.6
0.2555	0.45505	0.01038	2417.7	46	2511.5	29.2
0.02306	0.09993	0.00232	614	13.6	604.5	16.4
0.03222	0.10318	0.00262	633	15.4	619.2	21.4
0.19636	0.02457	0.00174	156.5	11	2141.8	89.4
0.0234	0.10537	0.0024	645.8	14	659.2	16.2
0.08016	0.1929	0.00528	1137.1	28.6	1107	33
0.04056	0.14522	0.00348	874.1	19.6	859.4	22.2
0.0289	0.10188	0.0025	625.4	14.6	618.3	19.4
0.04162	0.10014	0.00288	615.2	16.8	592.8	27.4
0.04414	0.10256	0.00296	629.4	17.4	632.8	28.2

0.03308	0.12405	0.00296	753.8	17	742.4	20.2
0.04338	0.16841	0.00384	1003.3	21.2	1012.6	21.2
0.02996	0.11338	0.0027	692.3	15.6	692.1	19.2
0.03092	0.1031	0.00258	632.6	15	622.5	20.6
0.02372	0.06821	0.00158	425.4	9.6	661.6	16.4
0.02974	0.10335	0.0025	634	14.6	663.1	19.4
0.0331	0.09468	0.00254	583.2	15	567.3	22.8
0.03162	0.12757	0.00298	774	17	759.8	19.2
0.0244	0.10771	0.00248	659.4	14.4	652.2	16.8
0.03582	0.09734	0.00266	598.8	15.6	579	24.2
0.0358	0.12498	0.00304	759.2	17.4	749.2	21.6
0.0346	0.12198	0.00298	741.9	17.2	731.4	21.2
0.04488	0.14453	0.00354	870.2	20	886.6	23.8
0.05648	0.16058	0.0041	960	22.8	964.6	27.2
0.03758	0.09815	0.00236	603.6	13.8	847.8	21.4
0.05116	0.09591	0.00314	590.4	18.4	577.6	33.6
0.09918	0.18873	0.0058	1114.5	31.4	1113.6	40
0.0399	0.12551	0.00306	762.2	17.6	826.6	22.4
0.05304	0.1144	0.00346	698.3	20	672.3	32
0.05148	0.09011	0.00206	556.2	12.2	1164.5	22.4
0.05836	0.13667	0.00432	825.8	24.6	618	36
0.03406	0.11383	0.00274	695	15.8	758.1	20.6
0.02904	0.10273	0.00254	630.4	14.8	612.1	19.6
0.04454	0.10134	0.00232	622.3	13.6	1045	21.4
0.02458	0.10632	0.00246	651.3	14.4	649.8	16.8
0.06828	0.1798	0.00478	1065.9	26.2	1028.2	30.6
573.56958	29.73272	5.05226				
0.07814	0.13666	0.00362	825.7	20.6	-1828.5	-499.2
0.1795	0.38686	0.0086	2108.2	40	2222.4	27.4
0.06478	0.17211	0.0045	1023.7	24.8	1024.4	29.4
0.04862	0.10748	0.00316	658.1	18.4	682	29.6
0.02736	0.09658	0.00238	594.3	14	591.4	19
0.03876	0.11902	0.00284	724.9	16.4	855.9	21.6
0.02864	0.10385	0.00252	636.9	14.8	631.4	19.2
0.04002	0.10462	0.00288	641.4	16.8	630.5	25.6
0.09114	0.17975	0.00544	1065.6	29.8	1061.9	38.6
0.03394	0.11902	0.0029	724.9	16.8	722.6	21
0.0291	0.11615	0.00264	708.4	15.2	777.6	18
0.07704	0.20037	0.00524	1177.3	28.2	1156.8	30.8
263.38614	1.59434	3.34426				
0.05892	0.14784	0.00406	888.8	22.8	881.6	30
0.02298	0.0989	0.0023	608	13.4	604.5	16.2
0.0405	0.10647	0.00292	652.2	17	642.6	25.8
0.04746	0.11067	0.00316	676.6	18.4	695	28.8
0.02766	0.10886	0.00258	666.1	15	658.6	18.4
0.03132	0.09643	0.0025	593.5	14.6	573	21.6
0.0359	0.11181	0.00284	683.3	16.4	682.5	22.6
0.04186	0.13964	0.00338	842.6	19.2	862	22.8
0.0231	0.09457	0.00222	582.5	13	576.7	16.6
0.0114	0.05438	0.00126	341.4	7.8	340.8	10.4
0.09278	0.1878	0.00556	1109.4	30.2	1121.5	37.6
0.03446	0.12101	0.00296	736.4	17	722.8	21.2
0.0433	0.1179	0.00316	718.5	18.2	711.1	26
0.033	0.10946	0.0027	669.6	15.6	680.3	21
0.01994	0.03319	0.00076	210.5	4.8	612.3	15

0.02564	0.09041	0.00222	558	13.2	564.4	18.2
0.04422	0.11176	0.0031	683	18	679.7	27.2
0.05146	0.18251	0.0043	1080.7	23.4	1055	23.6
0.03106	0.09191	0.00208	566.8	12.2	831.8	18.4
0.03442	0.11235	0.00282	686.4	16.4	673.1	21.8
0.05688	0.10037	0.0034	616.6	20	605.5	36.2
0.04684	0.10058	0.00304	617.8	17.8	625	30
0.02652	0.09842	0.00238	605.1	14	603.9	18.4
0.04074	0.11464	0.00304	699.6	17.6	685.1	25
0.05794	0.16849	0.00426	1003.8	23.6	1004.8	27
0.03542	0.09896	0.00268	608.3	15.8	579.6	23.8
0.11672	0.10976	0.00436				
0.08956	0.17937	0.00502	1063.5	27.4	1198.2	34.4
0.03996	0.14531	0.00344	874.6	19.4	880.9	21.6
0.09744	0.1682	0.00396	1002.2	21.8	1606.8	27.2
0.0345	0.11066	0.0028	676.6	16.2	663.2	22
0.0451	0.1137	0.00316	694.2	18.2	690.3	27.6
0.02224	0.10084	0.00232	619.3	13.6	609.1	16
0.03996	0.14868	0.00352	893.6	19.8	875.4	21.8
0.03956	0.10519	0.00286	644.8	16.6	646.7	25.2
0.0332	0.11198	0.00278	684.2	16.2	679	21.2
0.04288	0.14343	0.00354	864	20	839.6	23.4
0.05354	0.11226	0.00346	685.9	20	671.2	32.6
1514.6975	4.40396	9.23834				
0.29952	0.49286	0.01194	2583	51.6	2574.3	31.8
0.03578	0.11236	0.00284	686.4	16.4	685.1	22.4
897.52246	-10.386	20.27402				
0.08422	0.19089	0.00532	1126.2	28.8	1121.6	34.2
0.02228	0.10976	0.00246	671.4	14.2	666.4	15.6
0.0316	0.10958	0.0027	670.3	15.6	660.3	20.6
0.02548	0.10419	0.00244	638.9	14.2	634.1	17.4
0.07774	0.18164	0.00508	1075.9	27.8	1051.9	33.8
0.0262	0.10208	0.00246	626.6	14.4	602.3	18.2
0.02684	0.10684	0.00252	654.4	14.6	644.5	18
0.02672	0.11205	0.00262	684.6	15.2	667.2	17.8
0.0491	0.18966	0.0043	1119.5	23.4	1112.8	21.8
0.0308	0.11659	0.00274	710.9	15.8	741.5	19.2
0.0271	0.10842	0.00256	663.6	14.8	646.4	18.2
0.02568	0.09612	0.00228	591.6	13.4	614.4	17.8
0.02652	0.11668	0.00268	711.4	15.4	700.5	17.4
0.03248	0.09216	0.00206	568.3	12.2	885.8	18.4
0.03076	0.1056	0.00262	647.1	15.2	638.5	20.4
0.1173	0.02596	0.0019	165.2	12	1005.3	76.6
0.05432	0.10752	0.00338	658.3	19.6	660.2	33.4
0.08192	0.15726	0.0049	941.5	27.2	962.8	38.4

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
935.4	79.4	-1.6	-5.3	886.2	21.6
1318.5	71.4	-22.7	-54.6		
603.9	112.4	2.3	11.3	672.3	18.2
835.9	232.2	-7.3	-25.9	619.4	27
1139	77.4	-0.9	-2.6	1139	77.4
1151.5	49.8	-12.8	-35.2	746.2	16.2
874	69.8	-1	-3.2	846.1	19.8
671.7	93.2	-1.7	-7.4	622.3	16
560.8	86	1.7	8.8	609.9	14.8
808	53.2	-1.9	-6.9	752.5	16.2
1302.2	51.6	-27.5	-65.6		
101.7	148.6	0.6	16.7	118.7	3.4
1009.5	74	0.2	0.7	1017	24.4
851.7	70.8	0	0	851.9	19.8
616.9	68	0.5	2.4	631.4	14.4
710.6	97.8	0.7	3.1	732.3	19
648	107.4	3.7	17.2	759.4	20.4
943	82	1.4	4.8	988.1	24.6
802.6	50.2	-1.2	-4.4	767.5	16.4
2613.3	58.4	-51.4	-77.2		
834.7	54.8	0.3	1.1	844	18.4
961.2	114.4	4	13.4	1089.9	31.8
1042.6	66.4	-6.2	-18.5	849.6	19.8
1047.5	90.2	2	6.3		
1073.1	77.4	0.8	2.4	1099.1	27
750.2	65.8	2	8.3	812.3	18.4
2513.9	43	-6.5	-11.5	2513.9	43
632.5	84.2	-0.8	-3.2	612.1	15
1257.9	47.4	-16.7	-42.5		
603.6	65.6	1.1	5.6	637.2	14.4
503.5	88.4	3.8	21.5	611.9	15
797.2	73.4	1.1	4.2	830.3	19.4
570	68.6	4.1	21.2	690.7	15.8
775	80.2	-0.2	-0.5	771.5	18.8
638.9	86.8	-0.4	-1.7	628.1	15.6
521.8	64.6	3.4	18.7	619.5	14
1003.4	82.2	0	0.2	1005.6	25.2
654.3	90.8	0.7	3.5	677	17
2587.3	36.2	-3.7	-6.6	2587.3	36.2
567.5	59.8	1.6	8.2	614	13.6
567.8	84	2.2	11.5	633	15.4
6284.3	96	-92.7	-97.5		
703.8	51.4	-2	-8.2	645.8	14
1047.2	82	2.7	8.6		
820.3	62.2	1.7	6.6	874.1	19.6
590.9	74.2	1.1	5.8	625.4	14.6
506.6	118	3.8	21.5	615.2	16.8
643.5	112.6	-0.5	-2.2	629.4	17.4

706.9	64.2	1.5	6.6	753.8	17
1031.6	48.4	-0.9	-2.7	1003.3	21.2
689.9	64.2	0	0.4	692.3	15.6
584.7	79.6	1.6	8.2	632.6	15
1579	46.4	-35.7	-73.1		
761.7	67.2	-4.4	-16.8	634	14.6
503.1	99	2.8	15.9	583.2	15
717.3	58.4	1.9	7.9	774	17
625.8	56.2	1.1	5.4	659.4	14.4
500.8	104.6	3.4	19.6	598.8	15.6
718	69.2	1.3	5.7	759.2	17.4
698.1	69.4	1.4	6.3	741.9	17.2
926.3	65.2	-1.8	-6.1	870.2	20
974	72.4	-0.5	-1.4	960	22.8
1554.4	53.4	-28.8	-61.2		
526.4	151.4	2.2	12.2	590.4	18.4
1110.5	101.2	0.1	0.4	1110.5	101.2
1002.8	63.8	-7.8	-24	762.2	17.6
585.1	125.6	3.9	19.3	698.3	20
2584.9	37.8	-52.2	-78.5		
-86.3	174.2	33.6	-1057.4		
948.2	62	-8.3	-26.7	695	15.8
543.7	76.4	3	15.9	630.4	14.8
2079.5	41.6	-40.5	-70.1		
642.8	57	0.2	1.3	651.3	14.4
947.6	80	3.7	12.5	1065.9	26.2
		-145.2			
2328.4	35.6	-5.1	-9.5	2328.4	35.6
1024.7	75.6	-0.1	-0.1	1023.7	24.8
760.4	109.8	-3.5	-13.4	658.1	18.4
579.2	74.8	0.5	2.6	594.3	14
1211.2	56.6	-15.3	-40.1		
610.1	71.2	0.9	4.4	636.9	14.8
590.2	102.6	1.7	8.7	641.4	16.8
1053.2	101.2	0.3	1.2	1065.6	29.8
714.3	68.6	0.3	1.5	724.9	16.8
980.6	48.8	-8.9	-27.8	708.4	15.2
1117.3	72.2	1.8	5.4		
862.1	89.4	0.8	3.1	888.8	22.8
590.5	59	0.6	2.9	608	13.4
607.5	100.8	1.5	7.4	652.2	17
753.8	104.2	-2.6	-10.2	676.6	18.4
631.5	63.8	1.1	5.5	666.1	15
491.1	92.2	3.6	20.8	593.5	14.6
678.9	80.4	0.1	0.6	683.3	16.4
910.9	63.4	-2.3	-7.5	842.6	19.2
552.6	64.8	1	5.4	582.5	13
336.1	63	0.2	1.6	341.4	7.8
1143.6	93	-1.1	-3	1143.6	93
679.6	70.2	1.9	8.4	736.4	17
686.5	92.4	1	4.7	718.5	18.2
714.3	73.4	-1.6	-6.3	669.6	15.6
2659.9	38.2	-65.6	-92.1		

589.1	74.2	-1.1	-5.3	558	13.2
667.5	101.2	0.5	2.3	683	18
1000.8	55.4	2.4	8	1080.7	23.4
1625	43.2	-31.9	-65.1		
627.6	78.8	2	9.4	686.4	16.4
562.7	156.8	1.8	9.6	616.6	20
649.8	121.8	-1.1	-4.9	617.8	17.8
597.8	70.2	0.2	1.2	605.1	14
636.4	91.8	2.1	9.9	699.6	17.6
1005.9	69.2	-0.1	-0.2	1003.8	23.6
467.4	103.6	4.9	30.2	608.3	15.8
1448.9	76.4	-11.2	-26.6	1063.5	27.4
895.4	58.2	-0.7	-2.3	874.6	19.4
2524.1	40.6	-37.6	-60.3		
616.5	80.8	2	9.7	676.6	16.2
676.5	101.2	0.6	2.6	694.2	18.2
570	56.8	1.7	8.6	619.3	13.6
828.7	59.4	2.1	7.8	893.6	19.8
652.2	97.2	-0.3	-1.1	644.8	16.6
660.3	74.4	0.8	3.6	684.2	16.2
774.3	69.2	2.9	11.6	864	20
620.8	127	2.2	10.5	685.9	20
2566.4	40.2	0.3	0.6	2566.4	40.2
679.6	79.8	0.2	1	686.4	16.4
1111.6	84	0.4	1.3	1111.6	84
648.4	48.4	0.7	3.5	671.4	14.2
625.1	74	1.5	7.2	670.3	15.6
615.8	61.6	0.8	3.8	638.9	14.2
1001.1	87.8	2.3	7.5	1075.9	27.8
510.8	70.4	4	22.7	626.6	14.4
609	64	1.5	7.5	654.4	14.6
607.5	60.4	2.6	12.7	684.6	15.2
1098.5	46.2	0.6	1.9	1098.5	46.2
833.7	58	-4.1	-14.7	710.9	15.8
585.8	65	2.7	13.3	663.6	14.8
698.1	64.6	-3.7	-15.2	591.6	13.4
664.4	54.8	1.6	7.1	711.4	15.4
1791.8	39.6	-35.8	-68.3		
606.8	75.6	1.3	6.6	647.1	15.2
4156.6	141.2	-83.6	-96		
665.5	131	-0.3	-1.1	658.3	19.6
1010.3	108	-2.2	-6.8	941.5	27.2

Sample 2947S Abay @ Goha Tsiyon 27 grain analysed 4 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2947S_G001				0.34273	1.82988	19.22721
X2947S_G002				0.53893	0.36088	47.95984
X2947S_G003				0.70656	0.11098	415.86508
X2947S_G004				0.84341	0.04162	944.12683
X2947S_G005				0.80089	0.04746	
X2947S_G006				54.37289		227.14677
X2947S_G007				0.81362	0.44976	
X2947S_G008				0.82595	0.0722	277.06625
X2947S_G009				0.82426	0.03724	
X2947S_G010				0.89333	1.07674	486.72595
X2947S_G011				0.82663	0.16908	143.5423
X2947S_G012				3.02105	13.33338	247.33389
X2947S_G013				0.80884	0.16122	179.79218
X2947S_G014				-0.89884	3.89154	-73.59762
X2947S_G015				-6.19172	55.24828	
X2947S_G016				9.89654	1.69788	
X2947S_G017				0.75171	0.13072	82.12801
X2947S_G018				0.56459	0.56	20.70885
X2947S_G019				0.72041	0.1733	628.38251
X2947S_G020				0.84142	0.12068	40.47459
X2947S_G021	77.3	15.6	0.9728	0.07272	0.00372	1.66031
X2947S_G022	241.9	97	0.9711	0.11773	0.00422	5.28007
X2947S_G023	1279.5	66.6	1.0518	0.12153	0.00436	0.67564
X2947S_G024	79.3	9.2	1.098	0.06039	0.0042	0.77127
X2947S_G025	362.5	15.7	0.4915	0.05195	0.00284	0.29254
X2947S_G026				-1.67749	6.99308	-53.55665
X2947S_G027				-0.0638	0.80748	-29.70832

14.8% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
92.6551	0.40702	0.9636				
33.21416	0.64565	0.25098				
148.7944	4.27023	1.55416				
130.08126	8.12156	1.12544				
664.2483	21.44522	6.03284				
159.22564	0.03031	2.64166				
1160.1997	10.80138	10.74022				
37.38434	2.43375	0.34732				
146.97506	9.29997	1.2956				
1643.13172	3.9529	13.6406				
40.2347	1.25983	0.37538				
302.0744	0.59397	2.6555				
47.25838	1.61268	0.4418				
205.35496	0.59404	2.13854				
972.48834	0.34766	3.27704				
224.21444	0.7376	0.20272				
15.85486	0.79264	0.17022				
17.58908	0.26611	0.15204				
395.98754	6.32823	3.94458				
5.51556	0.34898	0.05056				
0.0826	0.16563	0.00482	988	26.6	993.5	37.2
0.18812	0.32537	0.00832	1815.9	40.4	1865.6	37.6
0.02358	0.04033	0.001	254.9	6.2	524.1	17.8
0.05176	0.09266	0.00302	571.2	17.8	580.5	34
0.0155	0.04085	0.00112	258.1	7	260.6	14
95.87198	0.23162	0.87948				
387.09698	3.37797	11.81528				

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
1006.2	103.8	-0.6	-1.8	988	26.6
1922.1	64.2	-2.7	-5.5	1922.1	64.2
1978.8	63.8	-51.4	-87.1		
617.6	150.2	-1.6	-7.5	571.2	17.8
283.2	125	-0.9	-8.9	258.1	7

Sample 2975S Anger @ Tsige Maryam 116 grain analysed 101 concordant age

	concentrations		isotopic ratios			
grain	U [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235	2σ 75
2975_005	800.6	346.9	0.05939	0.00099	0.69095	0.01157
2975_012	1166.6	1579.9	0.06229	0.00086	0.88701	0.01267
2975_018	450.1	276.9	0.05985	0.0011	0.77883	0.01434
2975_020	554.9	428.6	0.05989	0.001	0.87054	0.01462
2975_021	376.3	176.9	0.06855	0.0012	1.32989	0.02341
2975_022	917.5	506.0	0.06153	0.00092	0.82845	0.01268
2975_023	183.8	219.9	0.09633	0.00193	1.61205	0.03153
2975_024	2395.0	1144.8	0.11615	0.0015	0.88916	0.01189
2975_025	216.5	167.0	0.06193	0.00146	0.86247	0.01994
2975_029	97.9	8.0	0.06092	0.00216	0.85369	0.02923
2975_031	542.9	309.0	0.06464	0.00104	1.10878	0.01799
2975_033	1515.4	1173.2	0.06223	0.00086	0.87017	0.01237
2975_035	2932.8	1634.2	0.06748	0.00082	1.14845	0.01475
2975_036	1340.1	88.9	0.06105	0.00087	0.80149	0.01176
2975_040	1549.7	2134.4	0.06446	0.00091	0.79808	0.01159
2975_042	1998.1	1375.8	0.08731	0.00122	1.08259	0.01549
2975_045	36.1	9.0	0.06307	0.00342	1.17522	0.06167
2975_046	2360.6	2458.4	0.07706	0.00104	0.79365	0.01102
2975_047	4520.3	1568.6	0.1227	0.00148	1.14505	0.0145
2975_052	386.6	331.5	0.05959	0.00123	0.85802	0.01753
2975_055	963.8	1396.6	0.06476	0.001	0.75893	0.0119
2975_056	1458.7	1070.5	0.06169	0.00085	0.88167	0.01253
2975_057	620.2	525.9	0.06643	0.00106	1.12773	0.01817
2975_058	218.2	168.4	0.06434	0.00143	1.17686	0.02583
2975_062	1168.3	169.4	0.06302	0.00093	0.89816	0.01351
2975_063	542.9	297.9	0.06139	0.00106	0.91325	0.01576
2975_064	381.4	250.5	0.06113	0.0012	0.92396	0.01795
2975_068	386.6	230.5	0.06235	0.00122	0.88454	0.01715
2975_074	175.2	80.1	0.06622	0.00161	1.164	0.02774
2975_078	391.7	349.1	0.06421	0.00126	0.92398	0.01796
2975_080	261.1	373.2	0.06562	0.00156	0.80806	0.01879
2975_083	634.0	392.4	0.05858	0.00139	0.33535	0.00776
2975_084	496.5	309.2	0.06461	0.00112	1.12523	0.01955
2975_085	876.2	228.2	0.0643	0.00096	1.08725	0.01646
2975_087	1142.5	707.7	0.06041	9.00E-04	0.83547	0.01267
2975_088	139.2	94.0	0.05969	0.00178	0.83585	0.02415
2975_089	24.1	0.2	0.06462	0.00479	0.98694	0.07056
2975_091	491.4	446.2	0.06139	0.00113	0.82938	0.01523
2975_092	331.6	80.0	0.07007	0.0019	1.15365	0.03026
2975_093	1924.3	1242.5	0.06493	0.00116	0.73135	0.01297
2975_098	345.3	162.9	0.06754	0.0013	1.14882	0.02184
2975_100	218.2	55.4	0.06354	0.00152	1.02808	0.0241
2975_101	441.5	150.5	0.06315	0.0012	0.92652	0.01752
2975_102	2168.2	412.1	0.06629	0.00089	1.05983	0.01461
2975_105	187.3	73.4	0.06837	0.00164	1.22468	0.02863
2975_106	5848.4	1179.9	0.07415	0.001	0.48693	0.00675
2975_107	154.6	161.8	0.06596	0.00191	0.94866	0.02666
2975_109	5166.3	2818.6	0.05072	0.00072	0.28504	0.00415
2975_114	2235.2	840.4	0.07149	0.00093	1.56884	0.0211
2975_116	3376.0	561.3	0.07349	0.001	0.73004	0.01016
2975_117	1912.2	2677.4	0.07371	0.0011	0.63585	0.00959
2975_120	1432.9	654.3	0.06315	0.00092	0.9931	0.01469
2975_121	1322.9	595.1	0.07064	0.00102	1.20957	0.01784
2975_122	446.7	199.3	0.10877	0.00151	4.74785	0.06789

2975_123	692.4	326.2	0.06115	0.00121	0.86898	0.01701
2975_124	486.2	242.5	0.06634	0.00119	1.19783	0.0214
2975_125	965.6	909.3	0.06776	0.00129	0.99614	0.01878
2975_126	163.2	55.9	0.07028	0.00203	0.99768	0.02789
2975_127	61.9	42.0	0.06643	0.00296	1.19891	0.05159
2975_131	271.5	285.7	0.06004	0.00144	0.89293	0.02095
2975_132	5970.3	5362.0	0.0942	0.00129	0.49352	0.00686
2975_134	127.1	48.1	0.06391	0.00202	0.99822	0.0306
2975_136	372.8	362.5	0.05933	0.00131	0.75735	0.0164
2975_137	570.4	498.1	0.06233	0.00114	0.9361	0.01695
2975_140	89.3	62.8	0.06	0.00267	0.7096	0.03042
2975_141	158.1	213.0	0.0599	0.00203	0.69973	0.02293
2975_142	795.5	587.3	0.06738	0.00108	1.20856	0.01953
2975_144	341.9	203.5	0.06817	0.00138	1.15664	0.02309
2975_146	304.1	185.1	0.05926	0.00139	0.91569	0.02099
2975_147	446.7	249.3	0.06743	0.00123	1.27167	0.02313
2975_148	381.4	75.4	0.06427	0.00129	1.14738	0.02268
2975_149	1651.1	387.8	0.05893	0.00097	0.55288	0.00908
2975_152	515.4	255.5	0.04134	0.00505	0.02722	0.00325
2975_153	403.8	130.5	0.07099	0.00138	1.07977	0.02071
2975_157	379.7	444.7	0.06782	0.00145	0.92576	0.01935
2975_158	845.3	243.3	0.06639	0.00105	1.21253	0.01932
2975_160	247.4	169.5	0.07147	0.00143	1.69118	0.03351
2975_161	190.7	78.2	0.07423	0.00164	1.70053	0.03682
2975_162	1503.3	358.6	0.06496	0.00095	1.12596	0.0167
2975_163	3766.0	5436.9	0.13009	0.00181	1.29649	0.01821
2975_165	1359.0	1252.9	0.07936	0.00117	1.30312	0.01937
2975_166	862.5	747.8	0.06377	0.00107	1.10548	0.01855
2975_168	1668.3	958.2	0.065	0.00105	0.85604	0.0139
2975_169	49.8	14.4	0.0705	0.00332	1.2102	0.05487
2975_170	257.7	206.5	0.06626	0.00146	1.21081	0.02617
2975_172	357.4	176.6	0.06451	0.00132	1.22057	0.02456
2975_173	3121.8	125.2	0.07072	0.00097	1.37432	0.01922
2975_174	323.0	161.4	0.06049	0.00145	0.84742	0.01976
2975_175	300.7	218.0	0.06134	0.00151	0.86337	0.02065
2975_176	577.3	496.6	0.06426	0.00125	0.90324	0.01736
2975_179	1527.4	689.2	0.05669	0.00097	0.57123	0.00976
2975_183	917.5	1682.6	0.22847	0.00303	16.46729	0.22486
2975_184	379.7	279.2	0.06246	0.0014	0.926	0.02027
2975_185	419.2	159.1	0.06137	0.0013	0.92249	0.01914
2975_187	1324.6	467.6	0.06614	0.00106	0.96109	0.01542
2975_188	1733.5	914.9	0.06214	0.00095	0.86221	0.0133
2975_190	443.3	295.4	0.06509	0.00124	1.13784	0.02141
2975_191	1197.5	939.9	0.06203	0.001	0.88707	0.01427
2975_192	144.3	31.2	0.13941	0.00304	2.68258	0.05587
2975_193	2235.2	1056.3	0.06591	0.00102	0.62002	0.00965
2975_195	1848.7	922.6	0.06142	0.00094	0.82383	0.01262
2975_197	558.4	298.7	0.22157	0.00302	17.46339	0.24438
2975_198	769.7	494.5	0.07179	0.00113	1.42628	0.02253
2975_199	965.6	550.5	0.06401	0.00104	0.87982	0.01426
2975_200	544.6	460.9	0.06336	0.00125	0.8865	0.01724
2975_201	130.6	88.3	0.07061	0.00174	1.38669	0.03333
2975_202	2620.1	313.5	0.07484	0.00112	0.87984	0.01321
2975_204	518.9	818.5	0.06233	0.00115	0.877	0.016
2975_206	551.5	187.3	0.07126	0.00117	1.44363	0.02373
2975_207	417.5	293.0	0.06734	0.00123	1.1628	0.021
2975_208	195.9	109.0	0.06047	0.00161	0.84459	0.02183
2975_211	84.2	47.7	0.06194	0.00241	0.82844	0.03102
2975_212	1341.8	1254.4	0.07893	0.00127	0.90229	0.01446

2975_213	1682.0	1324.6	0.06722	0.00103	0.85745	0.0132
2975_214	1523.9	164.3	0.11733	0.00163	5.08745	0.07181
2975_215	563.5	343.5	0.05931	0.00113	0.81725	0.01531

es 87.1% % concordant

		ages				
Pb206/U238	**2σ 68**	**age 206/238**	**2σ age 68**	**age 207/235**	**2σ age 75**	**age 207/206**
0.08443	0.00102	522.5	6.09	533.4	6.95	581.4
0.10335	0.0012	634	7.03	644.8	6.82	684
0.09444	0.00118	581.7	6.96	584.8	8.18	598.1
0.10548	0.00128	646.5	7.48	635.9	7.94	599.7
0.14079	0.00177	849.1	9.99	858.8	10.2	885.2
0.09772	0.00116	601	6.79	612.8	7.04	657.7
0.12145	0.00167	738.9	9.59	974.9	12.26	1554.1
0.05555	0.00065	348.5	3.95	645.9	6.39	1897.8
0.10106	0.00139	620.6	8.14	631.5	10.87	671.7
0.1017	0.00171	624.3	9.98	626.7	16.01	636.4
0.12448	0.00151	756.3	8.65	757.6	8.66	762.7
0.10147	0.00118	623	6.89	635.7	6.72	682.1
0.12351	0.0014	750.7	8.04	776.5	6.97	852.6
0.09527	0.00111	586.6	6.55	597.7	6.63	641
0.08985	0.00105	554.7	6.2	595.7	6.54	756.6
0.08998	0.00106	555.4	6.27	744.9	7.55	1367.4
0.13522	0.00309	817.6	17.53	789.1	28.79	710.6
0.07474	0.00087	464.6	5.19	593.2	6.24	1122.7
0.06772	0.00077	422.4	4.65	774.9	6.87	1995.9
0.10449	0.00136	640.7	7.92	629	9.58	588.6
0.08504	0.00101	526.1	6.02	573.4	6.87	766.6
0.10371	0.0012	636.1	7.01	641.9	6.76	663.4
0.12319	0.00149	748.9	8.54	766.7	8.67	820
0.13272	0.00181	803.4	10.28	789.9	12.05	753
0.10342	0.00122	634.4	7.1	650.7	7.23	709
0.10795	0.00132	660.8	7.69	658.8	8.36	653
0.10968	0.0014	670.9	8.14	664.5	9.47	643.9
0.10295	0.00132	631.7	7.69	643.4	9.24	686.1
0.12755	0.00181	773.9	10.36	783.8	13.02	813.3
0.10442	0.00134	640.3	7.82	664.5	9.48	748.6
0.08936	0.00124	551.7	7.32	601.4	10.55	794.3
0.04154	0.00056	262.4	3.44	293.6	5.9	551.4
0.12638	0.00156	767.2	8.92	765.5	9.34	761.6
0.12271	0.00144	746.1	8.3	747.2	8.01	751.4
0.10035	0.00118	616.5	6.89	616.6	7.01	618.3
0.10161	0.00154	623.8	9.01	616.9	13.36	593
0.11082	0.00306	677.5	17.74	697.2	36.06	762
0.09804	0.00122	602.9	7.17	613.3	8.45	652.9
0.11946	0.00182	727.5	10.46	779	14.27	930.5
0.08174	0.00101	506.5	6.02	557.3	7.6	772
0.12342	0.00158	750.2	9.08	776.7	10.32	854.5
0.1174	0.00163	715.6	9.41	718	12.06	726.4
0.10646	0.00135	652.2	7.84	665.8	9.24	713.3
0.11601	0.00133	707.6	7.67	733.7	7.2	815.6
0.12999	0.00184	787.8	10.47	811.9	13.07	879.7
0.04765	0.00055	300.1	3.36	402.8	4.61	1045.6
0.10437	0.00159	640	9.28	677.4	13.89	805
0.04078	0.00047	257.7	2.89	254.6	3.28	228.2
0.15923	0.00181	952.5	10.07	958	8.34	971.6
0.07208	0.00083	448.7	4.97	556.6	5.96	1027.6
0.06259	0.00073	391.4	4.45	499.7	5.95	1033.6
0.11412	0.00133	696.6	7.67	700.3	7.48	713.1
0.12424	0.00145	754.9	8.31	805	8.2	947.1
0.31675	0.00377	1773.8	18.45	1775.7	11.99	1778.8

0.10311	0.00131	632.6	7.68	635	9.24	644.6
0.13103	0.00163	793.7	9.29	799.6	9.89	817
0.10668	0.00136	653.4	7.9	701.8	9.55	861.2
0.10301	0.00158	632	9.24	702.6	14.17	936.6
0.13096	0.00257	793.3	14.67	800.1	23.82	819.9
0.10792	0.00148	660.6	8.59	647.9	11.24	605
0.03802	0.00044	240.5	2.71	407.3	4.67	1512.1
0.11334	0.00181	692.1	10.45	702.9	15.55	738.7
0.09263	0.00122	571.1	7.2	572.5	9.48	579.2
0.10898	0.00135	666.8	7.84	670.8	8.89	685.4
0.08582	0.00163	530.8	9.69	544.5	18.07	603.4
0.08477	0.00137	524.5	8.13	538.6	13.7	599.9
0.13016	0.00156	788.8	8.89	804.5	8.98	849.4
0.12312	0.0016	748.5	9.19	780.4	10.87	873.6
0.11212	0.00152	685.1	8.8	660.1	11.13	576.7
0.13684	0.00171	826.8	9.72	833.1	10.34	851.1
0.12953	0.00167	785.2	9.51	776	10.72	750.7
0.06807	0.00081	424.5	4.87	446.9	5.94	564.7
0.00478	0.00013	30.7	0.86	27.3	3.21	0.1
0.11037	0.00142	674.9	8.22	743.5	10.11	957.1
0.09905	0.00131	608.8	7.66	665.4	10.2	863.1
0.13253	0.00157	802.3	8.96	806.4	8.87	818.6
0.17169	0.00226	1021.4	12.43	1005.2	12.64	971
0.16622	0.00229	991.3	12.66	1008.7	13.84	1047.8
0.12576	0.00146	763.7	8.34	765.8	7.98	773.2
0.07232	0.00084	450.1	5.04	844.2	8.05	2099.1
0.11915	0.00139	725.7	8.01	847.1	8.54	1181.1
0.12579	0.00151	763.8	8.67	756	8.94	734
0.09556	0.00114	588.3	6.68	628	7.6	774.4
0.12455	0.00261	756.7	14.98	805.3	25.21	943.1
0.1326	0.00178	802.7	10.14	805.6	12.02	814.5
0.1373	0.00178	829.4	10.07	810	11.23	758.3
0.14102	0.0016	850.4	9.06	878	8.22	949.3
0.10166	0.00138	624.1	8.09	623.2	10.86	621
0.10214	0.00141	626.9	8.24	632	11.25	651
0.10199	0.00129	626.1	7.54	653.5	9.26	750.3
0.07312	0.00087	454.9	5.24	458.8	6.31	478.9
0.523	0.00601	2711.9	25.45	2904.3	13.07	3041.4
0.10758	0.00143	658.7	8.32	665.5	10.69	690
0.10908	0.00141	667.4	8.22	663.7	10.11	652.2
0.10545	0.00125	646.2	7.27	683.9	7.99	810.8
0.10069	0.00117	618.4	6.86	631.3	7.25	678.9
0.12686	0.00159	769.9	9.11	771.5	10.17	777.1
0.10377	0.00122	636.5	7.14	644.8	7.68	675.1
0.13963	0.00208	842.6	11.78	1323.7	15.4	2219.9
0.06826	8.00E-04	425.6	4.8	489.9	6.05	803.6
0.09734	0.00113	598.8	6.63	610.2	7.03	653.9
0.57193	0.00665	2915.7	27.29	2960.6	13.44	2992.1
0.14416	0.0017	868.2	9.59	900	9.43	980
0.09974	0.00118	612.9	6.91	640.9	7.7	742
0.10153	0.00128	623.4	7.51	644.5	9.28	720.3
0.1425	0.00204	858.8	11.51	883.3	14.18	946.3
0.08531	0.00099	527.7	5.86	640.9	7.14	1064.2
0.1021	0.00125	626.7	7.34	639.4	8.66	685.4
0.14702	0.00176	884.2	9.89	907.2	9.86	964.7
0.1253	0.00155	761	8.86	783.3	9.86	848.3
0.10135	0.00145	622.3	8.49	621.7	12.02	620.4
0.09706	0.00171	597.1	10.06	612.7	17.23	672
0.08296	0.00098	513.7	5.85	653	7.72	1170.3

0.09256	0.00107	570.7	6.34	628.7	7.22	844.6
0.31464	0.00359	1763.5	17.59	1834	11.98	1915.9
0.09999	0.00123	614.3	7.23	606.5	8.55	578.6

	discordance		preferred age	
2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
35.63	2.1	11.3	522.5	6.09
29.23	1.7	7.9	634.0	7.03
39.43	0.5	2.8	581.7	6.96
35.61	-1.6	-7.2	646.5	7.48
35.83	1.1	4.3	849.1	9.99
31.81	2.0	9.4	601.0	6.79
37.06	31.9	110.3		
23.1	85.3	444.6		
49.65	1.8	8.2	620.6	8.14
74.36	0.4	1.9	624.3	9.98
33.41	0.2	0.8	756.3	8.65
29.12	2.0	9.5	623.0	6.89
25.08	3.4	13.6	750.7	8.04
30.41	1.9	9.3	586.6	6.55
29.54	7.4	36.4	554.7	6.2
26.67	34.1	146.2		
111.38	-3.5	-13.1	817.6	17.53
26.6	27.7	141.6		
21.27	83.5	372.5		
44.18	-1.8	-8.1	640.7	7.92
32.26	9.0	45.7		
29.23	0.9	4.3	636.1	7.01
32.92	2.4	9.5	748.9	8.54
46.34	-1.7	-6.3	803.4	10.28
31.02	2.6	11.8	634.4	7.1
36.48	-0.3	-1.2	660.8	7.69
41.51	-1.0	-4.0	670.9	8.14
41.21	1.9	8.6	631.7	7.69
50.13	1.3	5.1	773.9	10.36
40.95	3.8	16.9	640.3	7.82
49.22	9.0	44.0	551.7	7.32
51.02	11.9	110.1	262.4	3.44
36.13	-0.2	-0.7	767.2	8.92
31.07	0.1	0.7	746.1	8.3
31.82	0.0	0.3	616.5	6.89
62.7	-1.1	-4.9	623.8	9.01
148.81	2.9	12.5	677.5	17.74
39.13	1.7	8.3	602.9	7.17
54.59	7.1	27.9	727.5	10.46
37.08	10.0	52.4	506.5	6.02
39.35	3.5	13.9	750.2	9.08
49.97	0.3	1.5	715.6	9.41
40.01	2.1	9.4	652.2	7.84
27.67	3.7	15.3	707.6	7.67
48.71	3.1	11.7	787.8	10.47
27.03	34.2	248.4		
59.56	5.8	25.8	640.0	9.28
32.56	-1.2	-11.4	257.7	2.89
26.25	0.6	2.0	952.5	10.07
26.89	24.0	129.0		
29.87	27.7	164.1		
30.54	0.5	2.4	696.6	7.67
29.37	6.6	25.5	754.9	8.31
25.15	0.1	0.3	1778.8	25.15

42.02	0.4	1.9	632.6	7.68
37.02	0.7	2.9	793.7	9.29
39.09	7.4	31.8	653.4	7.9
58.19	11.2	48.2	632.0	9.24
90.28	0.9	3.4	793.3	14.67
51.02	-1.9	-8.4	660.6	8.59
25.54	69.4	528.7		
65.61	1.6	6.7	692.1	10.45
47.27	0.2	1.4	571.1	7.2
38.42	0.6	2.8	666.8	7.84
93.59	2.6	13.7	530.8	9.69
71.84	2.7	14.4	524.5	8.13
33.07	2.0	7.7	788.8	8.89
41.42	4.3	16.7	748.5	9.19
50.07	-3.6	-15.8	685.1	8.8
37.59	0.8	2.9	826.8	9.72
41.71	-1.2	-4.4	785.2	9.51
35.33	5.3	33.0	424.5	4.87
17.96	-11.1	-99.7	30.7	0.86
39.33	10.2	41.8	674.9	8.22
43.68	9.3	41.8	608.8	7.66
32.75	0.5	2.0	802.3	8.96
40.37	-1.6	-4.9	1021.4	12.43
43.84	1.8	5.7	991.3	12.66
30.47	0.3	1.2	763.7	8.34
24.19	87.6	366.4		
28.8	16.7	62.8		
35.14	-1.0	-3.9	763.8	8.67
33.78	6.7	31.6	588.3	6.68
93.69	6.4	24.6	756.7	14.98
45.42	0.4	1.5	802.7	10.14
42.48	-2.3	-8.6	829.4	10.07
27.78	3.2	11.6	850.4	9.06
50.73	-0.1	-0.5	624.1	8.09
51.82	0.8	3.8	626.9	8.24
40.69	4.4	19.8	626.1	7.54
37.89	0.9	5.3	454.9	5.24
21.11	7.1	12.2	3041.4	21.11
47.03	1.0	4.8	658.7	8.32
44.74	-0.6	-2.3	667.4	8.22
33.2	5.8	25.5	646.2	7.27
32.44	2.1	9.8	618.4	6.86
39.56	0.2	0.9	769.9	9.11
33.99	1.3	6.1	636.5	7.14
37.29	57.1	163.5		
32.23	15.1	88.8		
32.36	1.9	9.2	598.8	6.63
21.78	1.5	2.6	2992.1	21.78
31.79	3.7	12.9	868.2	9.59
33.97	4.6	21.1	612.9	6.91
41.44	3.4	15.5	623.4	7.51
49.78	2.9	10.2	858.8	11.51
29.79	21.5	101.7	527.7	5.86
38.95	2.0	9.4	626.7	7.34
33.3	2.6	9.1	884.2	9.89
37.54	2.9	11.5	761	8.86
56.49	-0.1	-0.3	622.3	8.49
81.11	2.6	12.5	597.1	10.06
31.6	27.1	127.8		

31.66	10.2	48.0	570.7	6.34
24.75	4.0	8.6	1915.9	24.75
40.76	-1.3	-5.8	614.3	7.23

Sample 2976S Didesa @ Ephrem 178 grain analysed 50 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2976n_G001	16	1.6	0.291	0.05751	0.00536	0.75696
X2976n_G002	177	24.3	0.4332	0.06499	0.00192	1.1657
X2976n_G003				0.75872	0.02336	78.06116
X2976n_G004	41.7	4.6	0.393	0.06858	0.00356	0.98405
X2976n_G005	134	14.9	0.5198	0.05958	0.00206	0.84921
X2976n_G006	72.5	7.9	0.5384	0.05932	0.0026	0.81922
X2976n_G007	85.3	10.2	0.7598	0.05801	0.0024	0.83306
X2976n_G008				0.60231	0.07074	1.86164
X2976n_G009	32.1	3.4	0.3975	0.0645	0.00392	0.90112
X2976n_G010				0.10108	0.00382	1.33397
X2976n_G011				0.09808	0.00362	1.31322
X2976n_G012	578.4	57.4	0.0335	0.06028	0.00146	0.88527
X2976n_G013				0.30237	0.01524	6.63717
X2976n_G014				0.20796	0.01322	3.98599
X2976n_G015				0.26412	0.0108	4.14629
X2976n_G016				0.26894	0.01074	4.42688
X2976n_G017				0.31114	0.01816	6.43079
X2976n_G018	3693.6	489	1.2192	0.06404	0.00138	0.943
X2976n_G019	143	17.7	0.3803	0.06218	0.00202	1.02308
X2976n_G020	111.6	15.6	0.2678	0.06653	0.0022	1.26179
X2976n_G021	190.5	24	0.4259	0.06684	0.00204	1.10287
X2976n_G022	153.3	18.8	0.4063	0.06314	0.00202	1.01957
X2976n_G023	173.8	9	0.5531	0.06682	0.00266	0.45606
X2976n_G024	343.1	52.7	0.6564	0.06465	0.00164	1.2201
X2976n_G025	417.5	68.9	1.0079	0.06384	0.0016	1.18302
X2976n_G026	130.8	17.9	1.0244	0.06106	0.00214	0.93359
X2976n_G027				0.09972	0.00438	1.38319
X2976n_G028				0.20489	0.00908	3.21837
X2976n_G029	1519.1	164.6	0.2426	0.06578	0.00148	1.01536
X2976n_G030				0.75288	0.02562	69.02879
X2976n_G031	317.4	43.2	0.528	0.06455	0.00172	1.11949
X2976n_G032				0.31322	0.01972	6.44893
X2976n_G033				0.08303	0.00374	1.13108
X2976n_G034				0.33735	0.0145	6.41324
X2976n_G035				0.17326	0.00656	1.99344
X2976n_G036				0.62268	0.08132	1.8858
X2976n_G037				0.07246	0.00592	1.7086
X2976n_G038				0.15207	0.00786	2.20416
X2976n_G039				0.11929	0.0068	1.76919
X2976n_G040				0.33255	0.01778	7.4822
X2976n_G041				0.3464	0.0221	7.32055
X2976n_G042	139.8	16.4	0.1128	0.07536	0.00252	1.25998
X2976n_G043	281.5	30.5	0.3299	0.05914	0.0017	0.86235
X2976n_G044	410.4	40.1	0.0363	0.05899	0.00156	0.85327
X2976n_G045				0.09422	0.00442	1.32263
X2976n_G046	5845.1	228.5	0.0203	0.06401	0.00142	0.3717
X2976n_G047	479.7	59.6	0.0997	0.06735	0.00166	1.20604
X2976n_G048	2175.8	122.4	0.2776	0.21843	0.00482	1.57568
X2976n_G049				0.3856	0.01774	9.1717
X2976n_G050	149.4	19.2	1.2409	0.05639	0.00198	0.76776

X2976n_G051	74.4	8.3	0.4576	0.05896	0.0026	0.85791
X2976n_G052				0.74528	0.0964	113.0762
X2976n_G053				0.55705	0.02868	17.80117
X2976n_G054				0.08139	0.003	1.34296
X2976n_G055				0.10594	0.00464	1.40369
X2976n_G056				0.12489	0.00718	1.81185
X2976n_G057				0.41273	0.02052	9.02442
X2976n_G058				0.32407	0.00894	7.01736
X2976n_G059				0.15644	0.0071	2.39191
X2976n_G060				0.09005	0.00364	1.29126
X2976n_G061				0.8088	0.0352	181.38142
X2976n_G062				0.23047	0.00756	2.2598
X2976n_G063				0.09978	0.00346	1.71107
X2976n_G064				0.11032	0.00412	1.54001
X2976n_G065				0.19465	0.00872	2.23864
X2976n_G066				0.37073	0.01016	7.85058
X2976n_G067				0.0909	0.00442	1.26852
X2976n_G068				0.53392	0.15364	64.95598
X2976n_G069				0.6233	0.03202	136.38998
X2976n_G070				0.43603	0.01564	8.70551
X2976n_G071	62.8	8.1	0.3692	0.06216	0.00274	1.06977
X2976n_G072	61.6	7.8	0.3713	0.06235	0.00282	1.05819
X2976n_G073				0.74367	0.03692	59.53342
X2976n_G074	3905.9	198.6	0.0383	0.06311	0.00144	0.47549
X2976n_G075				0.16156	0.00928	2.53154
X2976n_G076				0.34881	0.01714	7.1753
X2976n_G077				0.28654	0.01366	5.1675
X2976n_G078				0.36593	0.01516	7.42358
X2976n_G079				-0.18402	0.23474	-32.243
X2976n_G080	207.1	29.5	0.345	0.06548	0.00192	1.24808
X2976n_G081				0.09256	0.0062	1.503
X2976n_G082				0.3872	0.02046	7.63708
X2976n_G083				0.15963	0.00742	2.83084
X2976n_G084				0.34665	0.01932	7.52496
X2976n_G085				0.07562	0.00282	1.02833
X2976n_G086				0.35445	0.01742	7.53545
X2976n_G087	67.3	8.1	0.7498	0.06257	0.00304	0.90324
X2976n_G088				0.43272	0.02692	10.47614
X2976n_G089				0.17981	0.00934	3.04973
X2976n_G090				0.23424	0.0137	4.73792
X2976n_G091				0.50388	0.02142	13.5848
X2976n_G092				0.0927	0.0026	1.1878
X2976n_G093				0.51943	0.01626	15.12985
X2976n_G094				0.17765	0.00468	2.32572
X2976n_G095				0.08334	0.01186	1.19285
X2976n_G096	1135	97.9	0.087	0.06695	0.0016	0.84514
X2976n_G097				0.71187	1.32394	
X2976n_G098	49.4	5	0.1892	0.05997	0.0032	0.853
X2976n_G099				0.2285	0.01388	3.64677
X2976n_G100				0.09374	0.00404	1.53392
X2976n_G101	112.2	17.4	0.5655	0.06505	0.00234	1.26875
X2976n_G102				0.17821	0.01194	2.75828
X2976n_G103				0.20646	0.009	3.25944
X2976n_G104				0.41746	0.02882	8.74378
X2976n_G105				0.18563	0.01132	3.4923

X2976n_G106				0.49232	0.02784	12.1417
X2976n_G107				0.27005	0.0134	4.97624
X2976n_G108				0.12793	0.0047	1.76313
X2976n_G109				0.51359	1.78876	166.51558
X2976n_G110				0.2419	0.00908	4.08881
X2976n_G111	415.5	46.3	0.173	0.06096	0.00166	0.96302
X2976n_G112				0.26312	0.01616	4.55955
X2976n_G113				0.08512	0.00358	1.25898
X2976n_G114				0.3939	0.0227	9.58649
X2976n_G115				0.82325	0.03846	
X2976n_G116				0.14281	0.00852	2.14984
X2976n_G117				3.89356	23.8	
X2976n_G118				0.17401	0.00964	2.69382
X2976n_G119				0.32788	0.01616	6.31234
X2976n_G120				0.73708	0.02268	63.76185
X2976n_G121				0.26601	0.03246	4.45511
X2976n_G122				0.48499	0.02604	7.22615
X2976n_G123				0.84341	0.06268	
X2976n_G124				0.7815	0.48036	304.61307
X2976n_G125				0.19476	0.01516	3.0612
X2976n_G126				0.54366	0.08076	26.49921
X2976n_G127				0.08993	0.00434	1.22983
X2976n_G128				0.41425	0.02902	9.84986
X2976n_G129				0.16564	0.01072	2.81007
X2976n_G130				0.10949	0.00526	1.65789
X2976n_G131				3.32061	0.26362	4.3043
X2976n_G132				0.26158	0.02836	4.51147
X2976n_G133				0.43406	0.01982	9.7395
X2976n_G134				0.09149	0.00318	1.44988
X2976n_G135				0.09466	0.00344	1.3585
X2976n_G136	219.3	30.1	0.266	0.06339	0.00196	1.18944
X2976n_G137				0.32915	0.0205	6.4152
X2976n_G138				0.06124	0.06666	1.54329
X2976n_G139	783.6	82.9	0.3304	0.06026	0.00152	0.86043
X2976n_G140	646.4	68.4	0.298	0.06083	0.0016	0.87607
X2976n_G141				0.52258	0.0376	14.87858
X2976n_G142				0.80939	0.1058	9.69346
X2976n_G143	236.6	24.2	0.0565	0.05816	0.00192	0.87486
X2976n_G144	216.1	25	0.3382	0.06117	0.002	0.95155
X2976n_G145				0.32696	0.02176	6.43972
X2976n_G146				0.35446	0.01968	7.14347
X2976n_G147				0.27022	0.01444	4.69718
X2976n_G148				0.23211	0.02076	4.17965
X2976n_G149				0.63467	0.04426	35.61636
X2976n_G150				0.31925	0.02884	6.8763
X2976n_G151	141.1	22.4	0.5896	0.06351	0.0022	1.26028
X2976n_G152				0.15051	0.0061	2.06587
X2976n_G153				-0.69304	1.68616	-87.11931
X2976n_G154	367.4	50.7	0.6775	0.07026	0.00202	1.19412
X2976n_G155				0.17066	0.00964	2.6866
X2976n_G156				0.16872	0.01888	2.42568
X2976n_G157				0.11962	0.00604	1.72739
X2976n_G158	95.5	12.9	0.2682	0.06751	0.00254	1.25312
X2976n_G159	68.6	6.4	0.2139	0.0585	0.00316	0.76786
X2976n_G160				0.1528	0.00854	2.25562

X2976S_G001	3002	380.7	0.1441	0.06368	0.00152	1.1529
X2976S_G002	98.7	32	1.3611	0.09875	0.00388	3.34317
X2976S_G003	89.4	13.8	0.5963	0.0661	0.00252	1.27974
X2976S_G004	3764.6	142.6	1.5314	0.07274	0.00194	0.31921
X2976S_G005	122	14	0.603	0.06302	0.00256	0.90981
X2976S_G006	46.1	5.1	0.1348	0.11907	0.00646	1.76848
X2976S_G007	192.3	28	0.7767	0.06253	0.00206	1.08438
X2976S_G008	159.2	25.4	0.7881	0.10531	0.00318	2.03732
X2976S_G009	41	4.7	0.4442	0.06317	0.00398	0.94264
X2976S_G010				-1.73864	13.66988	88.78706
X2976S_G011				2.75858	10.63546	
X2976S_G012	711.9	166.3	0.9686	0.08762	0.00218	2.58652
X2976S_G013				0.84696	0.0243	
X2976S_G014				0.61836	0.04776	7.99551
X2976S_G015	240.2	26.5	0.0774	0.2075	0.00928	2.88349
X2976S_G016	1223.1	145.1	0.1351	0.07309	0.00186	1.24929
X2976S_G017	210.9	34.4	0.7856	0.06602	0.00214	1.28153
X2976S_G018				0.92668	0.47222	50.50384

28.1% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.06824	0.09557	0.00382	588.4	22.4	572.3	44.4
0.0357	0.13023	0.00324	789.2	18.4	784.6	21.2
2.78122	0.74702	0.02812				
0.04988	0.10419	0.00316	638.9	18.4	695.7	30.2
0.0298	0.10349	0.00266	634.8	15.6	624.2	20.2
0.03566	0.10027	0.00278	616	16.2	607.6	23.8
0.03436	0.10427	0.00282	639.4	16.4	615.3	22.8
0.15	0.02244	0.00208				
0.053	0.10144	0.0033	622.8	19.4	652.3	33.2
0.04966	0.09582	0.00268				
0.04808	0.09722	0.00268				
0.0233	0.10662	0.00254	653.1	14.8	643.8	16.2
0.3021	0.15938	0.00662				
0.23026	0.13916	0.0063				
0.15642	0.11398	0.00386				
0.16384	0.11951	0.004				
0.33104	0.15007	0.00708				
0.0227	0.10692	0.0025	654.8	14.6	674.5	15.6
0.0341	0.11947	0.00304	727.5	17.6	715.5	21.2
0.04272	0.13771	0.00354	831.7	20	828.7	23.8
0.03468	0.11981	0.003	729.5	17.2	754.7	21
0.03364	0.11724	0.00298	714.7	17.2	713.7	21
0.01798	0.04955	0.00132	311.8	8.2	381.5	15.2
0.03318	0.13702	0.0033	827.8	18.8	809.8	19.6
0.0318	0.13455	0.00322	813.8	18.2	792.7	19
0.03326	0.11101	0.00288	678.6	16.8	669.5	21.4
0.05888	0.10071	0.00302				
0.13272	0.11405	0.0039				
0.0252	0.11207	0.00264	684.8	15.4	711.6	16.6
2.6494	0.6657	0.02726				
0.03172	0.12593	0.00306	764.6	17.6	762.7	19.4
0.35718	0.14949	0.0075				
0.04988	0.09891	0.0029				
0.24952	0.13803	0.0051				
0.07216	0.08354	0.0025				
0.16702	0.02199	0.00228				
0.13522	0.17119	0.00708				
0.10634	0.10523	0.00374				
0.09524	0.10768	0.00388				
0.35624	0.16336	0.0073				
0.40432	0.15344	0.00804				
0.04292	0.12139	0.00316	738.6	18.2	827.9	24
0.02604	0.10586	0.0026	648.7	15.2	631.4	17.8
0.024	0.10502	0.00254	643.8	14.8	626.4	16.8
0.0601	0.10193	0.00312				
0.00912	0.04216	0.00098	266.2	6	320.9	8.8
0.03214	0.13002	0.00312	788	17.8	803.4	19.2
0.0383	0.05238	0.00124	329.1	7.6	960.7	20.2
0.3807	0.17269	0.00702				
0.02742	0.09886	0.00254	607.7	15	578.5	19.2

0.0375	0.10564	0.00294	647.4	17.2	629	24.4
18.2417	1.10158	0.19142				
0.81984	0.23202	0.01146				
0.04972	0.11981	0.00324				
0.05956	0.0962	0.0029				
0.098	0.10533	0.00384				
0.39596	0.15875	0.0069				
0.19692	0.15722	0.00424				
0.10264	0.11101	0.00366				
0.05136	0.1041	0.00294				
12.03134	1.62823	0.11346				
0.07154	0.07119	0.00202				
0.05962	0.12451	0.00338				
0.05674	0.10135	0.00284				
0.09262	0.0835	0.0028				
0.21818	0.15375	0.00416				
0.05982	0.10132	0.00314				
22.44522	0.8833	0.31518				
10.53562	1.58871	0.1272				
0.28972	0.14496	0.00484				
0.04702	0.12495	0.00352	759	20.2	738.6	27.4
0.0475	0.12322	0.00348	749.1	20	732.9	27.8
3.20334	0.58122	0.03418				
0.0119	0.0547	0.00128	343.3	7.8	395	10.8
0.13438	0.11377	0.00444				
0.31436	0.14935	0.00622				
0.22266	0.13093	0.00506				
0.28032	0.14729	0.00538				
53.9596	1.27209	2.13884				
0.03836	0.1384	0.00344	835.6	19.4	822.5	21.6
0.0958	0.1179	0.00446				
0.35134	0.1432	0.00644				
0.12466	0.12875	0.00436				
0.37124	0.1576	0.00728				
0.0383	0.09873	0.00264				
0.33046	0.15435	0.00646				
0.04336	0.1048	0.00304	642.5	17.8	653.5	27.2
0.56386	0.17577	0.0095				
0.14696	0.12314	0.0046				
0.25148	0.14685	0.00646				
0.52454	0.19574	0.00784				
0.0348	0.09303	0.00232				
0.46406	0.21148	0.00658				
0.06404	0.09505	0.00238				
0.1599	0.10391	0.00684				
0.02198	0.09166	0.00218	565.3	12.8	622	15.6
0.04468	0.10326	0.00312	633.5	18.2	626.3	28.6
0.19824	0.11587	0.00514				
0.06474	0.1188	0.0035				
0.04648	0.1416	0.00374	853.7	21.2	831.8	25.4
0.16812	0.11237	0.00504				
0.13274	0.11462	0.00388				
0.5114	0.15206	0.0089				
0.19604	0.13659	0.0058				

0.5952	0.17905	0.0091				
0.22396	0.13378	0.00526				
0.06384	0.10006	0.00284				
528.80274	2.35387	4.7347				
0.14596	0.12271	0.00386				
0.02796	0.1147	0.0028	700	16.2	684.9	18.2
0.24822	0.12581	0.00584				
0.05226	0.10739	0.00308				
0.48712	0.17669	0.00874				
0.11928	0.10929	0.00426				
	-5.32653	174.91976				
0.1377	0.11239	0.00434				
0.27824	0.13977	0.0057				
2.18536	0.62803	0.02234				
0.46588	0.12159	0.01046				
0.32356	0.10817	0.005				
255.24976	2.82977	2.5612				
0.21368	0.11411	0.00592				
3.6167	0.35387	0.0517				
0.05752	0.09928	0.00306				
0.5934	0.17262	0.01026				
0.1671	0.12316	0.00532				
0.07676	0.10993	0.00352				
0.1549	0.00941	0.00072				
0.42272	0.12521	0.00964				
0.39764	0.1629	0.00662				
0.05076	0.11505	0.00308				
0.04944	0.10419	0.00284				
0.03812	0.13622	0.00342	823.3	19.4	795.7	22
0.3486	0.1415	0.00708				
1.64034	0.18295	0.06022				
0.02354	0.10366	0.00248	635.8	14.4	630.4	16.4
0.02462	0.10456	0.00252	641.1	14.8	638.9	17
0.91476	0.2067	0.0136				
0.87326	0.08694	0.01002				
0.02966	0.10921	0.00276	668.2	16	638.2	19.8
0.03204	0.11293	0.00286	689.7	16.6	678.9	20.4
0.37292	0.14299	0.00754				
0.34966	0.1463	0.0067				
0.22514	0.12619	0.00524				
0.32988	0.13073	0.0081				
2.42654	0.4074	0.03024				
0.53634	0.15637	0.0109				
0.04468	0.14406	0.00374	867.6	21	828	24.6
0.08072	0.09964	0.00304				
207.85294	0.91257	2.14782				
0.03598	0.12338	0.00306	750	17.6	797.9	21
0.14046	0.11428	0.00444				
0.24664	0.10437	0.00676				
0.08332	0.10483	0.0035				
0.04762	0.13476	0.0036	815	20.4	824.8	26
0.04064	0.09529	0.00286	586.7	16.8	578.5	27.2
0.11752	0.10716	0.00402				

0.02916	0.13135	0.00298	795.6	17	778.6	18
0.13116	0.24562	0.007	1415.8	36.2	1491.2	38
0.04884	0.14046	0.00364	847.3	20.6	836.7	26.2
0.00882	0.03184	0.00074	202.1	4.6	281.3	8.6
0.03664	0.10474	0.00274	642.1	16	657	23.4
0.09082	0.10776	0.00366	659.7	21.2	1034	41.6
0.03616	0.12582	0.00308	764	17.6	745.8	21.6
0.06246	0.14036	0.00346	846.7	19.6	1128.1	26.6
0.0576	0.10826	0.00342	662.6	19.8	674.3	34.8
305.21586	-0.3705	2.72262				
0.068	0.21416	0.00494	1250.9	26.2	1296.8	24.8
89.1667	10.56119	0.76328				
0.47154	0.09381	0.00626				
0.11904	0.10082	0.00336	619.2	19.6	1377.6	42
0.03342	0.12401	0.00286	753.6	16.4	823.1	19.4
0.04206	0.14083	0.00346	849.4	19.6	837.5	23.2
20.82344	0.3954	0.2149				

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
511.1	204.8	2.8	15.1	588.4	22.4
774	62.2	0.6	2	789.2	18.4
886.1	107.2	-8.2	-27.9	638.9	18.4
588.4	75	1.7	7.9	634.8	15.6
578.9	95.2	1.4	6.4	616	16.2
530.1	90.6	3.9	20.6	639.4	16.4
758.1	128.2	-4.5	-17.8	622.8	19.4
613.6	52.4	1.4	6.4	653.1	14.8
743	45.6	-2.9	-11.9	654.8	14.6
680.3	69.4	1.7	6.9	727.5	17.6
823.1	69	0.4	1	831.7	20
832.8	63.6	-3.3	-12.4	729.5	17.2
712.9	68	0.1	0.2	714.7	17.2
832.2	83	-18.3	-62.5		
763	53.4	2.2	8.5	827.8	18.8
736.3	53	2.7	10.5	813.8	18.2
641.3	75.4	1.4	5.8	678.6	16.8
799.4	47.2	-3.8	-14.3	684.8	15.4
759.7	56.2	0.2	0.6	764.6	17.6
1078.1	67.2	-10.8	-31.5	738.6	18.2
572.3	62.6	2.7	13.4	648.7	15.2
566.7	57.6	2.8	13.6	643.8	14.8
742	47	-17	-64.1		
848.6	51.2	-1.9	-7.1	788	17.8
2969.2	35.6	-65.7	-88.9		
467.8	77.8	5.1	29.9		

565.6	96	2.9	14.5	647.4	17.2
679.6	94.2	2.8	11.7	759	20.2
686.1	96.6	2.2	9.2	749.1	20
711.9	48.4	-13.1	-51.8	343.3	7.8
789.8	61.6	1.6	5.8	835.6	19.4
693.6	103.6	-1.7	-7.4	642.5	17.8
836.2	49.8	-9.1	-32.4	565.3	12.8
602.5	115.4	1.1	5.1	633.5	18.2
776	75.6	2.6	10	853.7	21.2

637.8	58.6	2.2	9.7	700	16.2
721.3	65.6	3.5	14.1	823.3	19.4
612.9	54.4	0.9	3.7	635.8	14.4
633.2	56.6	0.3	1.2	641.1	14.8
535.8	72.2	4.7	24.7	668.2	16
645.2	70.2	1.6	6.9	689.7	16.6
725.4	73.4	4.8	19.6	867.6	21
936	59	-6	-19.9	750	17.6
853.5	78.2	-1.2	-4.5	815	20.4
548.5	118	1.4	7	586.7	16.8

731	50.6	2.2	8.8	795.6	17
1600.6	73.4	-5.1	-11.5	1600.6	73.4
809.5	79.8	1.3	4.7	847.3	20.6
1006.7	54.2	-28.2	-79.9		
708.9	86.4	-2.3	-9.4	642.1	16
1942.3	97	-36.2	-66		
692.3	70.2	2.4	10.4	764	17.6
1719.7	55.4	-24.9	-50.8		
714	133.8	-1.7	-7.2	662.6	19.8
1374.2	47.8	-3.5	-9	1374.2	47.8
2886.1	72.6	-55.1	-78.5		
1016.4	51.6	-8.4	-25.9	753.6	16.4
807	67.8	1.4	5.2	849.4	19.6

Sample 3295S Dabus @ Bambesi 3 grain analysed 2 concordant ages 66

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X3295S_G001	3016.8	172.5	1.0027	0.13499	0.004	0.93722
X3295S_G002	595.1	80.9	0.7332	0.06536	0.00216	1.07774
X3295S_G003	666.4	89.6	0.6329	0.06354	0.00206	1.06204

.7% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.02754	0.05037	0.00116	316.8	7.2	671.4	18.4
0.03538	0.11963	0.00282	728.4	16.2	742.5	21.4
0.03434	0.12127	0.00284	737.9	16.4	734.8	21

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
2163.9	51.6	-52.8	-85.4		
785.9	69.4	-1.9	-7.3	728.4	16.2
726.4	68.8	0.4	1.6	737.9	16.4

Sample 2970S Beles @ Enat Beles 153 grain analysed 130 concordant ages

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X2970S_G001	1163.6	68.2	0.3015	0.0731	0.00192	0.61145
X2970S_G002	1126.4	99.9	0.3685	0.08253	0.00194	0.97458
X2970S_G003	2074.2	11.1	0.6642	0.04854	0.00248	0.03194
X2970n_G001	182.4	28	0.6375	0.06836	0.002	1.29603
X2970n_G002	18.1	3.7	0.4429	0.07017	0.00396	1.8709
X2970n_G003	594.8	86.9	0.546	0.06706	0.00166	1.24368
X2970n_G004	76.5	10.9	0.3841	0.06859	0.00254	1.29702
X2970n_G005	5540.4		1.5926	0.27861	0.0064	0.78425
X2970n_G006	136.5	16.5	0.7097	0.06478	0.0022	0.95479
X2970n_G007	441.8	64.7	0.5326	0.06912	0.00176	1.31361
X2970n_G008	389.1	54.7	0.5365	0.06773	0.00178	1.20897
X2970n_G009	68.5	8.5	0.7155	0.06335	0.00276	0.95675
X2970n_G010	108.2	13.5	0.6065	0.06288	0.0023	0.98478
X2970n_G011	1044.5	120.3	0.6239	0.06905	0.00166	0.98575
X2970n_G012	28.3		2.1315	-0.0005	0.00298	-0.0281
X2970n_G013	136.5	15.8	0.3647	0.06148	0.0021	0.95095
X2970n_G014	307.6	36.1	0.4358	0.06262	0.00176	0.96461
X2970n_G015	1685.2	103.2	0.0529	0.07301	0.00186	0.65324
X2970n_G016	205.1	22.3	0.2517	0.06241	0.00194	0.94113
X2970n_G017	156.9	17.3	0.2912	0.06464	0.00214	0.97439
X2970n_G018	3334.7	18	0.9031	0.0472	0.00176	0.0294
X2970n_G019	850.8	80.3	0.4541	0.06694	0.00168	0.82269
X2970n_G020	1084.7	109.1	0.3947	0.06982	0.0017	0.94467
X2970n_G021	139.3	22.2	0.2703	0.0708	0.0022	1.54122
X2970n_G022	1518.6	104.7	0.4942	0.10012	0.00242	0.85569
X2970n_G023	46.4	8.8	0.597	0.07509	0.0031	1.77566
X2970n_G024	835.5	83.5	0.3602	0.07962	0.00198	1.08335
X2970n_G025	177.9	22	0.2572	0.05509	0.00178	0.94053
X2970n_G026	86.7	13.2	0.7551	0.06569	0.00244	1.19831
X2970n_G027	470.7	64.8	0.4543	0.06854	0.00176	1.22948
X2970n_G028	1204.8	171.7	0.7307	0.06806	0.00162	1.17665
X2970n_G029	360.3	49.9	0.5824	0.0682	0.00184	1.18329
X2970n_G030	3932.3	253.6	1.0307	0.10112	0.00236	0.72647
X2970n_G031	73.6	11.2	0.669	0.06697	0.00266	1.25575
X2970n_G032	80.4	8.9	0.4858	0.07075	0.0034	1.00116
X2970n_G033	226	27.5	0.4898	0.06254	0.00194	0.98636
X2970n_G034	551.2	80	0.7583	0.06809	0.00174	1.1801
X2970n_G035	47	0.3	0.5358	0.04346	0.0192	0.0325
X2970n_G036	145	22.3	0.6888	0.06617	0.00216	1.24401
X2970n_G037	181.8	23.1	0.4329	0.06498	0.00206	1.08562
X2970n_G038	36.8	4.7	0.848	0.06068	0.00366	0.89705
X2970n_G039	256	27.2	0.1127	0.06193	0.00188	0.95054
X2970n_G040	343.8	35.6	0.0833	0.0636	0.00182	0.96013
X2970n_G041	176.2	24.7	0.3495	0.0685	0.00212	1.28761
X2970n_G042	234.5	33.9	0.3577	0.06506	0.00188	1.25428
X2970n_G043	150.7	18.3	0.6306	0.0643	0.00224	0.96905
X2970n_G044	164.3	21.4	0.8773	0.06477	0.0022	0.98345
X2970n_G045	216.9	26.1	0.7392	0.06304	0.00204	0.91174
X2970n_G046	123.5	15.5	0.2788	0.06532	0.00232	1.12535
X2970n_G047	99.1	12.5	0.2781	0.0648	0.00244	1.12144

X2970n_G048	61.7	9.1	0.597	0.06507	0.0029	1.20669
X2970n_G049	309.8	1.6	0.6555	0.04459	0.00536	0.02903
X2970n_G050	108.2	14.1	0.7818	0.06065	0.00236	0.94362
X2970n_G051	132	15.8	0.8629	0.06324	0.00234	0.88725
X2970n_G052	51.5	6	0.557	0.08555	0.0039	1.24186
X2970n_G053	130.3	14.6	0.8468	0.06078	0.00232	0.87578
X2970n_G054	5248.7	391.3	0.3047	0.07039	0.00166	0.73372
X2970n_G055	1718.6	129.4	0.2609	0.06783	0.0017	0.70986
X2970n_G056	467.3	61.7	0.454	0.06543	0.00174	1.12575
X2970n_G057	452	59	0.4539	0.0647	0.00174	1.10102
X2970n_G058	271.3	29	0.5164	0.06577	0.002	0.91232
X2970n_G059	49.8	7.4	0.611	0.06689	0.00316	1.23933
X2970n_G060	31.7	4.6	0.4908	0.0698	0.00396	1.29515
X2970n_G061	214.1	26.3	0.4193	0.06798	0.00208	1.09682
X2970n_G062	823	68.4	0.1613	0.06997	0.00184	0.82144
X2970n_G063	269.6	30.1	0.1804	0.06549	0.002	1.03011
X2970n_G064	260	37.3	0.5533	0.06725	0.002	1.22374
X2970n_G065	185.8	21.1	0.4811	0.06295	0.0021	0.92751
X2970n_G066	386.3	33.5	0.1358	0.06685	0.00196	0.83416
X2970n_G067	31.7	3.8	0.7155	0.06476	0.0057	0.93722
X2970n_G068	34	4.3	0.765	0.06226	0.00388	0.94723
X2970n_G069	175	20.9	0.5867	0.0619	0.0021	0.93054
X2970n_G070	221.5	32.9	0.5449	0.06901	0.00206	1.29796
X2970n_G071	191.5	23.2	0.5307	0.06288	0.00208	0.97156
X2970n_G072	229.4	31.6	0.3009	0.06573	0.00198	1.23283
X2970n_G073	305.9	43.3	0.3969	0.06729	0.00192	1.26225
X2970n_G074	629.9	84.3	0.3915	0.06972	0.00184	1.23213
X2970n_G075	294.6	55	0.577	0.07539	0.00208	1.76511
X2970n_G076	105.4	18.8	0.4641	0.07259	0.00244	1.67356
X2970n_G077	562.5	91.4	0.9809	0.06683	0.0018	1.22953
X2970n_G078	198.3	30.7	0.6908	0.06594	0.00208	1.2443
X2970n_G079	53.8	7.6	0.4485	0.06697	0.0031	1.24066
X2970n_G080	757.3	141.9	0.8587	0.07378	0.0019	1.63101
X2970n_G081	631.6	116.6	0.9029	0.07926	0.00212	1.71222
X2970n_G082	608.4	105.5	1.3218	0.07553	0.002	1.46313
X2970n_G083	88.9	10.6	0.7337	0.06352	0.00268	0.9149
X2970n_G084	129.1	18.3	0.322	0.06647	0.00228	1.27592
X2970n_G085	426	54.2	0.738	0.06666	0.0019	1.02282
X2970n_G086	149.5	18.6	0.78	0.06109	0.0022	0.9103
X2970n_G087	148.4	22.1	0.5026	0.06651	0.00222	1.26495
X2970n_G088	295.1	40.7	0.1648	0.07357	0.0021	1.43077
X2970n_G089	139.3	19.2	0.3392	0.06479	0.00222	1.19984
X2970n_G090	1292.6	6.3	0.5007	0.04574	0.00258	0.02883
X2970n_G091	168.2	23.4	1.0691	0.06596	0.00226	1.01795
X2970n_G092	638.4	71.6	0.604	0.07541	0.00206	1.06061
X2970n_G093	11669.3	137.6	0.237	0.24508	0.0062	0.35706
X2970n_G094	92.3	13.8	0.6158	0.06595	0.00258	1.22568
X2970n_G095	697.3	110.6	0.8087	0.06604	0.00178	1.24059
X2970n_G096	60	8.3	0.6846	0.06175	0.00312	1.03931
X2970n_G097	139.9	18.4	1.1988	0.06926	0.00254	0.98898
X2970n_G098	3572	184	0.3294	0.06992	0.00182	0.49131
X2970n_G099	45.9	9.8	0.8397	0.07492	0.00318	1.86837
X2970n_G100	43.6	5.3	0.5313	0.06193	0.0034	0.95451
X2970n_G101	495.6	70.9	0.3527	0.06641	0.00184	1.27193
X2970n_G102	132.5	18.4	1.0196	0.06309	0.00234	0.98563

X2970n_G103	982.8	132.4	0.4276	0.06598	0.00176	1.17212
X2970n_G104	89.5	10.6	0.6232	0.0612	0.00268	0.90384
X2970n_G105	1652.3	95.8	0.36	0.07669	0.00208	0.58101
X2970n_G106	211.9	23.7	0.4231	0.06488	0.00216	0.94834
X2970n_G107	215.2	25.1	0.5546	0.07137	0.00234	1.04365
X2970n_G108	264.5	30.4	0.529	0.06114	0.00198	0.90038
X2970n_G109	105.4	12	0.4186	0.06257	0.00252	0.94266
X2970n_G110	6853.4	91.1	0.4072	0.13355	0.00362	0.2306
X2970n_G111	27.8	5.4	0.4914	0.07952	0.00398	1.96393
X2970n_G112	43.6	8.6	0.7605	0.07672	0.0034	1.81423
X2970n_G113	329.7	47.8	0.4913	0.06639	0.00198	1.24126
X2970n_G114	152.4	17.4	0.5066	0.07553	0.00264	1.09071
X2970n_G115	83.3	12.7	0.6899	0.06661	0.00266	1.24052
X2970n_G116	115	14.1	0.4758	0.06172	0.0024	0.978
X2970n_G117	193.7	26.9	0.3766	0.06799	0.00224	1.25753
X2970n_G118	288.9	45.4	0.6506	0.06662	0.00204	1.2917
X2970n_G119	57.8	6.9	0.5125	0.0627	0.00324	0.96734
X2970n_G120	215.2	35.2	0.3042	0.07096	0.00222	1.56617
X2970n_G121	392	49.6	0.6775	0.06253	0.00192	0.97195
X2970n_G122	33.4	3.7	0.3798	0.06569	0.00424	0.96125
X2970n_G123	96.3	13.6	0.6394	0.06445	0.0026	1.12556
X2970n_G124	270.2	44.9	1.0031	0.06613	0.00206	1.25261
X2970n_G125	210.2	32.8	0.767	0.06656	0.0022	1.24264
X2970n_G126	5024.4	270.2	0.2765	0.07522	0.00202	0.56198
X2970n_G127	209	24.4	0.5947	0.08872	0.0029	1.25896
X2970n_G128	1826.2	200.8	0.933	0.07001	0.00192	0.87695
X2970n_G129	55.5	8.2	0.1705	0.06966	0.00308	1.44759
X2970n_G130	872.9	103.9	0.3453	0.06677	0.00196	1.07704
X2970n_G131				0.75887	0.29002	782.48004
X2970n_G132	57.2	10.1	0.5688	0.07268	0.00308	1.60912
X2970n_G133	128.6	15.3	0.3715	0.06211	0.00242	0.98554
X2970n_G134	282.7	36.6	0.1875	0.10705	0.00324	1.85312
X2970n_G135	283.8	41.3	0.5518	0.06846	0.00214	1.26054
X2970n_G136	162.6	19.7	0.6472	0.06198	0.00226	0.93018
X2970n_G137	1604.2	106.7	0.7298	0.12914	0.00366	1.04934
X2970n_G138	392.5	58.1	1.3994	0.06188	0.00192	0.94316
X2970n_G139	179	29.3	0.9218	0.06539	0.00222	1.23178
X2970n_G140	139.3	19.7	0.3543	0.06823	0.00242	1.29553
X2970n_G141	578.3	78.1	0.1583	0.06859	0.002	1.31152
X2970n_G142	55.5	5.9	0.2941	0.06261	0.00322	0.90761
X2970n_G143	97.4	11.7	0.5265	0.06531	0.00272	1.00804
X2970n_G144	514.9	72.7	0.4885	0.06653	0.00198	1.21189
X2970n_G145	231.7	30.2	0.8374	0.06222	0.00214	0.95634
X2970n_G146	112.2	16.4	0.5106	0.06618	0.00254	1.23705
X2970n_G147	139.9	16.6	0.5052	0.06055	0.00232	0.92704
X2970n_G148	159.7	19	0.5348	0.06302	0.00232	0.95817
X2970n_G149	2151.4	89.3	0.5611	0.08938	0.00264	0.47772
X2970n_G150	105.9	17.3	0.935	0.06568	0.00254	1.22981

85.0% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.01662	0.06063	0.0014	379.5	8.6	484.5	13.4
0.02426	0.0856	0.00194	529.5	11.6	690.8	16.4
0.0016	0.00477	0.00012	30.7	0.8	31.9	1.8
0.03966	0.13756	0.00338	830.9	19.2	844	22
0.10386	0.19346	0.00632	1140.1	34.2	1070.8	43.2
0.0332	0.13456	0.00318	813.8	18	820.5	19.2
0.04862	0.1372	0.00362	828.8	20.6	844.4	26
0.01972	0.02042	0.00048	130.3	3	587.9	14.6
0.03308	0.10694	0.00272	655	15.8	680.6	21
0.03584	0.13789	0.00328	832.7	18.6	851.7	20
0.03378	0.12951	0.0031	785.1	17.6	804.7	19.8
0.04142	0.10957	0.00302	670.3	17.6	681.6	25.6
0.03646	0.11363	0.00296	693.8	17.2	696.1	22.6
0.02584	0.10358	0.00244	635.4	14.2	696.5	17
0.16736	0.40798	0.01642	2205.7	75.2	-28.9	-175.2
0.0331	0.11223	0.00284	685.7	16.4	678.6	21
0.02866	0.11177	0.00272	683	15.8	685.7	18.6
0.01778	0.06491	0.00154	405.4	9.4	510.5	14
0.03018	0.1094	0.0027	669.3	15.6	673.5	19.6
0.03316	0.10936	0.00276	669	16	690.7	20.8
0.0011	0.00452	0.00012	29.1	0.8	29.4	1.4
0.0222	0.08916	0.00212	550.6	12.6	609.5	15.8
0.02494	0.09816	0.00232	603.6	13.6	675.3	16.8
0.04944	0.15793	0.00396	945.3	22	947	24.6
0.02234	0.06201	0.00146	387.8	8.8	627.8	15.8
0.07322	0.17158	0.0048	1020.8	26.4	1036.6	32.4
0.02894	0.09872	0.00234	606.9	13.8	745.3	18.2
0.03144	0.12386	0.00308	752.7	17.6	673.2	20
0.04498	0.13234	0.00348	801.2	19.8	799.8	25.2
0.03394	0.13015	0.0031	788.7	17.6	814.1	19.6
0.03056	0.12543	0.00294	761.7	16.8	789.8	18.4
0.03396	0.12587	0.00304	764.3	17.4	792.8	20
0.01852	0.05212	0.00122	327.5	7.4	554.5	14.2
0.05016	0.13605	0.00368	822.3	20.8	826	27.2
0.04716	0.10267	0.00298	630	17.4	704.4	28.6
0.03176	0.11443	0.00284	698.4	16.4	696.9	20
0.03248	0.12574	0.003	763.5	17.2	791.4	19.2
0.01414	0.00543	0.00046	34.9	3	32.5	14.4
0.04176	0.1364	0.00344	824.3	19.6	820.7	23.2
0.03546	0.12122	0.00302	737.6	17.4	746.4	21.4
0.05272	0.10725	0.00338	656.8	19.6	650.1	32.6
0.02994	0.11135	0.00274	680.6	15.8	678.4	19.4
0.02874	0.10953	0.00266	670	15.4	683.4	18.6
0.0412	0.13638	0.0034	824.2	19.2	840.2	22.8
0.038	0.13986	0.00342	843.9	19.4	825.3	21.4
0.0344	0.10934	0.0028	668.9	16.2	688	21.6
0.03398	0.11015	0.0028	673.6	16.2	695.4	21.4
0.03024	0.10493	0.00262	643.2	15.2	658	19.8
0.0405	0.125	0.00322	759.3	18.4	765.5	23.6
0.04264	0.12555	0.0033	762.4	19	763.7	24.6

0.05344	0.13455	0.0038	813.8	21.6	803.7	29.4
0.00338	0.00472	0.00018	30.4	1.2	29.1	3.6
0.0369	0.11289	0.00298	689.5	17.2	674.8	23.2
0.03304	0.10179	0.00264	624.9	15.4	644.9	21.6
0.05552	0.10532	0.0031	645.5	18	819.7	30.6
0.0337	0.10454	0.0027	641	15.8	638.7	21.8
0.01898	0.07563	0.00176	470	10.6	558.7	14.2
0.01912	0.07593	0.0018	471.8	10.8	544.7	14.6
0.0319	0.12483	0.00298	758.3	17	765.7	19.2
0.03144	0.12346	0.00296	750.4	17	753.8	19.2
0.0288	0.10063	0.00248	618.1	14.6	658.3	19
0.058	0.13442	0.00388	813	22	818.6	31.2
0.07184	0.13463	0.00426	814.2	24.2	843.6	37.2
0.0348	0.11705	0.0029	713.6	16.8	751.8	21
0.02306	0.08518	0.00204	527	12.2	608.9	16.2
0.0325	0.11412	0.00282	696.6	16.4	719	20.2
0.03784	0.13202	0.00324	799.4	18.4	811.5	21.6
0.03166	0.10691	0.0027	654.8	15.8	666.3	20.4
0.02552	0.09054	0.0022	558.7	13	615.9	17.6
0.0794	0.10499	0.00422	643.6	24.6	671.4	47.6
0.0575	0.11038	0.0036	675	21	676.7	34.8
0.03228	0.10906	0.00276	667.3	16	667.9	20.8
0.04048	0.13647	0.00336	824.7	19	844.8	22.2
0.03284	0.1121	0.00282	684.9	16.4	689.3	20.8
0.03846	0.13607	0.00334	822.4	19	815.6	21.8
0.03776	0.1361	0.0033	822.6	18.8	828.9	21.2
0.0345	0.12821	0.00306	777.6	17.4	815.3	20
0.05126	0.16986	0.0041	1011.3	22.6	1032.7	23.8
0.05762	0.16727	0.0043	997.1	23.8	998.5	26.8
0.03506	0.13349	0.0032	807.7	18.2	814.1	20.2
0.04068	0.13691	0.00342	827.2	19.4	820.8	22.6
0.05698	0.1344	0.00386	812.9	22	819.2	30.6
0.04482	0.16039	0.0038	958.9	21.2	982.2	22
0.04852	0.15674	0.00376	938.6	21	1013.1	23
0.04132	0.14054	0.00336	847.7	19	915.3	21.6
0.03854	0.1045	0.00284	640.7	16.6	659.7	24.4
0.04462	0.13926	0.00356	840.5	20.2	835	24.4
0.03048	0.11132	0.0027	680.4	15.6	715.3	19.2
0.03312	0.10811	0.00278	661.8	16.2	657.2	21.4
0.04326	0.13799	0.0035	833.3	19.8	830.1	23.8
0.04294	0.14109	0.00344	850.8	19.4	901.9	22.4
0.04182	0.13435	0.00342	812.6	19.4	800.5	23.6
0.0016	0.00457	0.00012	29.4	0.8	28.9	1.8
0.03546	0.11197	0.00284	684.2	16.4	712.9	21.8
0.03058	0.10204	0.00246	626.4	14.4	734.1	19
0.00964	0.01057	0.00026	67.8	1.6	310	9.4
0.04828	0.13484	0.0036	815.4	20.4	812.4	26.4
0.0354	0.1363	0.00326	823.7	18.4	819.1	20.2
0.05168	0.12212	0.00356	742.8	20.4	723.6	30.2
0.03662	0.10359	0.0027	635.4	15.8	698.2	22.8
0.01358	0.05098	0.0012	320.5	7.4	405.8	11.8
0.07918	0.18092	0.0051	1072	27.8	1070	33.8
0.05128	0.11181	0.00338	683.3	19.6	680.4	31
0.03728	0.13896	0.00334	838.8	19	833.3	20.8
0.03698	0.11335	0.00294	692.2	17	696.5	22.8

0.0333	0.12889	0.00308	781.5	17.6	787.6	19.6
0.03934	0.10714	0.00294	656.1	17.2	653.8	25
0.0167	0.05497	0.00132	345	8	465.1	13.6
0.03226	0.10604	0.00266	649.7	15.6	677.2	20.6
0.03486	0.10609	0.00266	650	15.6	725.7	21.4
0.03004	0.10684	0.00266	654.4	15.4	651.9	19.6
0.03792	0.10931	0.0029	668.7	16.8	674.3	23.8
0.00656	0.01253	0.0003	80.3	2	210.7	6.8
0.09692	0.17919	0.00554	1062.5	30.2	1103.2	39.6
0.07976	0.17157	0.00492	1020.8	27	1050.6	34.6
0.03838	0.13566	0.00332	820.1	18.8	819.5	21.6
0.03856	0.10477	0.0027	642.3	15.8	748.8	23
0.04956	0.13511	0.00362	817	20.6	819.1	27
0.03826	0.11496	0.00302	701.5	17.4	692.6	23.6
0.0424	0.13419	0.00338	811.7	19.2	826.8	23.4
0.04092	0.14068	0.00346	848.5	19.6	842.1	22.4
0.04912	0.11194	0.0033	684	19.2	687.1	29.8
0.05054	0.16014	0.00398	957.6	22.2	956.9	24.8
0.0309	0.11278	0.00276	688.9	16	689.5	19.6
0.0601	0.10617	0.00352	650.5	20.6	683.9	36.2
0.0455	0.12671	0.0034	769.1	19.4	765.6	26
0.04042	0.13743	0.0034	830.1	19.2	824.6	22.4
0.04192	0.13545	0.0034	818.9	19.4	820.1	23.4
0.01602	0.0542	0.00128	340.3	7.8	452.8	13
0.04204	0.10296	0.0026	631.7	15.2	827.4	23.4
0.0254	0.09087	0.00216	560.7	12.8	639.3	17.2
0.0637	0.15077	0.00424	905.3	23.8	908.9	31.4
0.03304	0.11704	0.00284	713.5	16.4	742.2	20
957.08948	7.48082	9.2735				
0.06804	0.16062	0.00448	960.2	24.8	973.8	31.8
0.03856	0.11512	0.00302	702.4	17.4	696.4	23.6
0.05772	0.1256	0.0031	762.7	17.8	1064.5	25.8
0.0408	0.13359	0.0033	808.3	18.8	828.2	22.6
0.03422	0.10889	0.0028	666.3	16.2	667.7	21.8
0.03106	0.05895	0.00142	369.2	8.6	728.6	19.4
0.03034	0.11059	0.00272	676.2	15.8	674.5	19.6
0.04266	0.13667	0.00344	825.8	19.6	815.1	23.6
0.04664	0.13775	0.00354	831.9	20	843.7	25.2
0.04002	0.13874	0.00336	837.5	19	850.8	21.8
0.0459	0.10518	0.00308	644.7	18	655.8	28.6
0.04174	0.11197	0.00302	684.2	17.6	707.9	25.2
0.0376	0.13216	0.00322	800.2	18.4	806.1	21.4
0.03342	0.11151	0.0028	681.5	16.2	681.4	21.2
0.04764	0.13561	0.00356	819.8	20.2	817.5	26.2
0.03572	0.11108	0.0029	679	16.8	666.1	22.6
0.03564	0.11031	0.00284	674.5	16.4	682.3	22.4
0.01462	0.03878	0.00094	245.3	5.8	396.5	12.6
0.04774	0.13585	0.00358	821.2	20.4	814.3	26.2

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
1016.7	53.2	-21.7	-62.7		
1258.1	46	-23.4	-57.9		
125.7	120.2	-3.9	-75.6	30.7	0.8
879.5	60.6	-1.6	-5.5	830.9	19.2
933.3	115.8	6.5	22.2		
839.6	51.6	-0.8	-3.1	813.8	18
886.4	76.6	-1.8	-6.5	828.8	20.6
3355.2	35.8	-77.8	-96.1		
767.2	71.6	-3.8	-14.6	655	15.8
902.3	52.4	-2.2	-7.7	832.7	18.6
860.3	54.6	-2.4	-8.7	785.1	17.6
720	92.4	-1.7	-6.9	670.3	17.6
704.2	77.8	-0.3	-1.5	693.8	17.2
900.2	49.6	-8.8	-29.4	635.4	14.2
		-7721.3			
656.1	73.2	1	4.5	685.7	16.4
695.4	59.8	-0.4	-1.8	683	15.8
1014.2	51.6	-20.6	-60		
688.2	66.4	-0.6	-2.8	669.3	15.6
762.6	69.8	-3.1	-12.3	669	16
59.4	88.8	-1.2	-51	29.1	0.8
835.9	52.2	-9.7	-34.1	550.6	12.6
923.1	50	-10.6	-34.6	603.6	13.6
951.6	63.6	-0.2	-0.7	945.3	22
1626.3	45	-38.2	-76.2		
1070.9	83	-1.5	-4.7	1020.8	26.4
1187.6	49.2	-18.6	-48.9		
415.9	72.2	11.8	81		
796.5	77.8	0.2	0.6	801.2	19.8
884.9	53	-3.1	-10.9	788.7	17.6
870.4	49.4	-3.5	-12.5	761.7	16.8
874.6	55.8	-3.6	-12.6	764.3	17.4
1644.8	43.2	-40.9	-80.1		
836.8	82.8	-0.4	-1.7	822.3	20.8
950.2	98.4	-10.6	-33.7	630	17.4
692.6	66.2	0.2	0.8	698.4	16.4
871.3	53	-3.5	-12.4	763.5	17.2
-141.2	1094.2	7.5	-124.7		
811.8	68.2	0.4	1.5	824.3	19.6
773.7	66.8	-1.2	-4.7	737.6	17.4
627.9	130	1	4.6	656.8	19.6
671.7	65	0.3	1.3	680.6	15.8
728.4	60.6	-2	-8	670	15.4
883.7	64	-1.9	-6.7	824.2	19.2
776.3	60.8	2.2	8.7	843.9	19.4
751.5	73.6	-2.8	-11	668.9	16.2
766.9	71.6	-3.1	-12.2	673.6	16.2
709.6	68.8	-2.2	-9.3	643.2	15.2
784.7	74.6	-0.8	-3.2	759.3	18.4
767.8	79.4	-0.2	-0.7	762.4	19

776.6	93.8	1.3	4.8	813.8	21.6
-78	294.2	4.5	-138.9	30.4	1.2
626.8	83.8	2.2	10	689.5	17.2
716.3	78.6	-3.1	-12.8	624.9	15.4
1328	88.2	-21.3	-51.4		
631.5	82.2	0.4	1.5	641	15.8
939.8	48.4	-15.9	-50		
863.4	52	-13.4	-45.4	471.8	10.8
788.2	55.8	-1	-3.8	758.3	17
764.6	56.6	-0.5	-1.9	750.4	17
799.1	63.8	-6.1	-22.6	618.1	14.6
834.4	98.4	-0.7	-2.6	813	22
922.5	116.6	-3.5	-11.7	814.2	24.2
867.9	63.4	-5.1	-17.8	713.6	16.8
927.5	54	-13.4	-43.2	527	12.2
790.1	64	-3.1	-11.8	696.6	16.4
845.5	61.8	-1.5	-5.5	799.4	18.4
706.5	71	-1.7	-7.3	654.8	15.8
833.1	61.2	-9.3	-32.9	558.7	13
766.5	185.4	-4.1	-16	643.6	24.6
683.1	133	-0.3	-1.2	675	21
670.7	72.6	-0.1	-0.5	667.3	16
899	61.6	-2.4	-8.3	824.7	19
704.2	70.4	-0.6	-2.7	684.9	16.4
797.8	63.2	0.8	3.1	822.4	19
846.8	59.4	-0.8	-2.9	822.6	18.8
920.1	54.2	-4.6	-15.5	777.6	17.4
1078.9	55.4	-2.1	-6.3	1011.3	22.6
1002.5	68.2	-0.1	-0.5	997.1	23.8
832.5	56.2	-0.8	-3	807.7	18.2
804.5	66	0.8	2.8	827.2	19.4
836.8	96.4	-0.8	-2.9	812.9	22
1035.5	52	-2.4	-7.4	958.9	21.2
1178.6	52.8	-7.4	-20.4	938.6	21
1082.6	53.2	-7.4	-21.7	847.7	19
725.7	89.4	-2.9	-11.7	640.7	16.6
821.2	71.6	0.7	2.3	840.5	20.2
827.2	59.4	-4.9	-17.7	680.4	15.6
642.4	77.4	0.7	3	661.8	16.2
822.5	69.6	0.4	1.3	833.3	19.8
1029.7	57.8	-5.7	-17.4	850.8	19.4
767.5	72.2	1.5	5.9	812.6	19.4
-16.1	136.4	1.8	-282.9	29.4	0.8
805.1	71.8	-4	-15	684.2	16.4
1079.5	54.8	-14.7	-42	626.4	14.4
3153.3	40.2	-78.1	-97.9		
804.8	82	0.4	1.3	815.4	20.4
807.6	56.4	0.6	2	823.7	18.4
665.5	108.2	2.7	11.6	742.8	20.4
906.5	75.6	-9	-29.9	635.4	15.8
926	53.4	-21	-65.4		
1066.4	85.4	0.2	0.5	1072	27.8
671.7	117.4	0.4	1.7	683.3	19.6
819.3	57.8	0.7	2.4	838.8	19
711.3	78.8	-0.6	-2.7	692.2	17

805.7	55.8	-0.8	-3	781.5	17.6
646.3	94	0.4	1.5	656.1	17.2
1113.1	54.2	-25.8	-69		
770.4	70	-4.1	-15.7	649.7	15.6
968	67	-10.4	-32.9	650	15.6
644.2	69.6	0.4	1.6	654.4	15.4
693.6	85.8	-0.8	-3.6	668.7	16.8
2145.2	47.4	-61.9	-96.3		
1185.1	98.8	-3.7	-10.3	1062.5	30.2
1113.9	88.4	-2.8	-8.4	1020.8	27
818.7	62.4	0.1	0.2	820.1	18.8
1082.6	70.2	-14.2	-40.7	642.3	15.8
825.6	83.4	-0.3	-1	817	20.6
664.4	83.2	1.3	5.6	701.5	17.4
868.2	68.2	-1.8	-6.5	811.7	19.2
825.9	63.8	0.8	2.7	848.5	19.6
698.1	110	-0.4	-2	684	19.2
956.3	64	0.1	0.1	957.6	22.2
692.3	65.4	-0.1	-0.5	688.9	16
796.5	135.4	-4.9	-18.3	650.5	20.6
756.4	85.2	0.4	1.7	769.1	19.4
810.5	65.2	0.7	2.4	830.1	19.2
824	69	-0.1	-0.6	818.9	19.4
1074.4	54	-24.9	-68.3		
1398.1	62.6	-23.7	-54.8		
928.6	56.4	-12.3	-39.6	560.7	12.8
918.3	91	-0.4	-1.4	905.3	23.8
830.6	61.2	-3.9	-14.1	713.5	16.4
1005	86	-1.4	-4.5	960.2	24.8
677.9	83.2	0.9	3.6	702.4	17.4
1749.8	55.4	-28.4	-56.4		
882.5	64.6	-2.4	-8.4	808.3	18.8
673.4	78	-0.2	-1.1	666.3	16.2
2086.3	49.8	-49.3	-82.3		
670	66.4	0.2	0.9	676.2	15.8
786.9	71.2	1.3	4.9	825.8	19.6
875.5	73.4	-1.4	-5	831.9	20
886.4	60.2	-1.6	-5.5	837.5	19
695	109.6	-1.7	-7.2	644.7	18
784.3	87.4	-3.3	-12.8	684.2	17.6
823.1	62.2	-0.7	-2.8	800.2	18.4
681.7	73.4	0	0	681.5	16.2
812.1	80.2	0.3	1	819.8	20.2
623.3	82.6	1.9	8.9	679	16.8
708.9	78.2	-1.1	-4.8	674.5	16.4
1412.3	56.6	-38.1	-82.6		
796.2	81	0.8	3.1	821.2	20.4

Sample 2964S Blue Nile @ Bambudi 323 grain analysed 293 concordant ag

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2964n_G001	139.8	18.1	0.3154	0.07491	0.0023	1.29007
X2964n_G002	89	13.6	0.4051	0.06722	0.00228	1.3535
X2964n_G003	46	5.9	0.6669	0.0664	0.00306	1.04201
X2964n_G004	260.4	27.4	0.223	0.06252	0.00172	0.91827
X2964n_G005	63.7	6.6	0.3221	0.06442	0.00314	0.9024
X2964n_G006	185.3	97.7	0.157	0.18768	0.00418	12.98802
X2964n_G007	131.6	16.1	0.3961	0.06521	0.0021	1.05079
X2964n_G008	317.4	44.5	0.3097	0.06515	0.00166	1.23519
X2964n_G009	132.1	20.2	0.549	0.06736	0.00204	1.3005
X2964n_G010	483.5	58.4	0.4485	0.06177	0.00154	0.97494
X2964n_G011	216.8	22.8	0.6161	0.05973	0.00182	0.78268
X2964n_G012	196.3	25.4	0.3952	0.06661	0.0019	1.14578
X2964n_G013	111.5	19.1	0.5565	0.07762	0.00236	1.67053
X2964n_G014	42.1	0.3	1.3018	0.28573	0.03736	0.24477
X2964n_G015	1149.3	132.2	0.4484	0.06687	0.00152	1.00817
X2964n_G016	24.4	4.8	1.5348	0.06633	0.00386	1.2974
X2964n_G017	259	24.4	0.0258	0.06154	0.00178	0.86092
X2964n_G018	534.7	57.7	0.0373	0.0665	0.00162	1.06374
X2964n_G019	269	12.5	0.9112	0.05123	0.00208	0.27484
X2964n_G020	70.8	10.8	0.8592	0.06456	0.00254	1.14924
X2964n_G021	101.5	10.3	0.1725	0.05922	0.0023	0.85161
X2964n_G022	233.1	24.4	0.4412	0.05854	0.00176	0.80315
X2964n_G023	161.3	34.3	0.7287	0.07613	0.00212	1.9443
X2964n_G024	485.4	62.4	1.727	0.06144	0.0019	0.76115
X2964n_G025	265.2	116.4	1.0474	0.12625	0.00286	6.03315
X2964n_G026	97.2	10	0.1017	0.06315	0.00236	0.93229
X2964n_G027	102	9.8	0.7074	0.05951	0.00248	0.68965
X2964n_G028	405.4	39.3	0.5099	0.05864	0.0016	0.72845
X2964n_G029	1667.7	251	0.799	0.09822	0.00226	1.86368
X2964n_G030	293	40.1	0.5852	0.06539	0.00174	1.12117
X2964n_G031	127.8	18.2	0.4791	0.07396	0.00234	1.3481
X2964n_G032	380.6	51.6	0.3109	0.06682	0.00168	1.22556
X2964n_G033	62.7	8.9	0.3147	0.06862	0.00278	1.31965
X2964n_G034	606	61	0.0733	0.06204	0.0016	0.91509
X2964n_G035	306.8	42.8	1.1925	0.06275	0.00176	0.9392
X2964n_G036	194.3	31.8	0.843	0.06842	0.00198	1.31171
X2964n_G037	185.7	24.9	0.3819	0.07523	0.00222	1.32633
X2964n_G038	421.7	55.2	0.1593	0.06598	0.00164	1.22407
X2964n_G039	65.6	9.4	0.8938	0.06612	0.00278	1.09259
X2964n_G040	325.5	110.3	0.5501	0.11175	0.00258	4.69673
X2964n_G041	70.8	7.7	0.5809	0.05944	0.00268	0.81399
X2964n_G042	589.3	62.2	0.6224	0.07087	0.00238	0.94235
X2964n_G043	51.7	6.1	0.2335	0.06659	0.00304	1.09287
X2964n_G044	520.3	105.1	0.692	0.0856	0.00202	2.05591
X2964n_G045	139.8	16.6	0.5348	0.06213	0.0021	0.93812
X2964n_G046	213	26.9	0.3902	0.06675	0.00194	1.11394
X2964n_G047	162.8	24.1	0.7213	0.06779	0.00282	1.21496
X2964n_G048	98.6	13.2	0.3735	0.06687	0.00236	1.18759
X2964n_G049	80.4	12.1	0.6209	0.06348	0.00242	1.18598
X2964n_G050	683.1	87	0.0853	0.06722	0.0016	1.24304

X2964n_G051	100	15.6	0.7725	0.06691	0.00232	1.23959
X2964n_G052	78	11.6	0.6791	0.06331	0.0024	1.14623
X2964n_G053	516	64.3	0.4576	0.06332	0.00158	1.02579
X2964n_G054	223.1	21.4	0.3871	0.0583	0.00186	0.74662
X2964n_G055	270.9	1.3	1.1242	0.05772	0.00696	0.02996
X2964n_G056	78	10.8	0.3351	0.06617	0.00252	1.23343
X2964n_G057	244.1	27.5	0.8074	0.05987	0.00182	0.7992
X2964n_G058	328.9	41.4	0.6731	0.06222	0.0017	0.96538
X2964n_G059	57.9	8.3	0.3989	0.06581	0.00284	1.2472
X2964n_G060	389.6	56.1	0.6736	0.06497	0.00168	1.14667
X2964n_G061	67	9.3	0.4881	0.06698	0.00346	1.19766
X2964n_G062	251.8	36.3	0.6417	0.0661	0.00184	1.18841
X2964n_G063	438	40.1	0.7986	0.05827	0.00162	0.63391
X2964n_G064	474.9	68.8	0.5119	0.06896	0.0017	1.28753
X2964n_G065	54.1		1.6182	0.1545	0.0464	1.0337
X2964n_G066	537.6	21.7	0.389	0.05481	0.0018	0.29457
X2964n_G067	208.2	38	0.3776	0.07347	0.00196	1.77567
X2964n_G068	121.6	17.5	0.5128	0.06967	0.00228	1.27781
X2964n_G069	99.1	11.1	0.5796	0.06017	0.00242	0.84848
X2964n_G070	64.1	10.1	0.706	0.06819	0.00274	1.30917
X2964n_G071	124.5	16.5	0.8387	0.05985	0.00224	0.92854
X2964n_G072	37.8	5.7	0.8059	0.06762	0.00336	1.21088
X2964n_G073	459.5	54	0.1266	0.06497	0.0017	1.09567
X2964n_G074	73.2	0.3	0.555	0.04451	0.01622	0.02575
X2964n_G075	67	9.3	0.4	0.06827	0.0028	1.25392
X2964n_G076	74.7	10.5	0.5046	0.07856	0.00436	1.40835
X2964n_G077	1606.5	160.9	0.0305	0.06117	0.0014	0.90855
X2964n_G078	56	8	0.4076	0.06607	0.00288	1.23819
X2964n_G079	52.2	6.9	0.3212	0.06365	0.003	1.13002
X2964n_G080	459.1	75.7	0.9296	0.06632	0.00166	1.25392
X2964n_G081	125.9	19.3	0.6339	0.0656	0.0022	1.2453
X2964n_G082	1653.9		1.882	0.10455	0.00252	0.76002
X2964n_G083				0.53078	0.0663	20.09719
X2964n_G084	587.3	85.4	0.4027	0.06571	0.00158	1.25871
X2964n_G085	1433.2	124	0.4821	0.0708	0.00174	0.80592
X2964n_G086	19.6	3	1.1072	0.07099	0.00492	1.23214
X2964n_G087	59.8	5.8	0.7532	0.05902	0.00306	0.68296
X2964n_G088	83.3	10	0.4392	0.06548	0.0026	1.03277
X2964n_G089	501.2	86.9	0.62	0.07113	0.00172	1.52596
X2964n_G090	290.6	44.2	0.4006	0.06822	0.00218	1.365
X2964n_G091	52.7	7.4	0.3744	0.06315	0.00284	1.17799
X2964n_G092	793.7	252.5	0.6541	0.13412	0.00298	5.29084
X2964n_G093	210.6	30	0.3078	0.06454	0.00186	1.24663
X2964n_G094	45	6.3	0.5528	0.06272	0.00312	1.11492
X2964n_G095	109.1	12.1	0.5406	0.06063	0.00236	0.85795
X2964n_G096	164.7	24.2	0.4814	0.06583	0.002	1.25076
X2964n_G097	91.9	11.4	0.2394	0.06525	0.00244	1.118
X2964n_G098	52.2	5.9	0.7892	0.05565	0.0031	0.74173
X2964n_G099	83.8	12.1	0.5157	0.06699	0.0025	1.23405
X2964n_G100	61.3	12.1	1.064	0.07017	0.00274	1.54102
X2964n_G101	133.6	21.1	0.8338	0.06626	0.00208	1.22499
X2964n_G102	245.1	36.6	0.3765	0.06682	0.0018	1.32249
X2964n_G103	192.4	22.2	0.6936	0.06078	0.0019	0.85713
X2964n_G104	147	15.1	0.3182	0.06093	0.0021	0.8504
X2964n_G105	283.9	42	1.0038	0.06286	0.00172	1.04064

X2964n_G106	429.9	38.1	0.3037	0.05727	0.00158	0.69283
X2964n_G107	46.4	5.1	0.5427	0.06444	0.0032	0.91819
X2964n_G108	131.6	18.9	0.4134	0.06486	0.00204	1.21958
X2964n_G109	103.4	14.9	0.4611	0.06677	0.00226	1.2466
X2964n_G110	241.3	22	0.4	0.06242	0.00278	0.77374
X2964n_G111	88.1	14.9	1.3829	0.06814	0.00248	1.18298
X2964n_G112	131.2	10.5	0.4541	0.05722	0.0023	0.59944
X2964n_G113	62.7	9.6	0.8473	0.06661	0.00278	1.20445
X2964n_G114	133.1	23.1	2.7151	0.0678	0.0023	0.92664
X2964n_G115	282.9	28.5	1.2198	0.06862	0.00206	0.73678
X2964n_G116	183.8	4.6	0.6962	0.04924	0.00306	0.15104
X2964n_G117	305.4	57.7	0.9227	0.07297	0.0019	1.56665
X2964n_G118	312.1	44.3	0.7376	0.06439	0.00184	1.09819
X2964n_G119	38.3	5.6	0.4408	0.0643	0.0032	1.22706
X2964n_G120	38.8	5.7	0.4401	0.06487	0.00326	1.24139
X2964n_G121	356.1	39.5	0.4741	0.06108	0.00168	0.87711
X2964n_G122	79.9	10.8	0.5057	0.06476	0.0025	1.12206
X2964n_G123	63.2	9.2	0.3524	0.06639	0.0028	1.29166
X2964n_G124	151.3	23.8	0.5924	0.06778	0.00204	1.33073
X2964n_G125	243.7	32.2	0.178	0.06695	0.00188	1.24598
X2964n_G126	78.5	9.6	0.457	0.06104	0.00248	0.96968
X2964n_G127	958.8	111.2	0.504	0.06183	0.00148	0.9616
X2964n_G128	59.8	8.2	1.8042	0.06617	0.00328	0.89071
X2964n_G129	132.6	14.5	0.9014	0.0573	0.00222	0.72514
X2964n_G130	241.3	36.6	0.4946	0.06616	0.00188	1.28473
X2964n_G131	5532.2	620.9	4.3102	0.06665	0.00154	0.42337
X2964n_G132	21.5	2.4	0.6283	0.06079	0.00512	0.84901
X2964n_G133	100	14.4	0.5535	0.06541	0.0024	1.19259
X2964n_G134	205.4	37.8	0.7375	0.07115	0.00216	1.57316
X2964n_G135	190.5	34.2	0.5607	0.07013	0.00212	1.58828
X2964n_G136	135	18.8	0.3685	0.06473	0.00224	1.20337
X2964n_G137	119.7	12.4	0.3407	0.05832	0.00234	0.81579
X2964n_G138	68.9	10.7	0.4481	0.06841	0.00264	1.38525
X2964n_G139	37.8	4.9	0.3437	0.06531	0.00338	1.14501
X2964n_G140	93.3	11.4	0.8464	0.05841	0.00236	0.8304
X2964n_G141	38.8	4.7	0.1179	0.06602	0.00326	1.15556
X2964n_G142	111.1	16	0.4113	0.06605	0.00222	1.25235
X2964n_G143	3369	346.5	0.2849	0.06727	0.00158	0.95166
X2964n_G144	114.4	0.5	0.5335	0.05303	0.0139	0.02895
X2964n_G145	25.4	4.1	0.6174	0.06677	0.00382	1.32046
X2964n_G146	119.2	17.3	0.3986	0.06807	0.00218	1.30605
X2964n_G147	824.3	67.7	0.1621	0.07688	0.00188	0.90785
X2964n_G148	98.6	14.1	0.4094	0.06537	0.00222	1.22862
X2964n_G149	148.4	21.2	0.371	0.06649	0.002	1.26485
X2964n_G150	3589.7	182.6	0.3847	0.06168	0.00142	0.41767
X2964n_G151	69.9	10.5	0.5173	0.06504	0.0025	1.2504
X2964n_G152	170.4	31.4	0.4273	0.07116	0.00198	1.70803
X2964n_G153	583	29.9	0.1026	0.05297	0.0015	0.39593
X2964n_G154	584.5	29.7	0.1051	0.0532	0.0015	0.39463
X2964n_G155	52.2	8.7	0.3366	0.07244	0.00282	1.62034
X2964n_G156	789.8	5.1	2.4619	0.04631	0.00342	0.02446
X2964n_G157	171.4	30.1	0.7393	0.06901	0.002	1.45439
X2964n_G158	200.1	21.3	0.4189	0.05972	0.00188	0.83713
X2964n_G159	623.2	38.7	0.3646	0.05315	0.00194	0.44285
X2964n_G160	105.8	12	0.795	0.05831	0.0022	0.78332

X2964n_G161	508.4	46.5	0.0102	0.06119	0.00158	0.83743
X2964n_G162	253.2	33.7	0.422	0.06408	0.00178	1.11853
X2964n_G163	119.7	14.5	0.6417	0.06231	0.00248	0.93183
X2964n_G164	268.5	35.2	0.5089	0.06985	0.0019	1.15621
X2964n_G165	453.3	65.1	0.3436	0.06894	0.0017	1.3313
X2964n_G166	781.7	113	0.4436	0.06798	0.00162	1.28612
X2964n_G167	45.5	5.4	0.8692	0.06092	0.00318	0.84092
X2964n_G168	31.6	0.2	1.1915	0.05521	0.02388	0.03734
X2964n_G169	115.8	23.8	0.843	0.07391	0.00224	1.769
X2964n_G170	461.9	75.4	0.8896	0.06644	0.00168	1.25987
X2964n_G171	32.6	3.8	0.3957	0.05449	0.00342	0.85524
X2964n_G172	138.3	18.3	1.7645	0.05754	0.00212	0.72359
X2964n_G173	51.2	7.1	0.3561	0.06355	0.00284	1.17912
X2964n_G174	117.8	17.2	0.7785	0.06253	0.00208	1.08803
X2964n_G175	158.4	28.4	0.3935	0.07278	0.00204	1.71888
X2964n_G176	360.9	75.5	0.8801	0.07264	0.0018	1.75034
X2964n_G177	130.7	20.7	0.7257	0.06716	0.00208	1.27897
X2964n_G178	86.6	13.5	0.486	0.07968	0.003	1.58439
X2964n_G179	246	43.2	0.38	0.07286	0.00194	1.6844
X2964n_G180	55.5	7.8	0.4673	0.0695	0.00306	1.26651
X2964n_G181	47.9	8.9	1.7481	0.06378	0.003	1.12556
X2964n_G182	124.9	18.1	0.558	0.06515	0.00232	1.19563
X2964n_G183	39.7	5.7	0.469	0.065	0.00368	1.21369
X2964n_G184	142.6	11.9	0.4	0.05813	0.00236	0.64131
X2964n_G185	1070.3	178.9	0.7987	0.07204	0.00172	1.42278
X2964n_G186	1746.7	130.5	0.4785	0.06764	0.00164	0.66502
X2964n_G187	170.9	19.2	0.915	0.05939	0.00206	0.76592
X2964n_G188	11	0.1	2.1535	0.05344	0.06458	0.03352
X2964n_G189	310.2	44.2	0.573	0.06423	0.00174	1.15189
X2964n_G190	746.3	24.2	0.7559	0.05051	0.00166	0.19777
X2964n_G191	202.5	21.9	1.1955	0.05597	0.0019	0.6503
X2964n_G192	218.3	23.3	0.3605	0.05932	0.00184	0.85045
X2964n_G193	962.6	103.9	0.691	0.06141	0.00152	0.81308
X2964n_G194	82.3	13.4	0.4013	0.07112	0.0026	1.52111
X2964n_G195	51.2	8.5	0.7731	0.06699	0.00274	1.32325
X2964n_G196	14.4	1.9	0.4845	0.06823	0.00522	1.13545
X2964n_G197	131.2	17	0.1607	0.07005	0.00218	1.28056
X2964n_G198	270.5	54.9	0.4244	0.07498	0.00194	1.97991
X2964n_G199	107.2	11.8	0.7813	0.06004	0.00236	0.79002
X2964n_G200	139.3	20.2	0.4301	0.0658	0.00208	1.25031
X2964n_G201	90	14.2	1.089	0.06176	0.00234	1.0702
X2964n_G202	59.4	10.3	0.4237	0.06962	0.00262	1.57266
X2964n_G203	264.2	28.3	0.4018	0.06299	0.00208	0.88788
X2964n_G204	225.5	19.1	0.086	0.06103	0.00206	0.75673
X2964n_G205	57.9	7.2	0.829	0.06161	0.00298	0.90483
X2964n_G206	56	8.2	0.4333	0.08134	0.0042	1.54441
X2964n_G207	50.3	4.8	0.846	0.05688	0.00362	0.63225
X2964n_G208	113.9	15.5	0.6093	0.06358	0.00236	1.07585
X2964n_G209	63.7	2.1	0.7022	0.07797	0.01412	0.30909
X2964n_G210	228.3	34.3	0.6034	0.06562	0.00206	1.22924
X2964n_G211	1501.2	246.3	1.1601	0.06416	0.00156	1.13284
X2964n_G212	709.9	69.7	0.4095	0.06798	0.00192	0.86643
X2964n_G213	85.7	12.8	0.6696	0.06634	0.00272	1.21696
X2964n_G214	155.1	18	1.0099	0.05841	0.00234	0.76531
X2964n_G215	144.6	18.7	0.3849	0.0639	0.00254	1.09892

X2964n_G216	78	0.3	0.7402	0.04926	0.02424	0.02547
X2964n_G217	332.2	35.6	0.2737	0.0628	0.00194	0.93613
X2964n_G218	54.6	7.6	0.7749	0.06011	0.00372	0.9891
X2964n_G219	158.4	21.2	0.4709	0.06304	0.00218	1.09138
X2964n_G220	192.4	22.2	0.3277	0.06132	0.00208	0.95295
X2964n_G221	70.4	9.2	1.5537	0.06705	0.00444	0.87862
X2964n_G222	471	38.8	0.3687	0.06459	0.00178	0.72655
X2964n_G223	83.8	12.9	0.6082	0.06638	0.00246	1.27104
X2964n_G224	78.5	11.8	0.5882	0.06529	0.00252	1.22177
X2964n_G225	2262.7	118.3	0.0772	0.07043	0.00266	0.53811
X2964n_G226	1742.9	65.5	0.1985	0.09594	0.00338	0.49802
X2964n_G227	117.8	16.4	0.6311	0.06561	0.00224	1.12684
X2964n_G228	128.3	16.5	1.1629	0.06102	0.0024	0.85461
X2964n_G229	419.8	70.2	1.3134	0.06466	0.00172	1.12741
X2964n_G230	42.1	5.8	0.5654	0.06505	0.00316	1.128
X2964n_G231	185.7	81.4	1.1285	0.12213	0.00302	5.7383
X2964n_G232	114.4	12.4	1.034	0.0575	0.00228	0.70049
X2964n_G233	74.7	8.6	0.4264	0.05903	0.00252	0.89389
X2964n_G234	123.5	19.8	0.6352	0.06575	0.00214	1.29883
X2964n_G235	112	6	0.9802	0.05079	0.00274	0.30889
X2964n_G236	92.4	13.1	0.3821	0.06341	0.00224	1.19016
X2964n_G237	155.1	16.8	0.7103	0.05944	0.00198	0.78056
X2964n_G238	203	27.4	0.3132	0.06665	0.00198	1.21734
X2964n_G239	339.9	48.6	0.4586	0.06582	0.00174	1.22092
X2964n_G240	123.5	17.9	0.5053	0.06444	0.00206	1.19258
X2964n_G241	164.7	24	0.4533	0.06526	0.00194	1.23623
X2964n_G242	546.7	58	0.3586	0.06098	0.00162	0.87035
X2964n_G243	55.5	7.3	0.3256	0.06478	0.00282	1.14343
X2964n_G244	94.3	12.3	0.127	0.06386	0.00234	1.19691
X2964n_G245	1696.9	66.5	0.2507	0.07786	0.00216	0.42762
X2964n_G246	75.6	11.9	0.791	0.06472	0.00248	1.21674
X2964n_G247	227.9	28.8	0.4118	0.06358	0.0019	1.06031
X2964n_G248	167.1	22.9	0.9762	0.06174	0.00202	0.95952
X2964n_G249	881.3	3.8	0.7447	0.12137	0.00638	0.06073
X2964n_G250	88.6	11	0.6157	0.06161	0.00242	0.94685
X2964n_G251	665.4	33.6	0.098	0.05258	0.00148	0.38827
X2964n_G252	81.9	11.6	0.5964	0.06511	0.00254	1.15154
X2964n_G253	20.6	2.6	0.3692	0.0642	0.00496	1.08963
X2964n_G254	4.3	0.8	0.2448	0.07678	0.01044	1.93111
X2964n_G255	98.1	11.9	0.253	0.06441	0.00248	1.08267
X2964n_G256	159.4	20	0.179	0.06503	0.00214	1.15296
X2964n_G257	290.6	39.6	0.3476	0.0673	0.0019	1.23576
X2964n_G258	106.3	15.4	0.5722	0.06906	0.00244	1.26389
X2964n_G259	1120.1	7.3	1.237	0.04647	0.0025	0.03209
X2964n_G260	342.3	40.2	0.917	0.05961	0.00174	0.80687
X2964n_G261	48.3	5.6	0.6416	0.06072	0.00326	0.87435
X2964n_G262	1960.2	64.1	0.4249	0.1677	0.00434	0.67079
X2964n_G263				-1.90734	2.44014	
X2964n_G264	131.2	20.2	0.5803	0.06812	0.00228	1.31514
X2964n_G265	104.8	15.1	0.3883	0.06678	0.0023	1.27174
X2964n_G266	79	13	0.2484	0.07005	0.00246	1.59119
X2964n_G267	13.9	1.8	1.2467	0.06103	0.00562	0.85184
X2964n_G268	59.8	8.6	0.4889	0.06583	0.00258	1.21161
X2964n_G269	79.9	11.9	0.5635	0.06582	0.00236	1.23246
X2964n_G270	51.2	12.1	1.7851	0.0725	0.00276	1.61346

X2964n_G271				0.98808	0.21196	
X2964n_G272						
X2964n_G273	314	46.2	0.7403	0.06343	0.00174	1.12033
X2964n_G274	127.3	14.5	0.1518	0.06204	0.00208	1.00343
X2964n_G275	313.5	17.1	0.6362	0.12036	0.0037	0.80548
X2964n_G276	336.5	17.7	0.6201	0.11811	0.00346	0.76853
X2964n_G277	20.1	2.7	0.3529	0.06656	0.0043	1.2014
X2964n_G278	92.9	16.3	1.2417	0.06583	0.0023	1.19801
X2964n_G279	117.3	13.7	0.9431	0.06067	0.00226	0.81335
X2964n_G280	48.8	7.3	0.5476	0.06628	0.00288	1.24601
X2964n_G281				0.17461	0.0108	3.48827
X2964n_G282	101	0.6	1.1734	0.21869	0.02732	0.14254
X2964n_G283	236.5	22.2	0.0888	0.06025	0.00188	0.8255
X2964n_G284	1812.3	116.5	0.139	0.07084	0.0018	0.65351
X2964n_G285	802.8	58.6	0.6261	0.08553	0.0026	0.74612
X2964n_G286	87.6	8.7	0.5711	0.05869	0.00248	0.73243
X2964n_G287	117.8	12.5	1.584	0.1177	0.00392	1.37087
X2964n_G288	91	11	0.4275	0.06248	0.00234	0.98836
X2964n_G289	54.6	7.8	0.6047	0.06658	0.00292	1.18971
X2964n_G290	69.4	9.7	0.4537	0.06949	0.00332	1.25933
X2964n_G291	138.8	17.5	1.3863	0.06136	0.00216	0.79284
X2964n_G292	207.7	29.4	0.3985	0.06674	0.00194	1.24416
X2964n_G293	64.6	9.4	0.5578	0.06628	0.00256	1.22308
X2964n_G294	57.4	7.5	1.0349	0.06023	0.00274	0.87854
X2964n_G295	199.6	32	0.7646	0.06706	0.00196	1.28884
X2964n_G296	52.7	6.2	0.2955	0.06339	0.0028	1.02373
X2964n_G297	178.5	19.5	0.2227	0.06001	0.00194	0.91497
X2964n_G298	51.2	6.9	0.2941	0.06508	0.00282	1.19766
X2964n_G299	66.5	0.4	1.1583	0.06167	0.01642	0.03501
X2964n_G300	538.5	53.8	0.2625	0.06148	0.00166	0.8479
X2964n_G301	95.7	13.5	0.4616	0.06674	0.00234	1.22175
X2964n_G302	120.2	16.4	0.5152	0.06316	0.00214	1.09897
X2964n_G303	61.3	6.6	0.7923	0.0622	0.00282	0.79881
X2964n_G304	51.7	5.6	0.7875	0.06003	0.0029	0.77108
X2964n_G305	232.2	24.3	0.5267	0.06612	0.002	0.8909
X2964n_G306	334.1	14.8	0.4352	0.05306	0.0019	0.30939
X2964n_G307	261.4	34.1	0.3647	0.06665	0.00194	1.16472
X2964n_G308	93.3	9.8	0.9361	0.07143	0.00278	0.90328
X2964n_G309	20.6	2.3	1.1561	0.06881	0.00498	0.84092
X2964n_G310	124.5	16.1	0.3269	0.06434	0.00208	1.12343
X2964n_G311	182.4	15.4	0.455	0.05885	0.00198	0.64974
X2964n_G312	189.1	20.4	0.3058	0.06354	0.002	0.94528
X2964n_G313	172.8	23.6	0.4471	0.06849	0.00222	1.22022
X2964n_G314	396.4	34.8	0.0944	0.06154	0.00184	0.78793
X2964n_G315	128.3	14.4	0.0673	0.06349	0.0021	1.04455
X2964n_G316	313.1	47.2	0.1779	0.07106	0.00196	1.50536
X2964n_G317	150.3	16.6	1.4128	0.05916	0.00212	0.67264
X2964n_G318	98.6	11.6	0.8484	0.06327	0.00264	0.87563
X2964n_G319	77.1	10.6	0.315	0.06553	0.00246	1.22091
X2964n_G320	109.1	25.5	1.3028	0.07476	0.00236	1.82636
X2964L_G001	294.6	1.7	0.9077	0.04876	0.0077	0.03259
X2964L_G002	138.6	60.1	1.6108	0.10922	0.0034	4.63314
X2964L_G003	16	1.6	0.0016	0.06652	0.00744	1.00847

es 90.7% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.04136	0.12495	0.00318	759	18.2	841.3	22.8
0.0475	0.14609	0.00382	879	21.4	869.1	25
0.04766	0.11385	0.00328	695.1	19	724.9	28.2
0.02718	0.10656	0.00262	652.7	15.2	661.4	18
0.0434	0.10163	0.00298	624	17.4	653	27.4
0.32812	0.50205	0.01214	2622.6	52.2	2678.8	31
0.03526	0.1169	0.003	712.7	17.4	729.3	21.4
0.03446	0.13755	0.00334	830.8	19	816.7	19.8
0.0414	0.14006	0.00354	845	20	845.9	22.6
0.02662	0.1145	0.00276	698.8	16	691	17.4
0.025	0.09506	0.00238	585.4	14	587	17.6
0.03462	0.1248	0.0031	758.1	17.8	775.2	20.6
0.05312	0.15614	0.00398	935.3	22.2	997.4	25.2
0.02558	0.00621	0.00052	39.9	3.4	222.3	31
0.0258	0.10937	0.0026	669.1	15.2	707.9	16.8
0.07416	0.14191	0.0046	855.5	26	844.6	38.2
0.0264	0.1015	0.00252	623.2	14.8	630.6	18
0.02864	0.11606	0.0028	707.8	16.2	735.7	18
0.0112	0.03892	0.00102	246.1	6.4	246.6	10.6
0.04566	0.12914	0.0035	783	20	776.9	26
0.03364	0.10433	0.00278	639.7	16.2	625.5	22
0.02544	0.09954	0.00248	611.7	14.6	598.6	17.6
0.05798	0.18528	0.00464	1095.8	25.2	1096.5	25.2
0.02454	0.08987	0.00226	554.8	13.4	574.7	17.4
0.15412	0.3467	0.00836	1918.8	40	1980.6	28.8
0.03546	0.1071	0.00284	655.9	16.6	668.8	22.4
0.02884	0.08408	0.00228	520.4	13.6	532.6	20.6
0.0213	0.09013	0.0022	556.3	13	555.6	15.6
0.0478	0.13766	0.0033	831.4	18.6	1068.3	22
0.03212	0.12438	0.00304	755.7	17.4	763.5	19.4
0.04444	0.13224	0.0034	800.6	19.4	866.7	23.8
0.03372	0.13307	0.00322	805.4	18.4	812.3	19.6
0.05398	0.13951	0.00386	841.9	21.8	854.4	28.4
0.02562	0.10701	0.0026	655.4	15.2	659.8	17.2
0.02798	0.10859	0.00268	664.6	15.6	672.5	18.4
0.04036	0.13909	0.00348	839.5	19.6	850.9	22
0.04116	0.12791	0.00322	775.9	18.4	857.3	22.4
0.03342	0.13459	0.00326	814	18.6	811.6	19.4
0.04604	0.11989	0.00334	729.9	19.2	749.8	26.8
0.12134	0.30491	0.00736	1715.6	36.4	1766.7	28
0.03672	0.09935	0.00278	610.6	16.4	604.7	24.2
0.03246	0.09647	0.0025	593.7	14.6	674.1	21
0.0496	0.11907	0.00342	725.2	19.8	749.9	28.6
0.05368	0.17424	0.00418	1035.4	23	1134.3	23
0.03282	0.10954	0.00282	670.1	16.4	671.9	20.8
0.03416	0.12107	0.00302	736.7	17.4	760.1	20.4
0.05082	0.13003	0.00364	788	20.8	807.5	28
0.04278	0.12884	0.00338	781.2	19.4	794.8	24.2
0.0459	0.13554	0.00364	819.4	20.6	794.1	25.6
0.03266	0.13416	0.00322	811.6	18.4	820.3	19

0.04402	0.1344	0.00352	812.9	20	818.7	24.4
0.0441	0.13136	0.00352	795.6	20	775.5	25.2
0.02794	0.11753	0.00284	716.3	16.4	716.8	17.8
0.0247	0.09291	0.00234	572.7	13.8	566.3	17.6
0.00344	0.00377	0.00018	24.3	1.2	30	3.8
0.0478	0.13524	0.00364	817.7	20.6	815.9	26.2
0.02538	0.09685	0.00242	595.9	14.2	596.4	17.8
0.02832	0.11256	0.00276	687.6	16	686.1	18.4
0.05404	0.13749	0.00388	830.5	22	822.1	29
0.03202	0.12804	0.0031	776.7	17.8	775.7	19.2
0.06106	0.12972	0.00398	786.3	22.8	799.5	33.2
0.03532	0.13044	0.00322	790.4	18.4	795.2	20.6
0.01886	0.07893	0.00194	489.7	11.6	498.5	14.6
0.03474	0.13546	0.00326	818.9	18.6	840.2	19.6
0.2721	0.04854	0.0079	305.6	48.6	720.8	176.4
0.01004	0.03899	0.00098	246.6	6	262.2	9.6
0.0512	0.17535	0.00432	1041.5	23.6	1036.6	23.6
0.04324	0.13305	0.00344	805.2	19.6	835.9	23.8
0.03434	0.1023	0.00276	627.9	16.2	623.8	22.6
0.05308	0.13928	0.00384	840.6	21.8	849.8	28
0.03546	0.11255	0.00298	687.5	17.2	666.9	22.4
0.05944	0.12991	0.0039	787.4	22.2	805.6	32.2
0.03086	0.12234	0.00298	744	17.2	751.3	19
0.00922	0.0042	0.0003	27	2	25.8	9.4
0.05164	0.13324	0.00368	806.3	21	825.2	28
0.07612	0.13006	0.00428	788.2	24.4	892.5	38.4
0.02322	0.10776	0.00256	659.7	14.8	656.3	16
0.05388	0.13596	0.00384	821.8	21.8	818.1	29.2
0.05286	0.12881	0.00372	781.1	21.2	767.8	29.8
0.03424	0.13716	0.0033	828.6	18.8	825.2	19.6
0.0431	0.13771	0.00356	831.7	20.2	821.3	23.8
0.02008	0.05274	0.00126	331.3	7.8	574	14.8
2.21862	0.2747	0.03246				
0.03354	0.13897	0.00334	838.8	19	827.3	19.2
0.02166	0.08259	0.00198	511.6	11.8	600.2	15.6
0.08284	0.12592	0.00454	764.5	26	815.3	43.8
0.03486	0.08394	0.00246	519.6	14.6	528.6	24.6
0.04132	0.11443	0.0031	698.4	18	720.3	24.8
0.04064	0.15563	0.00374	932.4	20.8	940.9	21
0.04524	0.14517	0.00372	873.8	21	874	24
0.05286	0.13534	0.00384	818.3	21.8	790.4	29.2
0.1327	0.2862	0.0068	1622.5	34	1867.4	27.8
0.03804	0.14014	0.00348	845.5	19.6	821.9	21.4
0.05482	0.12897	0.00382	782	21.8	760.5	31
0.03388	0.10265	0.00274	629.9	16	629	22.2
0.03988	0.13784	0.00346	832.4	19.6	823.7	22.2
0.0425	0.12431	0.00332	755.3	19	762	24.6
0.04068	0.09669	0.00288	595	17	563.4	27.4
0.04696	0.13365	0.00358	808.7	20.4	816.2	25.8
0.06076	0.15933	0.00436	953.1	24.2	946.9	29.4
0.04014	0.13413	0.0034	811.4	19.4	812.1	22.6
0.03816	0.14359	0.00352	864.9	19.8	855.6	21
0.02804	0.1023	0.00258	627.9	15	628.6	18.8
0.03006	0.10126	0.0026	621.8	15.2	624.9	20
0.03056	0.1201	0.00294	731.1	17	724.2	19

0.02042	0.08777	0.00214	542.3	12.6	534.5	15.4
0.045	0.10338	0.00304	634.2	17.8	661.4	28
0.03986	0.13641	0.00346	824.3	19.6	809.6	22.6
0.04358	0.13545	0.00352	818.9	20	821.9	24
0.03416	0.08993	0.00252	555.1	15	581.9	23.4
0.04372	0.12595	0.00334	764.7	19.2	792.7	24.8
0.02434	0.07601	0.00202	472.3	12.2	476.9	18.4
0.05056	0.13118	0.00366	794.6	20.8	802.6	27.8
0.03228	0.09915	0.00256	609.4	15	665.9	20.8
0.02306	0.0779	0.00194	483.6	11.6	560.5	16.8
0.00916	0.02225	0.00066	141.9	4.2	142.8	9.2
0.04416	0.15577	0.0038	933.2	21.2	957.1	22.2
0.0333	0.12373	0.00306	752	17.6	752.5	20
0.0606	0.13844	0.00412	835.8	23.4	813	32.4
0.06172	0.13885	0.00414	838.2	23.4	819.5	32.8
0.02574	0.10418	0.00254	638.9	14.8	639.4	17.4
0.04378	0.12571	0.00338	763.3	19.4	764	25.2
0.0546	0.14116	0.00394	851.2	22.2	842	29
0.04198	0.14244	0.00358	858.4	20.2	859.2	22.8
0.03706	0.13503	0.00332	816.5	18.8	821.6	21
0.03974	0.11525	0.00312	703.2	18	688.3	24.4
0.02532	0.11283	0.00268	689.2	15.6	684.1	16.8
0.04358	0.09766	0.00288	600.7	17	646.8	27.6
0.02846	0.09181	0.00242	566.2	14.2	553.7	20
0.03882	0.14089	0.00348	849.7	19.6	839	21.6
0.01084	0.04609	0.00108	290.5	6.6	358.5	10
0.06928	0.10133	0.0038	622.2	22.2	624.1	43
0.0444	0.13228	0.0035	800.9	20	797.2	25
0.04996	0.16042	0.00404	959.1	22.4	959.7	24.4
0.05034	0.16431	0.00414	980.7	23	965.6	24.6
0.04268	0.13487	0.0035	815.6	19.8	802.1	24
0.03306	0.10149	0.00272	623.1	16	605.7	22
0.05414	0.14692	0.00398	883.7	22.4	882.7	27.8
0.05842	0.12719	0.00384	771.8	22	774.9	32.4
0.03368	0.10315	0.00276	632.8	16.2	613.8	22.4
0.05626	0.127	0.00378	770.7	21.6	779.9	31.4
0.0433	0.13755	0.00354	830.8	20	824.5	24
0.02474	0.10264	0.00244	629.9	14.2	679	16.6
0.0073	0.00396	0.0003	25.5	2	29	7.8
0.07422	0.14349	0.0046	864.4	26	854.7	37.8
0.04332	0.13921	0.00354	840.2	20	848.4	23.6
0.02428	0.08567	0.00204	529.9	12.2	655.9	16.4
0.043	0.13635	0.00352	824	20	813.7	23.8
0.03974	0.13801	0.00344	833.4	19.4	830.1	22.2
0.01074	0.04913	0.00116	309.2	7.2	354.4	9.8
0.04876	0.13949	0.00374	841.8	21.2	823.6	26.4
0.0504	0.17414	0.00428	1034.9	23.4	1011.5	23.8
0.01182	0.05422	0.00132	340.4	8	338.7	10.8
0.01182	0.05382	0.0013	337.9	8	337.7	10.6
0.06364	0.16228	0.00444	969.4	24.6	978.1	29.8
0.00174	0.00383	0.00012	24.6	0.8	24.5	2
0.04434	0.1529	0.0038	917.2	21.2	911.7	23
0.02748	0.10169	0.00254	624.3	14.8	617.6	18.6
0.01646	0.06045	0.00156	378.4	9.4	372.3	14
0.03006	0.09746	0.00256	599.5	15	587.4	20.6

0.02346	0.09929	0.00238	610.2	14	617.7	16.4
0.03298	0.12663	0.0031	768.6	17.8	762.3	19.8
0.03742	0.1085	0.00292	664	17	668.6	23.6
0.0335	0.12009	0.00292	731.1	16.8	780.2	19.8
0.0359	0.1401	0.00336	845.2	19	859.4	20
0.03378	0.13726	0.00326	829.1	18.4	839.6	19.2
0.04332	0.10015	0.00296	615.3	17.4	619.7	27.8
0.0157	0.00491	0.00052	31.6	3.4	37.2	16.2
0.05608	0.17364	0.00438	1032.1	24	1034.2	25.6
0.03448	0.13758	0.0033	831	18.8	827.8	19.8
0.0527	0.11387	0.0036	695.2	20.8	627.5	33
0.02708	0.09124	0.00236	562.9	14	552.8	19.2
0.05242	0.13462	0.0038	814.2	21.6	790.9	29
0.03744	0.12623	0.00322	766.3	18.4	747.5	22.2
0.05122	0.17136	0.00424	1019.6	23.4	1015.6	24
0.04742	0.17481	0.0042	1038.6	23	1027.3	22.4
0.0414	0.13816	0.00348	834.2	19.8	836.4	22.8
0.06028	0.14426	0.00394	868.7	22.2	964.1	29
0.04806	0.16773	0.00408	999.6	22.6	1002.6	23
0.05566	0.13222	0.00376	800.5	21.4	830.8	29.8
0.05272	0.12803	0.00368	776.6	21	765.6	29.6
0.04332	0.13316	0.00348	805.9	19.8	798.6	24.4
0.06726	0.13546	0.00428	818.9	24.2	806.9	36
0.02606	0.08004	0.00214	496.4	12.8	503.1	19.2
0.03736	0.14329	0.0034	863.2	19.2	898.5	20
0.0177	0.07133	0.0017	444.2	10.2	517.7	13.8
0.02728	0.09357	0.0024	576.6	14.2	577.4	19
0.04006	0.00455	0.00084	29.3	5.4	33.5	40.2
0.03324	0.13011	0.00316	788.5	18	778.1	19.8
0.0067	0.02841	0.0007	180.6	4.4	183.2	6.8
0.02276	0.0843	0.00214	521.7	12.8	508.7	17
0.02734	0.10401	0.00258	637.9	15	624.9	18.6
0.02182	0.09606	0.00228	591.3	13.4	604.2	15.6
0.05638	0.15518	0.00414	929.9	23.2	938.9	27.8
0.05434	0.14331	0.00394	863.4	22.2	855.9	28.6
0.08404	0.12074	0.00448	734.8	25.8	770.3	46
0.04126	0.13264	0.00334	802.9	19	837.1	22.8
0.0551	0.19157	0.00462	1129.9	25	1108.7	23.8
0.03118	0.09547	0.00254	587.8	15	591.2	21.2
0.04106	0.13786	0.00348	832.5	19.8	823.5	22.8
0.04106	0.12572	0.00332	763.4	19	738.8	24.2
0.06016	0.16389	0.0044	978.4	24.4	959.5	28.6
0.03024	0.10226	0.0026	627.6	15.2	645.2	20
0.02628	0.08996	0.00228	555.3	13.4	572.1	18.4
0.04328	0.10655	0.00308	652.7	18	654.3	27.2
0.07786	0.13776	0.00436	832	24.8	948.3	37.4
0.03924	0.08064	0.00258	499.9	15.4	497.5	28
0.0404	0.12277	0.00322	746.5	18.4	741.6	24
0.0522	0.02876	0.00214	182.8	13.4	273.5	47
0.0401	0.13591	0.00342	821.5	19.4	814	22.6
0.03022	0.1281	0.00304	777	17.4	769.1	18.4
0.0258	0.09247	0.00226	570.1	13.4	633.6	17.6
0.04992	0.13309	0.00364	805.5	20.8	808.4	27.4
0.0308	0.09507	0.00252	585.5	14.8	577.1	21.2
0.04396	0.12478	0.00336	758	19.2	752.8	25.6

0.0123	0.00375	0.00038	24.1	2.4	25.5	12.6
0.02998	0.10815	0.00268	662	15.6	670.9	19.4
0.05976	0.11939	0.00388	727.1	22.4	698.3	35.4
0.03862	0.1256	0.00324	762.7	18.6	749.2	22.8
0.03322	0.11276	0.00288	688.8	16.6	679.6	21
0.0563	0.09507	0.00326	585.5	19.2	640.2	35.4
0.02122	0.08161	0.00198	505.7	11.8	554.5	15.6
0.04764	0.13892	0.00368	838.6	20.8	832.9	25.8
0.04772	0.13577	0.00364	820.7	20.6	810.6	26.2
0.02038	0.05544	0.00146	347.8	9	437.2	16.4
0.0175	0.03766	0.001	238.3	6.2	410.4	14.8
0.03954	0.1246	0.0032	757	18.4	766.2	23
0.03388	0.10161	0.0027	623.8	15.8	627.2	22.2
0.03196	0.12651	0.00304	767.9	17.4	766.5	19.2
0.054	0.1258	0.00368	763.9	21	766.8	30.6
0.15492	0.34091	0.00824	1891	39.6	1937.2	30
0.02798	0.08838	0.00234	545.9	13.8	539.1	20
0.03812	0.10987	0.003	672	17.4	648.5	24.2
0.04356	0.14332	0.00364	863.4	20.6	845.2	23.6
0.01638	0.04412	0.00126	278.3	7.8	273.3	14.6
0.04308	0.13618	0.00354	823	20	796	24.2
0.02664	0.09527	0.0024	586.6	14.2	585.8	18.6
0.03796	0.13252	0.00328	802.2	18.6	808.6	21.6
0.03452	0.13459	0.00324	814	18.4	810.2	20
0.03938	0.13427	0.00338	812.2	19.2	797.2	22.4
0.03858	0.13744	0.0034	830.2	19.2	817.2	21.8
0.0247	0.10355	0.00248	635.2	14.4	635.8	17
0.0495	0.12806	0.00356	776.8	20.4	774.1	28
0.04454	0.136	0.00356	822	20.2	799.2	25
0.01254	0.03985	0.00096	251.9	6	361.5	11.2
0.04722	0.1364	0.00364	824.3	20.6	808.3	26
0.03316	0.121	0.00298	736.3	17.2	734	20.2
0.03234	0.11276	0.00284	688.8	16.4	683	20.6
0.00296	0.00363	0.00012	23.4	0.8	59.9	3.6
0.03734	0.11151	0.00296	681.5	17.2	676.5	23.4
0.0116	0.05357	0.0013	336.4	8	333.1	10.6
0.0452	0.12832	0.00344	778.3	19.6	778	25.8
0.08164	0.12315	0.00456	748.7	26.2	748.3	45.4
0.2525	0.18248	0.01142	1080.5	62.2	1091.9	100.2
0.04196	0.12197	0.00324	741.9	18.6	744.9	24.6
0.03902	0.12865	0.00326	780.2	18.6	778.6	22.6
0.03678	0.13322	0.00324	806.2	18.4	817	21
0.04532	0.13278	0.00346	803.7	19.6	829.7	24.8
0.0017	0.00501	0.00014	32.2	0.8	32.1	2
0.02474	0.09821	0.0024	603.9	14	600.7	17.2
0.04602	0.10448	0.00314	640.6	18.4	637.9	29.2
0.01842	0.02902	0.0007	184.4	4.4	521.2	14.4
1207.4945	2.5389	3.9038				
0.04502	0.14007	0.00358	845.1	20.2	852.4	24.2
0.04494	0.13817	0.00356	834.3	20.2	833.2	24.4
0.05696	0.16481	0.0043	983.5	23.8	966.8	27.2
0.07572	0.10127	0.00408	621.8	23.8	625.7	47
0.04776	0.13354	0.00358	808	20.4	805.9	26.4
0.04486	0.13586	0.00354	821.2	20	815.5	24.8
0.06204	0.16147	0.00434	964.9	24	975.5	29.2

1320.0393	11.74949	9.82606				
0.03256	0.12815	0.0031	777.3	17.8	763.1	19.6
0.03442	0.11735	0.00298	715.3	17.2	705.5	21.4
0.02518	0.04856	0.00124	305.7	7.6	599.9	18.2
0.02316	0.04721	0.00118	297.4	7.2	578.9	17
0.0756	0.13096	0.00444	793.3	25.4	801.2	40.4
0.04284	0.13204	0.00342	799.5	19.4	799.7	24
0.03062	0.09727	0.00252	598.4	14.8	604.3	20.6
0.05388	0.13641	0.00382	824.3	21.6	821.6	29.2
0.19986	0.14495	0.00614				
0.01484	0.00473	0.00036	30.4	2.4	135.3	18.6
0.0266	0.09941	0.00246	611	14.4	611.1	18.2
0.0179	0.06694	0.0016	417.7	9.6	510.6	14
0.02336	0.06329	0.00158	395.6	9.6	566	17
0.03086	0.09055	0.00244	558.8	14.4	558	21.6
0.04586	0.08451	0.00222	523	13.2	876.5	25
0.03728	0.11478	0.003	700.4	17.4	697.9	23
0.05178	0.12965	0.00362	785.9	20.6	795.8	28.6
0.0593	0.13149	0.00386	796.4	22	827.6	31.8
0.02836	0.09375	0.0024	577.7	14.2	592.8	19.6
0.038	0.13526	0.00332	817.8	18.8	820.8	21.4
0.04764	0.13389	0.00358	810	20.4	811.2	26.2
0.03962	0.10583	0.00294	648.5	17.2	640.2	25.4
0.03956	0.13945	0.00342	841.6	19.4	840.8	21.8
0.04508	0.11718	0.00326	714.3	18.8	715.8	26.8
0.03054	0.11063	0.00276	676.4	16	659.7	19.8
0.05168	0.13353	0.0037	808	21	799.5	28.4
0.009	0.00412	0.0003	26.5	2	34.9	9.4
0.02432	0.10007	0.0024	614.8	14	623.5	16.8
0.0437	0.13282	0.00342	803.9	19.4	810.6	24.2
0.03814	0.12626	0.0032	766.5	18.4	752.9	22.6
0.03596	0.09319	0.0026	574.4	15.4	596.2	24
0.03686	0.0932	0.00266	574.4	15.6	580.4	24.8
0.02796	0.09777	0.0024	601.3	14	646.9	18.6
0.0112	0.04231	0.00106	267.1	6.6	273.7	10.4
0.0356	0.1268	0.0031	769.6	17.8	784.2	20.8
0.03524	0.09175	0.00246	565.9	14.6	653.5	22.8
0.05846	0.08867	0.00318	547.7	18.8	619.7	37.4
0.03754	0.12669	0.00318	769	18.2	764.6	22
0.02238	0.0801	0.00202	496.7	12	508.3	16.8
0.03062	0.10795	0.00268	660.8	15.6	675.6	19.8
0.0406	0.12928	0.00326	783.8	18.6	809.9	23
0.02454	0.09291	0.00228	572.7	13.4	590	17.4
0.03556	0.11938	0.00302	727	17.4	726.2	21.6
0.04374	0.15371	0.00372	921.7	20.8	932.6	22.4
0.02452	0.0825	0.0021	511	12.6	522.3	18
0.03632	0.10042	0.00272	616.9	16	638.6	23.6
0.0463	0.13518	0.00356	817.3	20.2	810.2	25.6
0.0595	0.17726	0.00446	1052	24.4	1055	26.4
0.005	0.00485	0.0002	31.2	1.2	32.6	5.2
0.1421	0.30775	0.00706	1729.6	34.8	1755.3	32.2
0.10908	0.10998	0.00474	672.6	27.6	708.1	61.2

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
1066.1	61.8	-9.8	-28.8	759	18.2
844.6	70.6	1.1	4.1	879	21.4
819	96.2	-4.1	-15.1	695.1	19
691.9	58.6	-1.3	-5.7	652.7	15.2
755.4	102.8	-4.4	-17.4	624	17.4
2721.9	36.6	-2.1	-3.6	2721.9	36.6
781.1	67.6	-2.3	-8.8	712.7	17.4
779.2	53.6	1.7	6.6	830.8	19
848.9	63	-0.1	-0.5	845	20
666.2	53.4	1.1	4.9	698.8	16
593.8	66	-0.3	-1.4	585.4	14
825.6	59.6	-2.2	-8.2	758.1	17.8
1137.2	60.4	-6.2	-17.8	935.3	22.2
3394.5	203.6	-82	-98.8		
833.7	47.4	-5.5	-19.7	669.1	15.2
816.8	121.6	1.3	4.7	855.5	26
658.2	62	-1.2	-5.3	623.2	14.8
822.2	50.8	-3.8	-13.9	707.8	16.2
251.2	93.4	-0.2	-2	246.1	6.4
760	83	0.8	3	783	20
575.2	84.4	2.3	11.2	639.7	16.2
550	65.6	2.2	11.2	611.7	14.6
1098.5	55.8	-0.1	-0.2	1095.8	25.2
654.7	66.4	-3.5	-15.3	554.8	13.4
2046.4	40	-3.1	-6.2	2046.4	40
713.3	79.4	-1.9	-8	655.9	16.6
585.8	90.4	-2.3	-11.2	520.4	13.6
553.8	59.6	0.1	0.5	556.3	13
1590.6	43	-22.2	-47.7		
786.9	55.8	-1	-4	755.7	17.4
1040.4	63.8	-7.6	-23	800.6	19.4
832.2	52.4	-0.9	-3.2	805.4	18.4
887.3	83.8	-1.5	-5.1	841.9	21.8
675.5	55.2	-0.7	-3	655.4	15.2
699.8	59.8	-1.2	-5	664.6	15.6
881.3	59.8	-1.3	-4.7	839.5	19.6
1074.7	59.2	-9.5	-27.8	775.9	18.4
805.7	52	0.3	1	814	18.6
810.2	88	-2.6	-9.9	729.9	19.2
1828.1	41.8	-2.9	-6.2	1828.1	41.8
583.2	97.8	1	4.7	610.6	16.4
953.7	68.6	-11.9	-37.7	593.7	14.6
825	95.2	-3.3	-12.1	725.2	19.8
1329.2	45.6	-8.7	-22.1	1035.4	23
678.6	72.2	-0.3	-1.3	670.1	16.4
830	60.6	-3.1	-11.2	736.7	17.4
862.1	86.4	-2.4	-8.6	788	20.8
833.7	73.6	-1.7	-6.3	781.2	19.4
724.4	80.8	3.2	13.1	819.4	20.6
844.6	49.6	-1.1	-3.9	811.6	18.4

835	72.2	-0.7	-2.6	812.9	20
718.7	80.4	2.6	10.7	795.6	20
719	53	-0.1	-0.4	716.3	16.4
541.1	69.8	1.1	5.9	572.7	13.8
519.1	264.6	-19.1	-95.3		
811.8	79.6	0.2	0.7	817.7	20.6
598.9	65.8	-0.1	-0.5	595.9	14.2
681.7	58.4	0.2	0.9	687.6	16
800.3	90.4	1	3.8	830.5	22
773.4	54.4	0.1	0.4	776.7	17.8
837.2	107.6	-1.7	-6.1	786.3	22.8
809.5	58.2	-0.6	-2.4	790.4	18.4
539.9	60.8	-1.8	-9.3	489.7	11.6
897.5	50.8	-2.5	-8.8	818.9	18.6
2396.3	510.8	-57.6	-87.2		
404.5	73.6	-5.9	-39	246.6	6
1026.9	54	0.5	1.4	1041.5	23.6
918.6	67.2	-3.7	-12.3	805.2	19.6
609.7	87	0.7	3	627.9	16.2
874.3	83.2	-1.1	-3.9	840.6	21.8
598.2	81	3.1	14.9	687.5	17.2
856.9	103.2	-2.3	-8.1	787.4	22.2
773.4	55	-1	-3.8	744	17.2
-82.4	892.4	4.7	-132.8	27	2
876.8	84.8	-2.3	-8	806.3	21
1161.1	110	-11.7	-32.1	788.2	24.4
645.2	49.2	0.5	2.2	659.7	14.8
808.6	91.2	0.5	1.6	821.8	21.8
730	99.8	1.7	7	781.1	21.2
816.5	52.4	0.4	1.5	828.6	18.8
793.6	70.4	1.3	4.8	831.7	20.2
1706.4	44.4	-42.3	-80.6		
797.2	50.4	1.4	5.2	838.8	19
951.6	50.2	-14.8	-46.2	511.6	11.8
957.1	141.6	-6.2	-20.1	764.5	26
567.8	112.8	-1.7	-8.5	519.6	14.6
789.8	83.4	-3	-11.6	698.4	18
961.2	49.4	-0.9	-3	932.4	20.8
875.2	66.2	0	-0.2	873.8	21
713.3	95.6	3.5	14.7	818.3	21.8
2152.6	38.8	-13.1	-24.6		
759.4	60.8	2.9	11.3	845.5	19.6
698.8	106	2.8	11.9	782	21.8
626.1	84	0.1	0.6	629.9	16
801	63.6	1.1	3.9	832.4	19.6
782.4	78.6	-0.9	-3.5	755.3	19
438.4	124	5.6	35.7		
837.5	77.8	-0.9	-3.4	808.7	20.4
933.3	80.2	0.6	2.1	953.1	24.2
814.6	65.6	-0.1	-0.4	811.4	19.4
832.2	56.2	1.1	3.9	864.9	19.8
631.5	67.4	-0.1	-0.6	627.9	15
636.8	74.2	-0.5	-2.4	621.8	15.2
703.5	58.2	1	3.9	731.1	17

501.9	60.8	1.5	8	542.3	12.6
756.1	104.8	-4.1	-16.1	634.2	17.8
769.8	66.2	1.8	7.1	824.3	19.6
830.6	70.6	-0.4	-1.4	818.9	20
688.5	95	-4.6	-19.4	555.1	15
872.8	75.4	-3.5	-12.4	764.7	19.2
500	88.6	-1	-5.6	472.3	12.2
825.6	87	-1	-3.8	794.6	20.8
862.4	70.4	-8.5	-29.3	609.4	15
887.3	62	-13.7	-45.5	483.6	11.6
159.3	145.4	-0.7	-10.9	141.9	4.2
1013.1	52.8	-2.5	-7.9	933.2	21.2
754.5	60.4	-0.1	-0.3	752	17.6
751.5	105	2.8	11.2	835.8	23.4
770.1	105.8	2.3	8.8	838.2	23.4
642.1	59.2	-0.1	-0.5	638.9	14.8
766.5	81.4	-0.1	-0.4	763.3	19.4
818.7	88.2	1.1	4	851.2	22.2
861.8	62.4	-0.1	-0.4	858.4	20.2
836.2	58.4	-0.6	-2.4	816.5	18.8
640.6	87.4	2.2	9.8	703.2	18
668.2	51.2	0.7	3.1	689.2	15.6
811.8	103.6	-7.1	-26	600.7	17
503.1	85.2	2.3	12.5	566.2	14.2
811.4	59.4	1.3	4.7	849.7	19.6
826.9	48.2	-19	-64.9		
631.8	181.4	-0.3	-1.5	622.2	22.2
787.6	77	0.5	1.7	800.9	20
961.7	62	-0.1	-0.3	959.1	22.4
932.2	62	1.6	5.2	980.7	23
765.6	73	1.7	6.5	815.6	19.8
541.8	87.8	2.9	15	623.1	16
881	79.8	0.1	0.3	883.7	22.4
784.3	108.8	-0.4	-1.6	771.8	22
545.2	88.2	3.1	16.1	632.8	16.2
807	103.4	-1.2	-4.5	770.7	21.6
808	70.4	0.8	2.8	830.8	20
846.1	48.8	-7.2	-25.6	629.9	14.2
330.1	594.6	-12.1	-92.3	25.5	2
830.6	119.2	1.1	4.1	864.4	26
870.7	66.4	-1	-3.5	840.2	20
1118.1	48.8	-19.2	-52.6		
786.3	71.4	1.3	4.8	824	20
821.8	62.8	0.4	1.4	833.4	19.4
663	49.4	-12.8	-53.4	309.2	7.2
775.6	80.8	2.2	8.5	841.8	21.2
962	56.8	2.3	7.6	1034.9	23.4
327.5	64.2	0.5	3.9	340.4	8
337.3	63.8	0.1	0.2	337.9	8
998.3	79	-0.9	-2.9	969.4	24.6
13.8	177.6	0.4	78.7	24.6	0.8
899	59.8	0.6	2	917.2	21.2
593.4	68.2	1.1	5.2	624.3	14.8
335.2	82.8	1.6	12.9	378.4	9.4
541.4	82.4	2.1	10.7	599.5	15

645.9	55.4	-1.2	-5.5	610.2	14
744.3	58.8	0.8	3.3	768.6	17.8
684.8	85	-0.7	-3	664	17
923.9	55.8	-6.3	-20.9	731.1	16.8
896.9	50.8	-1.7	-5.8	845.2	19
867.9	49.4	-1.2	-4.5	829.1	18.4
636.4	112.4	-0.7	-3.3	615.3	17.4
420.7	965.6	-15.2	-92.5		
1039	61.2	-0.2	-0.7	1032.1	24
820.3	52.8	0.4	1.3	831	18.8
391.4	140.8	10.8	77.6		
512.3	81	1.8	9.9	562.9	14
726.7	94.8	2.9	12	814.2	21.6
692.3	71	2.5	10.7	766.3	18.4
1007.8	56.8	0.4	1.2	1019.6	23.4
1003.9	50.2	1.1	3.4	1038.6	23
842.7	64.4	-0.3	-1	834.2	19.8
1189.1	74.4	-9.9	-26.9	868.7	22.2
1010.1	54	-0.3	-1	999.6	22.6
913.6	90.6	-3.6	-12.4	800.5	21.4
734.3	99.6	1.4	5.8	776.6	21
779.2	74.8	0.9	3.4	805.9	19.8
774.3	119.2	1.5	5.8	818.9	24.2
534.7	88.8	-1.3	-7.2	496.4	12.8
987.1	48.6	-3.9	-12.5	863.2	19.2
857.5	50.4	-14.2	-48.2	444.2	10.2
581.4	75.4	-0.1	-0.8	576.6	14.2
347.5	2732.8	-12.6	-91.6	29.3	5.4
749.2	57.2	1.3	5.2	788.5	18
218.5	76	-1.4	-17.4	180.6	4.4
451.2	75.4	2.6	15.6	521.7	12.8
578.9	67.4	2.1	10.2	637.9	15
653.6	53.2	-2.1	-9.5	591.3	13.4
960.9	74.6	-1	-3.2	929.9	23.2
837.5	85.2	0.9	3.1	863.4	22.2
875.5	158.4	-4.6	-16.1	734.8	25.8
929.8	63.8	-4.1	-13.6	802.9	19
1068	52	1.9	5.8		
605	85	-0.6	-2.8	587.8	15
800	66.2	1.1	4.1	832.5	19.8
665.8	81.2	3.3	14.7	763.4	19
917.2	77.4	2	6.7	978.4	24.4
707.9	70.2	-2.7	-11.3	627.6	15.2
640.3	72.6	-2.9	-13.3	555.3	13.4
660.6	103.6	-0.2	-1.2	652.7	18
1229.7	101.4	-12.3	-32.3	832	24.8
486.9	140.4	0.5	2.7	499.9	15.4
727.7	78.6	0.7	2.6	746.5	18.4
1146.1	359.8	-33.2	-84.1		
794.3	65.8	0.9	3.4	821.5	19.4
746.9	51.4	1	4	777	17.4
867.9	58.6	-10	-34.3	570.1	13.4
817.1	85.6	-0.4	-1.4	805.5	20.8
545.2	87.6	1.5	7.4	585.5	14.8
738.3	84.2	0.7	2.7	758	19.2

160.2	1151.2	-5.5	-84.9	24.1	2.4
701.5	65.8	-1.3	-5.6	662	15.6
607.5	133.8	4.1	19.7	727.1	22.4
709.6	73.6	1.8	7.5	762.7	18.6
650.5	72.8	1.3	5.9	688.8	16.6
839.3	137.8	-8.6	-30.2	585.5	19.2
761	58.2	-8.8	-33.5	505.7	11.8
818.4	77.4	0.7	2.5	838.6	20.8
783.7	81	1.2	4.7	820.7	20.6
940.9	77.4	-20.4	-63		
1546.6	66.2	-41.9	-84.6		
794	71.6	-1.2	-4.7	757	18.4
639.9	84.6	-0.5	-2.5	623.8	15.8
763.3	56	0.2	0.6	767.9	17.4
776	102.2	-0.4	-1.6	763.9	21
1987.6	44	-2.4	-4.9	1987.6	44
510.8	87.2	1.3	6.9	545.9	13.8
568.2	93	3.6	18.3	672	17.4
798.4	68.2	2.2	8.1	863.4	20.6
231.3	124.6	1.8	20.3	278.3	7.8
722	75	3.4	14	823	20
583.2	72.4	0.1	0.6	586.6	14.2
826.9	62	-0.8	-3	802.2	18.6
800.7	55.4	0.5	1.7	814	18.4
756.1	67.4	1.9	7.4	812.2	19.2
782.7	62.4	1.6	6.1	830.2	19.2
638.5	57.2	-0.1	-0.5	635.2	14.4
767.2	91.6	0.3	1.2	776.8	20.4
737	77.6	2.9	11.5	822	20.2
1143.3	55.2	-30.3	-78		
765.2	80.8	2	7.7	824.3	20.6
727.7	63.4	0.3	1.2	736.3	17.2
665.1	70	0.8	3.6	688.8	16.4
1976.5	93.6	-61	-98.8		
660.6	84.2	0.7	3.2	681.5	17.2
310.7	64	1	8.3	336.4	8
777.9	82	0	0	778.3	19.6
748.2	163.2	0	0.1	748.7	26.2
1115.5	271.4	-1	-3.1	1080.5	62.2
755.1	81.2	-0.4	-1.8	741.9	18.6
775.3	69.2	0.2	0.6	780.2	18.6
847.1	58.8	-1.3	-4.8	806.2	18.4
900.5	72.8	-3.1	-10.8	803.7	19.6
22.1	129.2	0.4	45.9	32.2	0.8
589.4	63.4	0.5	2.5	603.9	14
629.3	115.6	0.4	1.8	640.6	18.4
2534.8	43.4	-64.6	-92.7		
872.2	69.4	-0.9	-3.1	845.1	20.2
830.9	71.8	0.1	0.4	834.3	20.2
929.8	72	1.7	5.8	983.5	23.8
640.3	198	-0.6	-2.9	621.8	23.8
801	82.2	0.3	0.9	808	20.4
800.7	75.2	0.7	2.6	821.2	20
1000	77.4	-1.1	-3.5	964.9	24

722.7	58.2	1.9	7.6	777.3	17.8
675.5	71.6	1.4	5.9	715.3	17.2
1961.6	54.8	-49	-84.4		
1927.8	52.4	-48.6	-84.6		
824	134.8	-1	-3.7	793.3	25.4
801	73.2	0	-0.2	799.5	19.4
627.6	80.2	-1	-4.6	598.4	14.8
815.2	90.8	0.3	1.1	824.3	21.6
2971.1	201.4	-77.5	-99		
612.6	67.4	0	-0.3	611	14.4
952.8	52	-18.2	-56.2		
1327.6	58.8	-30.1	-70.2		
555.6	92.2	0.1	0.6	558.8	14.4
1921.6	59.8	-40.3	-72.8		
690.6	79.8	0.4	1.4	700.4	17.4
824.7	91.6	-1.3	-4.7	785.9	20.6
913.3	98.4	-3.8	-12.8	796.4	22
651.9	75.6	-2.5	-11.4	577.7	14.2
829.7	60.6	-0.4	-1.4	817.8	18.8
815.2	80.8	-0.1	-0.6	810	20.4
611.8	98.2	1.3	6	648.5	17.2
839.6	60.8	0.1	0.2	841.6	19.4
721.3	93.8	-0.2	-1	714.3	18.8
603.9	70	2.5	12	676.4	16
776.9	91.2	1.1	4	808	21
662.7	570.4	-24.1	-96		
656.1	58	-1.4	-6.3	614.8	14
829.7	73.2	-0.8	-3.1	803.9	19.4
713.6	72	1.8	7.4	766.5	18.4
681	96.8	-3.7	-15.7	574.4	15.4
604.7	104.6	-1	-5	574.4	15.6
810.2	63.2	-7	-25.8	601.3	14
331.4	81.2	-2.4	-19.4	267.1	6.6
826.9	60.8	-1.9	-6.9	769.6	17.8
969.7	79.4	-13.4	-41.6	565.9	14.6
893	149.4	-11.6	-38.7	547.7	18.8
752.8	68.2	0.6	2.1	769	18.2
561.6	73.4	-2.3	-11.5	496.7	12
726.4	66.8	-2.2	-9	660.8	15.6
883.4	67	-3.2	-11.3	783.8	18.6
658.2	64.2	-2.9	-13	572.7	13.4
724.7	70.2	0.1	0.3	727	17.4
959.1	56.4	-1.2	-3.9	921.7	20.8
573	78	-2.2	-10.8	511	12.6
717.3	88.6	-3.4	-14	616.9	16
791.4	78.8	0.9	3.3	817.3	20.2
1062.1	63.6	-0.3	-0.9	1052	24.4
136.3	371	-4.2	-77.1	31.2	1.2
1786.4	56.8	-1.5	-3.2	1786.4	56.8
822.8	233.4	-5	-18.2	672.6	27.6

Sample 2876S Rahad @ Hufeira 7 grain analysed 4 concordant ages 57.

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2876S_G001	312.4	43.3	0.4962	0.06596	0.002	1.1764
X2876S_G002	79.1	12.2	0.6183	0.06751	0.00294	1.2944
X2876S_G003	2676.1	77.1	0.3435	0.17475	0.0046	0.6434
X2876S_G004	2200.8	72.9	0.592	0.18985	0.00546	0.77387
X2876S_G005	364.5	40.8	0.3764	0.0806	0.00244	1.19871
X2876S_G006	561.9	89.1	0.0724	0.0733	0.00204	1.687
X2876S_G007	380.8	48.8	0.7138	0.07286	0.00212	1.19124

1% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.03636	0.12941	0.00312	784.5	17.8	789.6	21.2
0.05576	0.13911	0.00382	839.6	21.6	843.2	29.4
0.01738	0.02671	0.00064	169.9	4	504.4	14.2
0.02218	0.02957	0.00072	187.9	4.6	582	16.6
0.03706	0.10791	0.00262	660.6	15.2	800	21.4
0.0488	0.16697	0.00396	995.4	21.8	1003.6	23.4
0.03568	0.11862	0.00284	722.6	16.4	796.5	20.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
805.1	63.4	-0.7	-2.6	784.5	17.8
853.5	90.4	-0.4	-1.6	839.6	21.6
2603.7	43.8	-66.3	-93.5		
2740.9	47.4	-67.7	-93.1		
1211.7	59.6	-17.4	-45.5		
1022.3	56.4	-0.8	-2.6	995.4	21.8
1010.1	59	-9.3	-28.5	722.6	16.4

Sample 3312S Tekeze @ Togo Ber 168 grain analysed 129 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X3312n_G001	41.8	22.7	0.7586	0.15518	0.0051	9.5433
X3312n_G002	207.4	25.8	0.2875	0.06561	0.00186	1.11036
X3312n_G003	266.7	43.5	0.456	0.07298	0.00198	1.55327
X3312n_G004	140.3	21.1	0.2312	0.0718	0.00202	1.4879
X3312n_G005	326.8	30.6	0.274	0.0586	0.00168	0.75432
X3312n_G006	1054.5	100.3	0.2452	0.06099	0.0014	0.80639
X3312n_G007	432.2	56.3	0.6157	0.06593	0.00168	1.07864
X3312n_G008	170.8	19.8	0.3505	0.05717	0.0019	0.88414
X3312n_G009	159.5	28.2	0.4634	0.06548	0.00212	1.4912
X3312n_G010	318.1	28.2	0.2497	0.05482	0.00166	0.67194
X3312n_G011	149.9	21.2	0.547	0.06332	0.00232	1.12945
X3312n_G012	413.1	48.4	0.6417	0.05758	0.00186	0.83151
X3312n_G013	313.7	175.5	0.304	0.19353	0.00428	13.69093
X3312n_G014	418.3	45.4	0.2287	0.05909	0.00158	0.89051
X3312n_G015	468	31.9	0.5102	0.0592	0.0019	0.51712
X3312n_G016	1051	119.8	0.7814	0.16884	0.00362	2.27187
X3312n_G017	6905.4	40.9	1.4818	0.04697	0.00166	0.02778
X3312n_G018	271.9	48.6	0.4765	0.06852	0.0018	1.57207
X3312n_G019	403.5	44.9	0.4255	0.074	0.0021	1.08246
X3312n_G020	38.3	4	0.7155	0.05722	0.00414	0.74494
X3312n_G021	383.4	60.4	0.3168	0.06618	0.00166	1.39857
X3312n_G022	136.8	72.8	0.6224	0.15569	0.00412	9.70954
X3312n_G023	420.9	38.9	0.1556	0.05851	0.00184	0.77086
X3312n_G024	641.4	97.8	0.0231	0.06793	0.0017	1.52358
X3312n_G025	413.1	57.3	0.3323	0.06363	0.00166	1.1867
X3312n_G026	136.8	20.2	0.3199	0.06564	0.00216	1.30888
X3312n_G027	1265.3	109.7	0.0596	0.06896	0.0016	0.88424
X3312n_G028	461	51.2	1.1241	0.06833	0.00222	0.88187
X3312n_G029	435.7	58.5	0.3582	0.06256	0.0017	1.12135
X3312n_G030	314.6	42.4	0.6076	0.06224	0.00176	1.04534
X3312n_G031	112.4	11.9	0.2698	0.05888	0.00236	0.85346
X3312n_G032	493.2	52.9	0.2848	0.05865	0.00154	0.86074
X3312n_G033	513.3	49.2	0.0066	0.0569	0.00156	0.81407
X3312n_G034	469.7	28.1	0.8275	0.08086	0.0037	0.60598
X3312n_G035	189.1	19	0.2348	0.06005	0.00222	0.84066
X3312n_G036	1139	87.7	0.1406	0.09133	0.0026	0.99351
X3312n_G037	160.3	96.5	0.5386	0.18665	0.0042	13.37021
X3312n_G038	20.9	1.9	0.4092	0.07397	0.00724	0.93091
X3312n_G039	495	88.7	0.4176	0.0703	0.00168	1.64103
X3312n_G040	112.4	16.5	0.5989	0.06641	0.00248	1.21777
X3312n_G041	236.2	32.4	0.5732	0.06253	0.00194	1.08062
X3312n_G042	258.8	38.2	0.2843	0.07368	0.002	1.48018
X3312n_G043	213.5	20.9	0.4044	0.05824	0.00198	0.75299
X3312n_G044	1736.8	107	1.1539	0.08682	0.00224	0.62914
X3312n_G045	348.6	35.4	0.1137	0.07282	0.002	1.05992
X3312n_G046	349.5	174.1	0.2997	0.15972	0.00376	10.07878
X3312n_G047	475.8	73.1	0.1673	0.0781	0.0019	1.71499
X3312n_G048	98.5	10.4	0.8313	0.05739	0.00288	0.71499
X3312n_G049	111.5	11.5	0.3362	0.05864	0.00252	0.81334
X3312n_G050	96.7	0.5	0.4001	0.03763	0.01808	0.02379

X3312n_G051	379.1	36.5	0.8744	0.05511	0.00174	0.61572
X3312n_G052	480.2	195.4	0.5002	0.13697	0.00304	6.92866
X3312n_G053	1341.2	50.2	0.4424	0.08065	0.00222	0.39794
X3312n_G054				1.25485	6.76684	
X3312n_G055	145.5	14.6	0.2691	0.05896	0.0023	0.8102
X3312n_G056	706.7	90.8	0.0777	0.07071	0.00172	1.31613
X3312n_G057	604.8	95.9	0.1879	0.07105	0.00172	1.57379
X3312n_G058	129.8	16.8	0.2619	0.06413	0.00234	1.13543
X3312n_G059	1600.9	81.4	0.0593	0.1043	0.00248	0.76863
X3312n_G060	311.1	30.5	0.759	0.07483	0.0023	0.88334
X3312n_G061	982.1	72.7	0.5375	0.07782	0.00196	0.76181
X3312n_G062	76.7	10.6	0.2441	0.06303	0.0027	1.19976
X3312n_G063	759.9	113.1	0.172	0.06896	0.00166	1.45202
X3312n_G064	99.3	12.9	0.2843	0.06264	0.00258	1.10441
X3312n_G065	95	14	0.3047	0.06557	0.00262	1.3045
X3312n_G066	393.9	25.6	0.3365	0.05843	0.002	0.51696
X3312n_G067	288.5	71.4	0.1978	0.10568	0.00262	3.62369
X3312n_G068	380	116.2	0.1454	0.10935	0.00258	4.61828
X3312n_G069	593.5	69.8	0.1705	0.06329	0.00166	1.0614
X3312n_G070	964.7	90.6	0.1903	0.05953	0.0015	0.79064
X3312n_G071	212.6	27.7	0.2515	0.06587	0.00206	1.18543
X3312n_G072	58.4	9.2	2.5328	0.06602	0.00384	0.8461
X3312n_G073	470.6	61.4	0.52	0.06859	0.00194	1.17437
X3312n_G074	598.7	90.2	0.069	0.07119	0.00178	1.55854
X3312n_G075	108.1	16.1	0.38	0.0892	0.0032	1.72285
X3312n_G076	447.9	39.9	0.1819	0.05756	0.00176	0.72637
X3312n_G077	566.4	50.4	0.4494	0.22245	0.00558	2.51576
X3312n_G078	52.3	0.3	0.319	0.06444	0.02134	0.04262
X3312n_G079	179.5	14.5	0.1609	0.05761	0.00224	0.66337
X3312n_G080	293.7	26.7	0.0777	0.05984	0.00192	0.79862
X3312n_G081	61.9	6.6	0.4799	0.06209	0.00354	0.86061
X3312n_G082	223.1	22	0.2499	0.05912	0.00198	0.80839
X3312n_G083	252.7	41.8	0.087	0.07446	0.00212	1.77789
X3312n_G084	196.1	37.5	0.5839	0.07331	0.00212	1.74262
X3312n_G085	534.2	64.3	0.3226	0.06792	0.00184	1.11366
X3312n_G086	853.2	45	0.5403	0.06639	0.0019	0.46994
X3312n_G087	995.2	99.2	0.3275	0.06038	0.00156	0.81668
X3312n_G088	288.5	46.1	0.2779	0.07136	0.00202	1.55038
X3312n_G089	217	24.4	0.1617	0.07169	0.00236	1.13752
X3312n_G090	461.9	40.1	0.3966	0.07569	0.00218	0.90802
X3312n_G091	352.9	32.1	0.4663	0.05982	0.00186	0.70692
X3312n_G092	488.9	55	0.8892	0.05777	0.00172	0.74971
X3312n_G093	117.6	51.8	0.3898	0.18858	0.0048	10.67172
X3312n_G094	97.6	10.5	0.4343	0.05892	0.00278	0.83107
X3312n_G095	317.2	31	0.7485	0.06826	0.00224	0.80055
X3312n_G096	549	56.9	0.2464	0.05821	0.00168	0.83605
X3312n_G097	874.9	79.9	0.0546	0.08657	0.00236	1.15522
X3312n_G098	57.5	8.4	0.3277	0.06484	0.00324	1.27175
X3312n_G099	390.4	32.3	0.192	0.05685	0.00184	0.66537
X3312n_G100	310.2	35.9	0.1622	0.06901	0.0021	1.13732
X3312n_G101	990	84.2	0.1058	0.06096	0.00162	0.76265
X3312n_G102	26.1	0.2	0.4936	0.54851	0.0762	0.72547
X3312n_G103	50.5	5.5	0.9947	0.06174	0.00396	0.76878
X3312n_G104	47.1	5	0.1928	0.06066	0.0037	0.91203
X3312n_G105	74.1	11.2	0.6515	0.06838	0.00304	1.26206

X3312n_G106	189.1	17.3	0.4542	0.06375	0.00238	0.7659
X3312n_G107	531.6	35	0.9322	0.07623	0.00238	0.63446
X3312n_G108	271	20.7	1.4029	0.07653	0.00278	0.67184
X3312n_G109	154.2	21.9	0.0758	0.06996	0.00244	1.44139
X3312n_G110	122	14.3	0.6828	0.05829	0.00258	0.82988
X3312n_G111	406.1	37.2	0.1865	0.06072	0.0019	0.78705
X3312n_G112	700.6	68.4	0.2269	0.07098	0.00198	0.97557
X3312n_G113	291.9	27.3	0.1493	0.05922	0.002	0.79037
X3312n_G114	377.3	76.8	0.4604	0.07655	0.0021	2.0087
X3312n_G115	1939.9	50.9	0.8283	0.13723	0.00404	0.4477
X3312n_G116	727.7	61.8	0.2039	0.08131	0.00226	0.96418
X3312n_G117	232.7	35.4	0.2351	0.07057	0.0022	1.49322
X3312n_G118	499.3	80.8	0.2448	0.07194	0.00196	1.60175
X3312n_G119	146.4	20.3	0.5277	0.06801	0.00252	1.19898
X3312n_G120	56.6	5.2	0.2584	0.06708	0.00388	0.86403
X3312n_G121	18.3	2.5	0.2576	0.0706	0.00586	1.32403
X3312n_G122	233.5	33.9	0.5812	0.07103	0.00232	1.31613
X3312n_G123	1074.5	98.5	1.2295	0.06466	0.00182	0.67179
X3312n_G124	180.4	97.3	0.5115	0.18764	0.00486	12.3844
X3312n_G125	228.3	17.7	0.3787	0.07239	0.00276	0.74831
X3312n_G126	157.7	18.9	0.3964	0.06495	0.00242	1.03708
X3312n_G127	135.1	5.7	0.6447	0.05058	0.00332	0.26323
X3312n_G128	184.7	6.6	0.7318	0.02541	0.0139	0.11393
X3312n_G129	1107.6	90.3	0.3778	0.04287	0.0017	0.4514
X3312n_G130	244	19.3	0.3238	0.06865	0.00266	0.71705
X3312n_G131	1257.5	3.5	2.3124	0.04844	0.00542	0.0113
X3312n_G132	1859.7	95	0.1223	0.10083	0.00272	0.73451
X3312n_G133	152.5	81.7	0.2339	0.17796	0.00476	12.18623
X3312n_G134	368.6	72	0.5944	0.07403	0.00214	1.79447
X3312n_G135	570.8	50.5	0.4299	0.05936	0.00184	0.6895
X3312n_G136	725	99	0.2145	0.07279	0.002	1.38479
X3312n_G137	110.7	13.3	0.9991	0.0624	0.0028	0.84023
X3312n_G138	36.6	0.6	0.5429	0.76495	0.04982	3.87665
X3312n_G139	289.3	13.5	0.6451	0.0551	0.00256	0.31838
X3312n_G140	325.1	30.7	0.2753	0.06325	0.00214	0.82745
X3312n_G141	252.7	101.9	0.3921	0.15935	0.00428	8.26436
X3312n_G142	146.4	15.1	0.3751	0.06224	0.00266	0.85635
X3312n_G143	397.4	46.4	0.5571	0.06392	0.00208	0.94438
X3312n_G144	295.4	134.5	0.3642	0.16373	0.00434	9.51822
X3312n_G145	189.1	19.7	0.4178	0.06649	0.00248	0.91127
X3312n_G146	1413.5	65.9	0.1489	0.11076	0.00312	0.72799
X3312n_G147	129	17.4	0.2443	0.06831	0.00262	1.27103
X3312n_G148	248.4	36.1	0.5146	0.06985	0.00228	1.30723
X3312n_G149	258	34.4	0.3511	0.06846	0.00224	1.22535
X3312n_G150	501.1	45.4	0.4124	0.05822	0.00188	0.69486
X3312n_G151	226.6	31.8	0.3562	0.06954	0.00234	1.30357
X3312n_G152	212.6	121.3	1.0415	0.16121	0.00442	9.87922
X3312n_G153	149	25	0.7392	0.0703	0.00256	1.41438
X3312n_G154	380	33.7	0.2976	0.06221	0.00212	0.75807
X3312n_G155	41.8	4.6	0.2649	0.07651	0.00456	1.15056
X3312n_G156	1094.5	85.1	0.4134	0.08997	0.0026	0.92178
X3312n_G157	912.4	294	0.1114	0.12442	0.00334	5.59961
X3312n_G158	301.5	61.2	0.9058	0.07524	0.00232	1.74988
X3312S_G001	99.2	11.3	0.6691	0.06749	0.00306	0.94226
X3312S_G002	58.8	6.2	0.4672	0.05904	0.00362	0.81273

X3312S_G003	299	29.1	0.1997	0.0707	0.00248	0.96958
X3312S_G004				0.7748	0.21732	
X3312S_G005	572.7	19.7	0.607	0.19195	0.01166	0.83047
X3312S_G006	119	19	3.3174	0.05949	0.00274	0.68829
X3312S_G007	24.3	5.3	1.0323	0.08112	0.00474	2.00083
X3312S_G008				0.05945	0.0018	0.70284
X3312S_G009	68.9	13.3	0.8917	0.06879	0.00304	1.56117
X3312S_G010	158	30.6	0.8983	0.07031	0.0027	1.58476

s 76.8% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.33382	0.4469	0.01394	2381.5	62.2	2391.7	41.6
0.03386	0.12298	0.0032	747.7	18.4	758.3	20.6
0.04556	0.15467	0.00402	927.1	22.4	951.8	23.2
0.04492	0.15057	0.00394	904.2	22	925.5	23.4
0.02316	0.09353	0.00242	576.4	14.2	570.7	16.8
0.02092	0.09607	0.0024	591.3	14.2	600.4	15.4
0.03012	0.11886	0.00302	724	17.4	743	19
0.0307	0.11235	0.003	686.4	17.4	643.2	20.4
0.05056	0.16546	0.00446	987	24.6	926.8	25.6
0.02154	0.08905	0.00232	549.9	13.8	521.9	16.4
0.04254	0.12958	0.00358	785.5	20.4	767.5	24.8
0.02818	0.1049	0.00278	643.1	16.2	614.4	19.2
0.3505	0.51391	0.01318	2673.3	56.2	2728.6	32
0.02598	0.10947	0.0028	669.7	16.2	646.6	17.8
0.01732	0.06346	0.00166	396.6	10	423.2	14.4
0.05606	0.09774	0.00244	601.2	14.4	1203.6	23.2
0.00102	0.0043	0.00012	27.7	0.8	27.8	1.2
0.045	0.16665	0.00426	993.6	23.6	959.2	22.8
0.03274	0.10624	0.00276	650.9	16	744.8	20.4
0.05222	0.09456	0.0034	582.4	20	565.3	35
0.03882	0.15348	0.00388	920.4	21.6	888.3	21
0.28398	0.45292	0.01244	2408.2	55.2	2407.6	35.2
0.02546	0.09569	0.0025	589.1	14.8	580.3	18
0.04238	0.16288	0.00412	972.8	22.8	939.9	21.8
0.03388	0.13544	0.00344	818.8	19.6	794.4	20
0.04496	0.14481	0.00388	871.8	21.8	849.6	24.4
0.02314	0.09312	0.00232	574	13.6	643.3	16.2
0.02976	0.09372	0.0025	577.5	14.8	642	20
0.03304	0.13016	0.00332	788.8	19	763.6	20
0.0318	0.12196	0.00314	741.8	18	726.6	19.8
0.03474	0.10524	0.00294	645	17.2	626.5	22.8
0.02482	0.10656	0.0027	652.7	15.8	630.5	17.2
0.02408	0.10389	0.00264	637.2	15.4	604.7	17
0.0271	0.05441	0.00164	341.5	10	481	21
0.0317	0.10165	0.00278	624.1	16.2	619.5	21.4
0.03	0.07898	0.00206	490	12.4	700.5	19.6
0.34656	0.52005	0.01326	2699.4	56.2	2706.2	32.2
0.08664	0.09136	0.00424	563.6	25	668.1	53
0.044	0.16946	0.00424	1009.1	23.4	986.1	21.8
0.04654	0.13313	0.0037	805.7	21	808.8	26
0.03528	0.12545	0.00328	761.9	18.8	743.9	21.4
0.04356	0.14582	0.00374	877.5	21	922.3	22.6
0.0266	0.09384	0.0025	578.2	14.8	570	18.8
0.01776	0.0526	0.00134	330.5	8.2	495.6	14.2
0.03136	0.10565	0.0027	647.4	15.8	733.8	19.6
0.26976	0.45802	0.01176	2430.8	52	2442	32.2
0.04648	0.15938	0.004	953.3	22.2	1014.2	22.4
0.03566	0.09043	0.00272	558.1	16	547.7	24.8
0.03512	0.10066	0.00286	618.3	16.8	604.3	23.4
0.01116	0.00459	0.0005	29.5	3.2	23.9	11.6

0.02036	0.08108	0.0021	502.6	12.6	487.2	15.8
0.17648	0.36712	0.0091	2015.8	43	2102.3	29.6
0.01178	0.03581	0.00092	226.8	5.8	340.2	10.8
0.03226	0.09972	0.00274	612.8	16	602.6	21.6
0.0357	0.13507	0.00336	816.7	19	852.8	20
0.0427	0.16075	0.004	960.9	22.2	959.9	21.6
0.04256	0.12849	0.0035	779.2	20	770.3	24.6
0.02044	0.05348	0.00134	335.9	8.2	579	15.2
0.02848	0.08566	0.00224	529.8	13.4	642.8	19.2
0.02118	0.07103	0.00178	442.4	10.8	575.1	15.6
0.0518	0.13811	0.00398	834	22.6	800.5	28.6
0.03918	0.15279	0.0038	916.6	21.2	910.7	20.8
0.04606	0.12792	0.00362	776	20.6	755.5	26.6
0.05316	0.14436	0.00408	869.3	23	847.7	28.2
0.01828	0.06419	0.00168	401.1	10.2	423.1	15
0.09978	0.24878	0.00628	1432.2	32.4	1554.7	28.2
0.12286	0.30643	0.00764	1723.1	37.6	1752.6	28.6
0.0304	0.12167	0.00304	740.2	17.4	734.5	19
0.02208	0.09636	0.0024	593	14.2	591.5	15.8
0.03922	0.13057	0.00342	791.1	19.6	793.8	22.4
0.048	0.09298	0.00302	573.1	17.8	622.5	31
0.03586	0.12422	0.00318	754.8	18.2	788.7	21
0.04314	0.15883	0.00396	950.3	22	953.9	21.8
0.06318	0.14012	0.0039	845.3	22	1017.1	29.2
0.02356	0.09154	0.00234	564.6	13.8	554.4	17
0.0687	0.08204	0.0021	508.3	12.6	1276.6	26
0.01358	0.0048	0.00046	30.9	3	42.4	14.4
0.02632	0.08353	0.00226	517.2	13.4	516.7	19.2
0.0269	0.09681	0.00252	595.7	14.8	596	18.6
0.04806	0.10054	0.0032	617.6	18.8	630.5	30.6
0.02816	0.09918	0.0026	609.6	15.2	601.6	19.4
0.05436	0.17321	0.00444	1029.8	24.4	1037.4	24.8
0.0541	0.17242	0.00444	1025.4	24.4	1024.4	25
0.0327	0.11894	0.00298	724.5	17.2	759.9	19.8
0.01442	0.05135	0.0013	322.8	8	391.1	12.4
0.0232	0.09811	0.00244	603.3	14.4	606.2	16.4
0.04734	0.1576	0.00402	943.4	22.4	950.6	23.6
0.03916	0.11509	0.00304	702.2	17.6	771.3	22.8
0.028	0.08702	0.00222	537.9	13.2	656	18.6
0.02316	0.08572	0.0022	530.2	13	542.9	17
0.02376	0.09412	0.00238	579.9	14	568.1	17
0.30136	0.41046	0.01058	2217	48.4	2495	33.6
0.03918	0.10231	0.00298	627.9	17.4	614.2	25.6
0.02728	0.08507	0.00222	526.3	13.2	597.1	19
0.0259	0.10417	0.00262	638.8	15.2	617	17.8
0.03408	0.09679	0.00244	595.6	14.4	779.7	20.2
0.06336	0.14226	0.00434	857.4	24.4	833.2	33.2
0.02268	0.08488	0.00218	525.2	13	517.9	16.8
0.03666	0.11953	0.00308	727.9	17.8	771.2	21.6
0.02218	0.09074	0.00226	559.9	13.4	575.5	16
0.06926	0.00959	0.00102	61.5	6.6	553.9	74.6
0.04804	0.09031	0.003	557.4	17.8	579.1	31.8
0.0545	0.10904	0.00358	667.2	20.8	658.1	33.6
0.05632	0.13385	0.00388	809.8	22	828.8	30

0.02916	0.08713	0.00234	538.5	13.8	577.4	20.2
0.02074	0.06036	0.00156	377.8	9.4	498.9	16
0.02488	0.06367	0.00172	397.9	10.4	521.8	18.4
0.05204	0.14941	0.004	897.7	22.4	906.3	26.4
0.03682	0.10325	0.0029	633.4	17	613.5	24.2
0.02602	0.094	0.0024	579.2	14.2	589.5	18
0.02932	0.09967	0.0025	612.5	14.6	691.3	18.8
0.02792	0.09678	0.00252	595.5	14.8	591.4	19.2
0.05982	0.19029	0.00478	1122.9	25.8	1118.5	25.2
0.01382	0.02366	0.00062	150.7	4	375.7	12.4
0.02884	0.08599	0.00216	531.8	12.8	685.5	18.6
0.04908	0.15344	0.00396	920.2	22.2	927.6	24.6
0.04756	0.16146	0.00404	964.9	22.4	970.9	23.2
0.04558	0.12785	0.00346	775.6	19.8	800.1	25.4
0.04896	0.0934	0.003	575.6	17.6	632.3	31.2
0.10634	0.136	0.00552	822	31.4	856.3	53.4
0.04504	0.13438	0.0035	812.8	19.8	852.8	24.2
0.02036	0.07535	0.00188	468.3	11.2	521.8	15.4
0.35498	0.47861	0.01208	2521.2	52.6	2634	34
0.02904	0.07496	0.00204	466	12.2	567.2	20.4
0.0396	0.11579	0.0031	706.3	18	722.5	23.8
0.01686	0.03774	0.00118	238.8	7.4	237.3	15.4
0.062	0.03252	0.00212	206.3	13.2	109.6	57.2
0.01866	0.07636	0.0019	474.4	11.4	378.3	14.8
0.02822	0.07575	0.00204	470.7	12.2	548.9	20
0.00122	0.00169	0.00006	10.9	0.4	11.4	1.4
0.02156	0.05282	0.0013	331.8	8	559.2	15.6
0.3577	0.49657	0.01262	2599	54.4	2618.8	34.6
0.05562	0.17579	0.00442	1043.9	24.2	1043.5	25
0.0226	0.08424	0.00212	521.4	12.6	532.5	16.6
0.04138	0.13796	0.00342	833.1	19.4	882.5	21.8
0.03774	0.09765	0.00276	600.6	16.2	619.3	24.6
0.1841	0.03675	0.00204	232.7	12.6	1608.8	69
0.01476	0.0419	0.00116	264.6	7.2	280.7	13.2
0.02914	0.09488	0.00246	584.3	14.4	612.2	19.6
0.24294	0.37611	0.00944	2058.1	44.2	2260.4	33.2
0.03678	0.09977	0.00276	613.1	16.2	628.1	23.8
0.03222	0.10715	0.00274	656.2	16	675.2	20.4
0.27692	0.42158	0.01048	2267.6	47.6	2389.3	33.4
0.03468	0.0994	0.00264	610.9	15.4	657.7	22.2
0.02202	0.04767	0.00118	300.2	7.2	555.4	16
0.04964	0.13495	0.00364	816	20.6	832.9	26.6
0.04454	0.13572	0.00348	820.4	19.8	848.9	23.8
0.04194	0.12981	0.00334	786.8	19	812.2	23.2
0.02348	0.08655	0.0022	535.1	13	535.7	17.2
0.04566	0.13595	0.00352	821.7	20	847.3	24.4
0.29488	0.44442	0.01114	2370.4	49.8	2423.6	34.2
0.05304	0.14591	0.00388	878	21.8	895	26.8
0.02682	0.08837	0.00228	545.9	13.6	572.9	18.8
0.06684	0.10906	0.00362	667.3	21	777.5	37
0.0284	0.0743	0.00184	462	11	663.3	18.6
0.16428	0.3264	0.008	1820.9	38.8	1916	31.4
0.05704	0.16867	0.00428	1004.8	23.6	1027.1	25.8
0.0418	0.1013	0.00276	622	16.2	674.1	26
0.0482	0.09988	0.0031	613.7	18.2	604	31.2

0.03386	0.0995	0.00244	611.5	14.4	688.2	21.4
978.01856	-7.97338	9.22612				
0.04456	0.03139	0.00122	199.2	7.6	613.9	33.2
0.03102	0.08394	0.00226	519.6	13.4	531.8	22
0.11346	0.17896	0.00594	1061.3	32.4	1115.8	45.6
0.0216	0.08577	0.002				
0.06774	0.16466	0.0045	982.6	25	954.9	32.2
0.06018	0.16354	0.0042	976.4	23.2	964.2	28.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2403.8	55.8	-0.4	-0.9	2403.8	55.8
794	59.4	-1.4	-5.8	747.7	18.4
1013.4	55	-2.6	-8.5	927.1	22.4
980.3	57.4	-2.3	-7.8	904.2	22
552.3	62.6	1	4.4	576.4	14.2
638.9	49.4	-1.5	-7.4	591.3	14.2
804.2	53.4	-2.6	-10	724	17.4
498.1	73.2	6.7	37.8		
789.8	68	6.5	25		
404.9	67.8	5.4	35.8		
719	77.8	2.3	9.2	785.5	20.4
513.8	71	4.7	25.2	643.1	16.2
2772.4	36.2	-2	-3.6	2772.4	36.2
570.4	58.2	3.6	17.4	669.7	16.2
574.5	69.8	-6.3	-31	396.6	10
2546.2	36	-50.1	-76.4		
47.7	84.4	-0.6	-42	27.7	0.8
884.3	54.4	3.6	12.4	993.6	23.6
1041.5	57.2	-12.6	-37.5	650.9	16
500	159.4	3	16.5	582.4	20
812.1	52.4	3.6	13.3	920.4	21.6
2409.4	45	0	0	2409.4	45
548.9	68.6	1.5	7.3	589.1	14.8
866.4	51.8	3.5	12.3	972.8	22.8
729.4	55.2	3.1	12.3	818.8	19.6
794.9	69	2.6	9.7	871.8	21.8
897.5	47.8	-10.8	-36.1	574	13.6
878.6	67.2	-10	-34.3	577.5	14.8
693.3	58	3.3	13.8	788.8	19
682.4	60.4	2.1	8.7	741.8	18
562.7	87.4	3	14.6	645	17.2
554.1	57.2	3.5	17.8	652.7	15.8
487.7	60.6	5.4	30.7		
1218	90	-29	-72		
605.4	80	0.7	3.1	624.1	16.2
1453.5	54.2	-30	-66.3		
2712.9	37.2	-0.2	-0.5	2712.9	37.2
1040.6	197.6	-15.6	-45.8		
937.1	49	2.3	7.7	1009.1	23.4
819.3	78	-0.4	-1.7	805.7	21
692.3	66.2	2.4	10	761.9	18.8
1032.7	54.8	-4.9	-15	877.5	21
538.8	74.4	1.4	7.3	578.2	14.8
1356.5	49.8	-33.3	-75.6		
1008.9	55.8	-11.8	-35.8	647.4	15.8
2452.7	39.8	-0.5	-0.9	2452.7	39.8
1149.4	48.4	-6	-17.1	953.3	22.2
506.6	110.4	1.9	10.2	558.1	16
553.8	93.8	2.3	11.7	618.3	16.8
-511.3	1282.2	23.7	-105.8		

416.7	70.6	3.2	20.6	502.6	12.6
2189.2	38.6	-4.1	-7.9	2189.2	38.6
1212.9	54.2	-33.3	-81.3		
565.6	85	1.7	8.3	612.8	16
949	49.8	-4.2	-13.9	816.7	19
958.9	49.4	0.1	0.2	960.9	22.2
745.9	77.2	1.2	4.5	779.2	20
1702	43.8	-42	-80.3		
1063.9	61.8	-17.6	-50.2		
1142.3	50	-23.1	-61.3		
709.2	91	4.2	17.6	834	22.6
897.5	49.6	0.6	2.1	916.6	21.2
696	87.8	2.7	11.5	776	20.6
792.7	83.8	2.5	9.7	869.3	23
545.9	74.8	-5.2	-26.5	401.1	10.2
1726.2	45.6	-7.9	-17		
1788.6	43	-1.7	-3.7	1788.6	43
718	55.6	0.8	3.1	740.2	17.4
586.5	54.6	0.3	1.1	593	14.2
802.2	65.6	-0.3	-1.4	791.1	19.6
807	121.8	-7.9	-29	573.1	17.8
886.4	58.4	-4.3	-14.8	754.8	18.2
962.9	51	-0.4	-1.3	950.3	22
1408.5	68.6	-16.9	-40		
513.1	67.2	1.8	10.1	564.6	13.8
2998.5	40.4	-60.2	-83		
756.1	698.8	-27.2	-95.9		
515	85.4	0.1	0.4	517.2	13.4
597.8	69.4	-0.1	-0.4	595.7	14.8
677.2	121.8	-2	-8.8	617.6	18.8
571.5	72.8	1.3	6.7	609.6	15.2
1054	57.4	-0.7	-2.3	1029.8	24.4
1022.5	58.6	0.1	0.3	1025.4	24.4
866.1	56.2	-4.7	-16.4	724.5	17.2
818.7	59.8	-17.5	-60.6		
617.2	55.8	-0.5	-2.3	603.3	14.4
967.7	57.8	-0.8	-2.5	943.4	22.4
977.2	67	-9	-28.1	702.2	17.6
1086.9	57.8	-18	-50.5		
597.1	67.4	-2.3	-11.2	530.2	13
521	65.4	2.1	11.3	579.9	14
2729.8	42	-11.1	-18.8		
564.1	102.8	2.2	11.3	627.9	17.4
876.5	68	-11.9	-39.9	526.3	13.2
537.7	63.2	3.5	18.8	638.8	15.2
1350.9	52.6	-23.6	-55.9		
769.1	105.2	2.9	11.5	857.4	24.4
485.7	71.4	1.4	8.1	525.2	13
899	62.8	-5.6	-19	727.9	17.8
637.8	57.2	-2.7	-12.2	559.9	13.4
4377.2	203.2	-88.9	-98.6		
665.1	137.4	-3.7	-16.2	557.4	17.8
627.2	131.4	1.4	6.4	667.2	20.8
880.1	92	-2.3	-8	809.8	22

733.3	79	-6.7	-26.6	538.5	13.8
1101.1	62.4	-24.3	-65.7		
1109	72.6	-23.7	-64.1		
927.2	71.6	-1	-3.2	897.7	22.4
540.7	96.8	3.2	17.2	633.4	17
629.3	67.4	-1.8	-8	579.2	14.2
956.8	57	-11.4	-36	612.5	14.6
575.2	73.4	0.7	3.5	595.5	14.8
1109.5	54.8	0.4	1.2	1109.5	54.8
2192.5	51.2	-59.9	-93.1		
1228.9	54.6	-22.4	-56.7		
945	63.8	-0.8	-2.6	920.2	22.2
984.2	55.4	-0.6	-2	964.9	22.4
868.9	76.8	-3.1	-10.7	775.6	19.8
840.3	120.4	-9	-31.5	575.6	17.6
945.9	170	-4	-13.1	822	31.4
958.3	66.8	-4.7	-15.2	812.8	19.8
763.3	59.4	-10.3	-38.6	468.3	11.2
2721.6	42.6	-4.3	-7.4	2721.6	42.6
996.9	77.4	-17.9	-53.3		
772.7	78.4	-2.2	-8.6	706.3	18
221.7	151.8	0.7	7.7	238.8	7.4
		88.3			
-175.2	98.8	25.4	-370.8		
888.2	80	-14.2	-47	470.7	12.2
120.8	263.6	-4.6	-91	10.9	0.4
1639.4	50	-40.7	-79.8		
2634	44.4	-0.8	-1.3	2634	44.4
1042.3	58.4	0	0.2	1043.9	24.2
580.3	67.4	-2.1	-10.2	521.4	12.6
1008.1	55.8	-5.6	-17.4	833.1	19.4
687.8	95.8	-3	-12.7	600.6	16.2
4857.8	93	-85.5	-95.2		
416.3	103.8	-5.7	-36.4	264.6	7.2
716.6	71.8	-4.6	-18.5	584.3	14.4
2448.8	45.4	-9	-16		
682.4	91.2	-2.4	-10.2	613.1	16.2
739	68.8	-2.8	-11.2	656.2	16
2494.5	44.6	-5.1	-9.1	2494.5	44.6
821.8	77.8	-7.1	-25.7	610.9	15.4
1811.9	51.2	-45.9	-83.4		
878	79.4	-2	-7.1	816	20.6
923.9	67	-3.4	-11.2	820.4	19.8
882.5	67.6	-3.1	-10.8	786.8	19
538.1	70.6	-0.1	-0.5	535.1	13
914.8	69.2	-3	-10.2	821.7	20
2468.4	46.2	-2.2	-4	2468.4	46.2
937.1	74.6	-1.9	-6.3	878	21.8
681.3	72.8	-4.7	-19.9	545.9	13.6
1108.4	119	-14.2	-39.8	667.3	21
1424.9	55.2	-30.3	-67.6		
2020.6	47.6	-5	-9.9	2020.6	47.6
1074.9	62	-2.2	-6.5	1004.8	23.6
852.9	94.2	-7.7	-27.1	622	16.2
568.6	133.4	1.6	7.9	613.7	18.2

948.8	71.8	-11.2	-35.5	611.5	14.4
2758.9	99.8	-67.5	-92.8		
585.1	100	-2.3	-11.2	519.6	13.4
1224.4	114.8	-4.9	-13.3	1061.3	32.4
892.4	91.2	2.9	10.1	982.6	25
937.4	78.8	1.3	4.2	976.4	23.2

Sample 2873S Atbara @ Showak 64 grain analysed 53 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2873S_G001	542.4	59	0.8116	0.05906	0.00188	0.7596
X2873S_G002	67	0.4	0.9184	0.05571	0.02744	0.03745
X2873S_G003	366.9	130.6	0.5788	0.11114	0.00314	4.85604
X2873S_G004	869.2	37.7	0.5491	0.05209	0.00206	0.28975
X2873S_G005	124.3	17.9	0.6196	0.0678	0.0028	1.21492
X2873S_G006	58.2	0.4	0.6841	0.08096	0.03252	0.05948
X2873S_G007	34.5	5	0.6535	0.06157	0.00506	1.11186
X2873S_G008	284.9	27.8	0.4091	0.05894	0.0023	0.76064
X2873S_G009	92.2	10.1	0.3801	0.0591	0.00304	0.86808
X2873S_G010	133.6	14.8	0.7055	0.05622	0.00256	0.76416
X2873S_G011	78.2	9.6	1.0036	0.0606	0.0032	0.84072
X2873S_G012	310.5	47.5	0.7562	0.06447	0.00212	1.18307
X2873S_G013	1971.7	77.2	0.5716	0.14162	0.00408	0.68209
X2873S_G014	140.1	22.3	0.9238	0.06569	0.00278	1.19542
X2873S_G015	161.1	23.5	0.4764	0.06541	0.0028	1.22985
X2873S_G016	344.5	29.5	0.4133	0.06326	0.00244	0.71743
X2873S_G017	120.6	14.1	1.1977	0.05746	0.0033	0.72754
X2873S_G018	129	14	1.0018	0.05605	0.0031	0.68998
X2873S_G019	416.7	73.6	0.4003	0.07339	0.00234	1.70904
X2873S_G020	88	18.6	0.6017	0.07324	0.0031	1.92774
X2873S_G021	69.4	9.8	0.6599	0.06379	0.00352	1.11929
X2873S_G022	232.8	28.5	0.9663	0.06206	0.00246	0.86482
X2873S_G023	1164.9	97.2	2.877	0.0779	0.00248	0.52642
X2873S_G024	221.1	26.1	0.7048	0.05985	0.00238	0.86468
X2873S_G025	999.6	376.9	0.0249	0.12788	0.0036	6.74416
X2873S_G026	191.8	22.9	1.3661	0.05726	0.00234	0.70848
X2873S_G027	371.5	237.7	0.0257	0.302	0.00844	26.98064
X2873S_G028	492.1	52.4	0.2491	0.05967	0.00194	0.88207
X2873S_G029	778	97.6	0.2938	0.09418	0.0029	1.64584
X2873S_G030	468.8	53.6	0.1486	0.0629	0.00214	1.02646
X2873S_G031	2204	298.3	0.2743	0.16869	0.00502	3.26594
X2873S_G032	340.8	50.1	0.2195	0.06923	0.00234	1.41627
X2873S_G033	312.9	55	0.3197	0.06948	0.00234	1.6159
X2873S_G034	296.1	45.9	0.1424	0.0674	0.00234	1.48344
X2873S_G035	162.5	24.2	0.6215	0.06723	0.0026	1.24651
X2873S_G036	61.9	10.2	0.4715	0.07253	0.00382	1.54779
X2873S_G037	255.1	25.3	0.1367	0.06032	0.0024	0.85892
X2873S_G038	666.2	61.7	0.0187	0.06524	0.00218	0.89586
X2873S_G039	190	20.9	0.5662	0.05929	0.00238	0.82705
X2873S_G040	422.3	55.8	0.5042	0.06762	0.0024	1.16354
X2873S_G041	96.4	10.9	0.6784	0.05941	0.0033	0.83226
X2873S_G042	48	7.3	0.7122	0.06523	0.00442	1.2069
X2873S_G043	13		0.6788	0.27647	0.01082	26.98205
X2873S_G044	120.1	6.6	0.5174	0.05081	0.00332	0.35824
X2873S_G045	141.5	7.9	0.5694	0.05086	0.00306	0.35984
X2873S_G046	177.4	9.9	0.5705	0.05086	0.0028	0.35986
X2873S_G047	27.5	0.2	1.3281	0.05927	0.04714	0.04786
X2873S_G048	43.3	5.9	1.3364	0.05771	0.00468	0.83595
X2873S_G049	69.4	7.9	0.4809	0.05809	0.00374	0.85493
X2873S_G050	197.4	28.7	0.1903	0.07679	0.0031	1.52764

X2873S_G051	563.8	64.6	0.2827	0.07723	0.00258	1.22119
X2873S_G052	93.6	62.9	1.6725	0.15765	0.00524	10.0762
X2873S_G053	207.2	25.2	0.5062	0.05954	0.00252	0.86424
X2873S_G054	163.4	19.1	0.5965	0.0592	0.00274	0.87192
X2873S_G055	63.3	7	0.4951	0.0625	0.00364	0.89132
X2873S_G056	87.5	46	0.9935	0.16023	0.00526	9.29114
X2873S_G057	136.9	36.7	0.2108	0.13775	0.00494	5.02522
X2873S_G058	162.5	9.1	0.5474	0.05503	0.00366	0.39108
X2873S_G059	470.2	30.1	1.0652	0.05272	0.00234	0.37833
X2873S_G060	289.6	38.7	0.5261	0.06627	0.00252	1.12724
X2873S_G061	517.2	47	0.3535	0.07128	0.00254	0.86538
X2873S_G062	32.1	3.8	1.0804	0.05613	0.00518	0.73451
X2873S_G063	63.3	9.1	0.4332	0.06445	0.00346	1.21385
X2873S_G064	377.1	81	1.2825	0.06546	0.00224	1.49795

82.8% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.02452	0.09331	0.00226	575.1	13.4	573.8	17.6
0.01792	0.00488	0.00058	31.4	3.8	37.3	18.6
0.1423	0.31698	0.00764	1775	37.4	1794.7	31.2
0.01138	0.04036	0.00102	255.1	6.4	258.4	10.8
0.0498	0.13001	0.00348	787.9	19.8	807.4	27.4
0.02294	0.00533	0.00062	34.3	4	58.7	23.8
0.08846	0.13101	0.00494	793.6	28.2	759.1	48.4
0.02954	0.09363	0.0024	577	14.2	574.4	20.4
0.04372	0.10657	0.00306	652.8	17.8	634.5	27.8
0.03424	0.09861	0.00266	606.3	15.6	576.4	23.2
0.04328	0.10065	0.00292	618.2	17.2	619.5	28
0.03958	0.13313	0.00328	805.7	18.6	792.7	22.6
0.02012	0.03494	0.00084	221.4	5.2	528	15.4
0.05006	0.13202	0.00356	799.4	20.2	798.5	27.8
0.05228	0.1364	0.0037	824.3	21	814.3	28.4
0.02744	0.08228	0.00212	509.7	12.6	549.1	19.6
0.04064	0.09185	0.00276	566.5	16.2	555.1	27.8
0.03726	0.08931	0.00262	551.5	15.6	532.8	26
0.05538	0.16895	0.00414	1006.3	22.8	1011.9	25.8
0.08104	0.19096	0.00528	1126.6	28.6	1090.8	33.8
0.0604	0.1273	0.00384	772.4	22	762.6	33.8
0.03408	0.1011	0.00262	620.9	15.4	632.8	22.4
0.01694	0.04903	0.0012	308.6	7.4	429.4	14
0.03436	0.10482	0.00272	642.6	15.8	632.7	22.4
0.19726	0.38261	0.00908	2088.5	42.4	2078.4	32.6
0.02882	0.08976	0.00234	554.1	13.8	543.8	20.4
0.78626	0.64817	0.01544	3221.1	60.4	3382.8	36
0.02916	0.10725	0.00262	656.8	15.2	642.1	19.4
0.05182	0.12679	0.00308	769.5	17.6	988	24.8
0.03528	0.11839	0.00294	721.3	17	717.2	21.6
0.09946	0.14046	0.00342	847.3	19.4	1473	29.8
0.04858	0.14842	0.0037	892.1	20.8	895.8	25
0.05498	0.16874	0.0042	1005.2	23.2	976.4	26.2
0.05206	0.15967	0.00402	954.9	22.4	923.6	26
0.04804	0.13452	0.0035	813.6	19.8	821.8	26.2
0.07952	0.15483	0.00472	928	26.4	949.6	37.6
0.03392	0.10331	0.00268	633.8	15.6	629.5	22.2
0.03028	0.09963	0.00246	612.2	14.4	649.5	20
0.03298	0.1012	0.00264	621.4	15.4	612	22
0.04162	0.12483	0.00314	758.3	18	783.6	23.8
0.04516	0.10163	0.00302	624	17.6	614.9	29
0.0794	0.13424	0.00462	812	26.2	803.8	42.2
1.1295	0.70805	0.02532	3451.1	95.6	3382.8	52
0.0227	0.05115	0.00156	321.6	9.6	310.9	19.4
0.0211	0.05133	0.00152	322.7	9.4	312.1	18
0.01934	0.05133	0.00146	322.7	9	312.1	16.6
0.03738	0.00586	0.0009	37.7	5.8	47.5	37.6
0.06566	0.10509	0.0038	644.2	22.2	616.9	41
0.05366	0.10677	0.00342	654	20	627.4	33.6
0.06128	0.14433	0.00388	869.1	21.8	941.6	29.8

0.04132	0.11472	0.00284	700.1	16.4	810.3	23.2
0.34428	0.46372	0.01224	2456	54	2441.8	39.2
0.03614	0.10531	0.0028	645.5	16.4	632.4	23.6
0.03966	0.10685	0.00294	654.4	17.2	636.6	25.4
0.05042	0.10347	0.00318	634.7	18.6	647.1	31.6
0.31188	0.42069	0.01086	2263.6	49.2	2367.1	38.2
0.18146	0.26467	0.00712	1513.7	36.2	1823.6	38
0.02514	0.05156	0.00162	324.1	10	335.2	21
0.0166	0.05207	0.00138	327.2	8.4	325.8	14.4
0.0429	0.1234	0.00318	750.1	18.2	766.4	24.8
0.03106	0.08808	0.00222	544.2	13.2	633.1	20.6
0.06546	0.09494	0.00368	584.7	21.6	559.2	43
0.06384	0.13665	0.00412	825.7	23.4	807	34.2
0.05212	0.16602	0.00414	990.1	22.8	929.6	25.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
569.3	69.2	0.2	1	575.1	13.4
440.8	1095.8	-15.9	-92.9		
1818.1	51.2	-1.1	-2.4	1818.1	51.2
289.4	90.4	-1.3	-11.9	255.1	6.4
862.4	85.6	-2.4	-8.6	787.9	19.8
1220.5	789.6	-41.6	-97.2		
659.2	176.2	4.6	20.4	793.6	28.2
564.9	85	0.5	2.1	577	14.2
570.8	112	2.9	14.4	652.8	17.8
461.1	101	5.2	31.5		
625.1	113.8	-0.2	-1.1	618.2	17.2
757.1	69.4	1.6	6.4	805.7	18.6
2247.1	49.8	-58.1	-90.1		
796.5	88.8	0.1	0.4	799.4	20.2
787.6	89.8	1.2	4.7	824.3	21
717	82	-7.2	-28.9	509.7	12.6
509.2	126.2	2	11.2	566.5	16.2
454.3	122.8	3.5	21.4	551.5	15.6
1024.7	64.6	-0.6	-1.8	1006.3	22.8
1020.6	85.6	3.3	10.4		
734.7	116.8	1.3	5.1	772.4	22
676.2	84.8	-1.9	-8.2	620.9	15.4
1144.3	63.2	-28.1	-73		
598.2	86.2	1.6	7.4	642.6	15.8
2069	49.6	0.5	0.9	2069	49.6
501.6	90	1.9	10.5	554.1	13.8
3480.5	43.2	-4.8	-7.5	3480.5	43.2
591.6	70.4	2.3	11	656.8	15.2
1511.7	58.2	-22.1	-49.1		
704.9	72.4	0.6	2.3	721.3	17
2544.7	49.8	-42.5	-66.7		
905.6	69.6	-0.4	-1.5	892.1	20.8
913	69.4	2.9	10.1	1005.2	23.2
850.2	72.2	3.4	12.3	954.9	22.4
844.9	80.4	-1	-3.7	813.6	19.8
1000.8	107	-2.3	-7.3	928	26.4
615.1	86	0.7	3	633.8	15.6
782.1	70.2	-5.7	-21.7	612.2	14.4
577.8	87.2	1.5	7.6	621.4	15.4
856.9	73.6	-3.2	-11.5	758.3	18
582.2	120.6	1.5	7.2	624	17.6
781.8	142.4	1	3.9	812	26.2
3343.1	61.2	2	3.2	3343.1	61.2
232.2	150.8	3.4	38.5	321.6	9.6
234.5	138.8	3.4	37.6	322.7	9.4
234.5	127	3.4	37.6	322.7	9
577	1728.6	-20.7	-93.5		
518.8	178	4.4	24.2	644.2	22.2
533.2	141	4.2	22.7	654	20
1115.7	80.6	-7.7	-22.1	869.1	21.8

1127.1	66.6	-13.6	-37.9	700.1	16.4
2430.6	56.4	0.6	1	2430.6	56.4
586.9	91.8	2.1	10	645.5	16.4
574.5	100.6	2.8	13.9	654.4	17.2
691.3	124.2	-1.9	-8.2	634.7	18.6
2458.1	55.4	-4.4	-7.9	2458.1	55.4
2199.1	62.2	-17	-31.2		
413.4	148.6	-3.3	-21.6	324.1	10
316.8	101	0.4	3.3	327.2	8.4
814.9	79.4	-2.1	-8	750.1	18.2
965.5	72.8	-14	-43.6	544.2	13.2
457.5	204.8	4.6	27.8	584.7	21.6
756.4	113.2	2.3	9.2	825.7	23.4
789.2	71.8	6.5	25.5		

Sample 2858S Atbara @ Abu Ammar 75 grain analysed 31 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2858n_G001	369.6	36.1	0.3019	0.06152	0.00168	0.8195
X2858n_G002	21.2	2	0.1501	0.06323	0.00494	0.83509
X2858n_G003	276.1	37.4	0.6591	0.07052	0.0019	1.18805
X2858n_G004	157.2	15.6	0.422	0.06529	0.00224	0.84751
X2858n_G005	579.9	149.6	0.1794	0.11519	0.00256	4.14383
X2858n_G006	59.5	9.7	0.3002	0.08174	0.00434	1.7908
X2858n_G007	72.2	11.3	0.3042	0.07276	0.00304	1.55264
X2858n_G008	1467.8	82	0.3843	0.24044	0.0057	1.74753
X2858n_G009	78.6	12.1	0.3351	0.06882	0.00248	1.42505
X2858n_G010				0.83792	0.73142	218.59854
X2858n_G011	70.1	9.7	0.3927	0.06798	0.00262	1.23964
X2858n_G012				1.69823	1.72138	619.20087
X2858n_G013	210.3	19.6	0.5271	0.06062	0.00194	0.72022
X2858n_G014	97.7	12.6	1.5956	0.06256	0.00254	0.79684
X2858n_G015	102	14.4	0.4415	0.06703	0.00232	1.23667
X2858n_G016				0.82199	0.04166	483.47055
X2858n_G017				0.79723	0.03304	244.76753
X2858n_G018				0.81605	0.03124	267.39194
X2858n_G019				-0.35377	0.43898	
X2858n_G020				4.13849	3.0015	
X2858n_G021				1.0522	0.7681	
X2858n_G022	1826.8	126.4	0.1239	0.06225	0.00138	0.62979
X2858n_G023	223	24.2	0.5988	0.06179	0.00188	0.84602
X2858n_G024	475.8	24.4	0.3336	0.07183	0.00206	0.50847
X2858n_G025	616	67.6	0.5001	0.06886	0.00164	0.98726
X2858n_G026	201.8	25.6	0.5168	0.06788	0.00192	1.11092
X2858n_G027	131.7	18.5	0.4181	0.07181	0.00216	1.32978
X2858n_G028	265.5	35.1	0.5526	0.07424	0.00222	1.26627
X2858n_G029				0.95429	1.17772	427.40057
X2858n_G030	930.4	98.6	0.3905	0.06951	0.0016	0.99422
X2858n_G031				1.52282	1.97128	171.67656
X2858n_G032				0.65368	0.45812	94.57461
X2858n_G033	1457.2	63	0.2892	0.0858	0.00222	0.50396
X2858n_G034	856	4.5	0.5961	0.04859	0.0056	0.03209
X2858n_G035	972.9	124.8	0.4393	0.06406	0.00148	1.08963
X2858n_G036	3812.9	89.9	0.0438	0.07962	0.00184	0.27662
X2858n_G037	184.8	26.6	0.4559	0.06188	0.00228	1.17088
X2858n_G038	206	28.4	0.3398	0.06827	0.00198	1.26864
X2858n_G039	193.3	24.7	0.3827	0.0632	0.00194	1.08591
X2858n_G040	159.3	17.7	0.143	0.06349	0.00214	1.01415
X2858n_G041	3617.5	89.8	0.1746	0.14478	0.00332	0.49827
X2858n_G042	424.8	41.6	0.3044	0.0568	0.00156	0.76463
X2858n_G043	756.2	97.8	0.3306	0.07267	0.00166	1.2925
X2858n_G044	159.3	7.4	0.1498	0.06777	0.00424	0.44839
X2858n_G045				1.16994	2.02076	
X2858n_G046	197.5	32.1	0.3027	0.07228	0.00186	1.5968
X2858n_G047				0.7312	0.30506	164.04414
X2858n_G048				0.49909	0.17006	203.42905
X2858n_G049				-14.6524	2.4326	
X2858n_G050	492.8	3.4	1.445	0.25523	0.03552	0.19934

X2858n_G051	380.2	2	0.9333	0.06909	0.00864	0.04278
X2858n_G052	545.9	205.3	0.1346	0.14038	0.00294	7.25784
X2858n_G053	934.6	142.8	0.0649	0.06455	0.00164	1.43098
X2858n_G054	1926.6	114.1	0.2874	0.08696	0.0019	0.71797
X2858n_G055	2345.1	79.8	0.1777	0.1051	0.00272	0.50744
X2858n_G056	51	7.6	0.6136	0.0646	0.00386	1.21665
X2858n_G057				2.96223	8.359	622.16772
X2858n_G058	342	39.2	0.2647	0.05903	0.00172	0.93719
X2858n_G059	694.6	89.9	0.2459	0.05754	0.0013	1.03449
X2858n_G060	403.6	47.1	0.4419	0.06388	0.002	0.98768
X2858n_G061				0.48469	0.3244	510.59763
X2858n_G062	106.2	15.2	0.2848	0.06042	0.00236	1.18998
X2858n_G063	669.1	29.9	0.4909	0.04525	0.00138	0.2675
X2858n_G064	216.7	31.9	0.3723	0.05931	0.00168	1.17352
X2858n_G065	1850.1	8.8	0.5555	0.04924	0.00212	0.03032
X2858n_G066				0.716	0.02906	426.93741
X2858n_G067	339.9	43.3	0.2566	0.0595	0.00152	1.0518
X2858n_G068				0.55717	0.24764	201.16873
X2858n_G069	229.4	21.1	0.6033	0.05091	0.00162	0.6005
X2858n_G070	102	9.3	0.5215	0.09968	0.00338	1.18497
X2858n_G071				1.1292	2.01106	
X2858n_G072	3592	80.9	0.4614	0.08487	0.00224	0.25857
X2858n_G073	152.9	16.7	0.4178	0.05058	0.0025	0.74067
X2858n_G074				0.21733	1.28312	2.42893
X2858S_G001	858.3	81.1	0.1064	0.0602	0.00192	0.82991

s 41.3% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.0237	0.09655	0.00232	594.2	13.6	607.8	16.6
0.0632	0.09573	0.00348	589.3	20.4	616.4	39.8
0.034	0.12213	0.00296	742.8	17	795.1	20
0.02966	0.0941	0.0024	579.7	14.2	623.3	20
0.10298	0.26084	0.00614	1494.1	31.4	1663	26.4
0.09302	0.15886	0.00516	950.4	28.8	1042.1	40.6
0.06478	0.15474	0.00436	927.5	24.4	951.5	31.2
0.0444	0.05271	0.00128	331.1	7.8	1026.3	22
0.0521	0.15018	0.00396	902	22.2	899.5	26.6
259.53922	1.89217	2.46782				
0.04812	0.13226	0.00356	800.7	20.2	818.7	26.4
799.04102	2.6449	4.19668				
0.0238	0.08618	0.00216	532.9	12.8	550.8	17.2
0.03236	0.0924	0.00248	569.7	14.6	595	22
0.04364	0.13385	0.00348	809.8	19.8	817.4	24.4
64.68664	4.26784	0.58268				
17.33048	2.22797	0.16432				
17.76292	2.37794	0.16422				
	-68.67284					
1872.8225	3.24685	3.98084				
	-8.04471	20.22486				
0.01538	0.07345	0.00172	456.9	10.4	496	12.6
0.02656	0.0994	0.00248	610.9	14.6	622.5	18.4
0.01512	0.0514	0.00128	323.1	7.8	417.4	13
0.0254	0.10411	0.00248	638.5	14.4	697.3	17
0.0328	0.11884	0.00294	723.9	17	758.6	20
0.04148	0.13449	0.0034	813.4	19.4	858.8	22.8
0.03926	0.12388	0.00314	752.9	18	830.7	22.2
563.26984	3.2533	5.0959				
0.02498	0.10391	0.00248	637.3	14.4	700.9	16.8
154.5346	0.81906	1.11888				
64.10874	1.05124	0.72586				
0.01376	0.04268	0.00104	269.4	6.4	414.4	12.2
0.00358	0.0048	0.00018	30.9	1.2	32.1	3.8
0.02744	0.12363	0.00296	751.4	17	748.3	17.6
0.00694	0.02525	0.0006	160.8	3.8	248	7.4
0.04354	0.13755	0.0037	830.8	21	787.1	25
0.0383	0.13509	0.0034	816.8	19.4	831.8	21.8
0.03438	0.12493	0.00318	758.9	18.2	746.5	21.2
0.03482	0.11614	0.00304	708.3	17.6	711	21.8
0.01222	0.02503	0.0006	159.4	3.8	410.5	11.2
0.02192	0.09793	0.00242	602.3	14.2	576.7	16.2
0.03204	0.1294	0.00312	784.4	17.8	842.4	19
0.02674	0.04814	0.00162	303.1	10	376.2	22.4
	-4.18009	14.10796				
0.04348	0.16077	0.00398	961.1	22.2	969	22.4
84.42198	1.63287	0.90896				
107.72168	2.96693	1.57224				
	6.24922	3.8681				
0.02172	0.00569	0.00052	36.6	3.4	184.6	28.2

0.00498	0.00451	0.00024	29	1.6	42.5	5.6
0.16852	0.37651	0.00906	2060	42.4	2143.6	28.4
0.03848	0.16146	0.00398	964.9	22	902	21.2
0.0171	0.06014	0.00144	376.5	8.8	549.5	13.8
0.01358	0.03517	0.00088	222.8	5.4	416.7	12.4
0.0704	0.13722	0.00464	828.9	26.4	808.2	38.4
1756.08544	1.53039	6.03016				
0.02814	0.1157	0.00292	705.8	16.8	671.4	19
0.02542	0.13104	0.00316	793.8	18	721.2	17.2
0.03146	0.11269	0.00292	688.4	17	697.5	20.6
1120.29248	7.67945	16.833				
0.0464	0.14359	0.004	864.9	22.6	796	26.6
0.0083	0.0431	0.00108	272	6.6	240.7	8.4
0.03454	0.14429	0.00366	868.9	20.6	788.3	20.8
0.00128	0.00449	0.00012	28.9	0.8	30.3	1.6
41.02508	4.34943	0.42868				
0.0283	0.12896	0.0032	781.9	18.2	729.8	18.6
156.61838	2.6343	2.05014				
0.01948	0.08608	0.0022	532.3	13	477.6	15.6
0.03956	0.08675	0.0024	536.3	14.2	793.6	24.2
	233.21083					
0.007	0.02224	0.00056	141.8	3.6	233.5	7.6
0.03574	0.10691	0.00316	654.8	18.4	562.8	25
13.09166	0.08161	0.19732				
0.02606	0.10002	0.00222	614.5	13	613.6	17.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
657.5	58.6	-2.2	-9.6	594.2	13.6
716	166	-4.4	-17.7	589.3	20.4
943.5	55.2	-6.6	-21.3	742.8	17
783.7	72	-7	-26	579.7	14.2
1882.9	40	-10.2	-20.6		
1239.3	104	-8.8	-23.3	950.4	28.8
1007.3	84.8	-2.5	-7.9	927.5	24.4
3122.9	37.8	-67.7	-89.4		
893.3	74.4	0.3	1	902	22.2
867.9	79.8	-2.2	-7.7	800.7	20.2
625.8	69	-3.2	-14.8	532.9	12.8
693.3	86.6	-4.3	-17.8	569.7	14.6
838.7	72	-0.9	-3.4	809.8	19.8
682.7	47.4	-7.9	-33.1	456.9	10.4
666.8	65.2	-1.9	-8.4	610.9	14.6
981.1	58.4	-22.6	-67.1		
894.5	49.2	-8.4	-28.6	638.5	14.4
864.9	58.6	-4.6	-16.3	723.9	17
980.6	61.2	-5.3	-17	813.4	19.4
1048	60.2	-9.4	-28.2	752.9	18
913.9	47.4	-9.1	-30.3	637.3	14.4
1333.7	50	-35	-79.8		
128.1	271.2	-3.8	-75.9	30.9	1.2
743.6	48.8	0.4	1.1	751.4	17
1187.6	45.6	-35.2	-86.5		
670	78.8	5.6	24		
876.8	60	-1.8	-6.8	816.8	19.4
715	65.2	1.7	6.1	758.9	18.2
724.7	71.4	-0.4	-2.3	708.3	17.6
2285.2	39.4	-61.2	-93		
483.8	60.6	4.4	24.5	602.3	14.2
1004.8	46.4	-6.9	-21.9	784.4	17.8
861.5	129.8	-19.4	-64.8		
993.8	52.4	-0.8	-3.3	961.1	22.2
3217.5	219.8	-80.2	-98.9		

901.4	257.8	-31.8	-96.8		
2231.9	36.2	-3.9	-7.7	2231.9	36.2
759.7	53.6	7	27		
1359.6	42.2	-31.5	-72.3		
1716.1	47.6	-46.5	-87		
761.3	126	2.6	8.9	828.9	26.4
568.2	63.4	5.1	24.2		
512.3	49.6	10.1	55		
737.7	66.2	-1.3	-6.7	688.4	17
618.6	84.4	8.7	39.8		
-42.2	74.2	13	-745		
578.5	61.6	10.2	50.2		
159.3	100.8	-4.8	-81.9	28.9	0.8
585.4	55.4	7.1	33.6		
236.8	73.4	11.5	124.8		
1618.1	63.2	-32.4	-66.9		
1312.6	51.2	-39.3	-89.2		
221.7	114.4	16.3	195.3		
610.8	69	0.2	0.6	614.5	13

Sample 2852S Main Nile @ Karima 1 grain analysed 1 concordant ages 1

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2852L_G001	94.9	10.4	0.3176	0.07632	0.00366	1.10837

L00.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.05078	0.10537	0.00286	645.8	16.6	757.4	29.4

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
1103.5	95.8	-14.7	-41.5	645.8	16.6

Sample 2847S Wadi Milk @ Ed Debba 170 grain analysed 136 concordant a

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
S2847_G001	63.4	11.8	0.6935	0.07835	0.00298	1.7616
S2847_G002	210.8	32.6	0.5305	0.06781	0.00198	1.33947
S2847_G003	107.5	19.9	5.6777	0.06262	0.00304	0.56785
S2847_G004	125.8	14.8	0.2502	0.06725	0.00232	1.10022
S2847_G005	230.6	32.4	1.7704	0.05866	0.00186	0.78811
S2847_G006	7207.5	163.9	0.0463	0.14084	0.00332	0.43613
S2847_G007	163	31.1	1.1043	0.0791	0.00232	1.67552
S2847_G008	310	33.7	0.7083	0.05923	0.00182	0.78059
S2847_G009	94.2	12.3	0.3735	0.06715	0.00258	1.16983
S2847_G010	61.5	8	0.8686	0.06377	0.00296	0.9738
S2847_G011	158.5	17.6	0.4021	0.06171	0.00214	0.9059
S2847_G012	148.3	11.8	0.7739	0.05648	0.0023	0.53634
S2847_G013	382.6	6.4	0.2323	0.0507	0.00286	0.11866
S2847_G014	734.4	83	0.344	0.06087	0.00152	0.92831
S2847_G015	938.8	96.2	0.5955	0.0682	0.00168	0.94008
S2847_G016	149.3	15.2	0.4944	0.05933	0.0021	0.77983
S2847_G017	136.9	26.3	0.6527	0.0757	0.00226	1.78777
S2847_G018	27.6	4.4	0.911	0.11228	0.0056	2.02378
S2847_G019	141.5	23.4	0.7109	0.07066	0.00216	1.40739
S2847_G020	311.9	24.8	0.4268	0.06436	0.002	0.67846
S2847_G021	187.4	17.6	0.1388	0.05905	0.00202	0.79718
S2847_G022	288.4	30.8	0.3148	0.06118	0.00178	0.88851
S2847_G023	223.7	5.4	1.9284	0.05128	0.00376	0.11362
S2847_G024	113	20.8	1.1453	0.07289	0.00242	1.46156
S2847_G025	187.4	8.3	0.5172	0.05056	0.00248	0.28991
S2847_G026	293.9	26.3	0.0798	0.06083	0.00188	0.80553
S2847_G027	163	23.6	0.5581	0.06603	0.00218	1.2095
S2847_G028	93.2	23.4	0.6906	0.11045	0.00314	3.35789
S2847_G029	37.7	3.4	0.3045	0.05945	0.0042	0.73557
S2847_G030	70.7	5.6	0.5877	0.05385	0.00346	0.53773
S2847_G031	72.1	9.5	0.5586	0.06537	0.00288	1.09127
S2847_G032	65.7	7.8	0.992	0.05777	0.00322	0.77741
S2847_G033	103.8		1.0831	0.32035	0.0093	5.94173
S2847_G034	85	12.5	0.7737	0.06367	0.00276	1.11652
S2847_G035	88.2	11.1	0.942	0.06141	0.0028	0.8876
S2847_G036	198.4	20.2	0.3942	0.05912	0.00208	0.80263
S2847_G037	164	19.7	0.4597	0.06455	0.00226	1.0183
S2847_G038	167.2	28.4	1.2008	0.06593	0.0021	1.20345
S2847_G039	146.5	19	0.3446	0.06555	0.00216	1.14148
S2847_G040	264.1	27.7	0.4346	0.05826	0.00178	0.80403
S2847_G041	395	53.5	0.8528	0.06862	0.00186	1.10769
S2847_G042	89.1	10.1	0.7393	0.06043	0.00262	0.82802
S2847_G043	81.3	10.8	1.6201	0.06166	0.00274	0.81163
S2847_G044	96	2.1	1.6565	0.04438	0.00616	0.09166
S2847_G045	54.2	6.3	0.3828	0.06199	0.0031	0.95993
S2847_G046	153.4	18.3	0.4339	0.06195	0.0021	0.9683
S2847_G047	53.3	12.5	1.8418	0.07122	0.00298	1.55114
S2847_G048	31.2	8.4	1.8767	0.07514	0.00352	1.8707
S2847_G049				0.08111	0.04394	1.48923
S2847_G050	44.1	10.3	1.7076	0.07176	0.00304	1.61569

S2847_G051	109.8	18.8	0.8286	0.06685	0.00228	1.3464
S2847_G052	48.7	6.4	1.41	0.06002	0.00346	0.8154
S2847_G053	63.8	8.8	1.7105	0.0577	0.00304	0.77131
S2847_G054	187.8	33.2	0.4912	0.07422	0.00214	1.68241
S2847_G055	119.9	12.9	0.732	0.05789	0.00258	0.75738
S2847_G056	287	37.8	0.3048	0.06433	0.00198	1.15058
S2847_G057	40.9	5	0.3787	0.06127	0.00352	0.99828
S2847_G058	1455.9	126.6	0.5779	0.28656	0.0067	2.9888
S2847_G059	84.5	7.9	0.3555	0.05925	0.00278	0.74783
S2847_G060	588.3	58	0.5733	0.06065	0.00168	0.75196
S2847_G061	138.2	59.4	0.8933	0.1219	0.00314	5.94078
S2847_G062	70.7	7.4	1.2555	0.05709	0.00332	0.63772
S2847_G063	62	8.4	0.3332	0.06583	0.0028	1.19602
S2847_G064	158	20	0.7864	0.06146	0.00216	0.92622
S2847_G065	352.3	49.4	0.8356	0.06789	0.0019	1.12234
S2847_G066	132.7	21.7	0.7784	0.09289	0.00306	1.7769
S2847_G067	156.2	16.1	0.257	0.05918	0.00212	0.84423
S2847_G068	336.7	35.3	0.151	0.06197	0.00176	0.92789
S2847_G069	198.9	24.9	1.1903	0.06314	0.00202	0.85442
S2847_G070	186.9	26	0.5832	0.06485	0.00204	1.13446
S2847_G071	81.3	8.3	0.5786	0.05891	0.00284	0.757
S2847_G072	148.8	23	0.4788	0.07258	0.0023	1.4431
S2847_G073	103.3	11	0.4201	0.06186	0.00256	0.86867
S2847_G074				-1.14686	5.2828	61.31481
S2847_G075	110.7	14.5	0.3052	0.06584	0.00246	1.17371
S2847_G076				18.39355	950.43842	
S2847_G077	882.7	71.8	0.2671	0.08595	0.00222	0.95028
S2847_G078	488.2	67.2	1.6185	0.05869	0.00164	0.79305
S2847_G079	47.8	5	0.4807	0.06089	0.00378	0.83264
S2847_G080	204.8	27.2	0.9395	0.06102	0.00206	0.93072
S2847_G081	22.5	2.1	0.3587	0.06166	0.00656	0.78957
S2847_G082	54.7	0.3	0.363	0.14452	0.03556	0.0906
S2847_G083	57.4	6.4	0.9338	0.05637	0.00368	0.71803
S2847_G084	47.3	7.6	0.7412	0.06565	0.00382	1.26474
S2847_G085	452.4	42.4	0.5424	0.08044	0.0023	0.95744
S2847_G086	26.2	3.7	0.5108	0.07936	0.005	1.4183
S2847_G087	1172.5	84.2	0.132	0.07228	0.00186	0.74608
S2847_G088	89.6	9	0.6912	0.05862	0.00278	0.71869
S2847_G089	105.2	13.5	0.3035	0.06526	0.00244	1.14329
S2847_G090	195.7	21.8	0.7518	0.0582	0.00204	0.78306
S2847_G091	296.7	38	0.429	0.06839	0.00196	1.15852
S2847_G092	122.2	16.6	0.4576	0.06669	0.00238	1.17881
S2847_G093	276.9	34.8	1.3902	0.07638	0.00234	1.0978
S2847_G094	219.1	17.8	0.7686	0.0547	0.00204	0.53227
S2847_G095	404.2	74	5.3193	0.05763	0.00188	0.53616
S2847_G096	345.8	174.5	1.1455	0.16924	0.00402	9.33081
S2847_G097	13.3	1.9	0.4686	0.05673	0.00594	1.02612
S2847_G098	150.6	14	0.2157	0.06125	0.0023	0.7995
S2847_G099	225.5	35.2	0.7281	0.06585	0.00206	1.24222
S2847_G100	185.5	61.3	0.7673	0.09641	0.0026	3.75297
S2847_G101	235.6	24.9	0.6278	0.05875	0.00212	0.77552
S2847_G102	270.1	29.2	0.5197	0.05904	0.00196	0.81909
S2847_G103	82.7	9	0.7829	0.05916	0.00304	0.76623
S2847_G104	85.4	9.1	0.7881	0.06344	0.0036	0.80686
S2847_G105	46.8	7	0.8043	0.06735	0.00408	1.17267

S2847_G106	78.5	8.8	0.2685	0.06578	0.00306	1.01426
S2847_G107	11.5	1.3	0.3184	0.07062	0.0085	1.05117
S2847_G108	32.1	4.8	0.3944	0.06402	0.00416	1.26759
S2847_G109	112.5	17.9	0.4769	0.06867	0.00248	1.40793
S2847_G110	69.4	10.7	0.4767	0.07059	0.00298	1.39807
S2847_G111	185.1	32.3	0.6266	0.0697	0.0022	1.50684
S2847_G112	1454.5	100	0.2471	0.0869	0.00222	0.82305
S2847_G113	39.5	3.8	0.4419	0.06081	0.00442	0.77589
S2847_G114	1272.2	107.2	0.8133	0.13517	0.00336	1.32188
S2847_G115	929.6	50.9	0.4982	0.07229	0.0021	0.51125
S2847_G116	79	7.5	0.4148	0.05955	0.00316	0.74694
S2847_G117	334.8	39	0.629	0.06102	0.00194	0.88427
S2847_G118	239.7	32.6	0.3732	0.06859	0.00216	1.24245
S2847_G119	52.8	7	0.4444	0.06955	0.00332	1.20487
S2847_G120	204.4	18.5	0.018	0.05839	0.00216	0.78975
S2847_G121	392.7	52.5	0.3591	0.06447	0.00186	1.15271
S2847_G122	96.4	13.7	0.7503	0.0596	0.00278	1.01639
S2847_G123	113	15	0.5102	0.06114	0.0026	1.04388
S2847_G124	24.8	2.9	0.3754	0.0634	0.00494	0.99707
S2847_G125	65.2	12.7	0.6848	0.07249	0.00288	1.71817
S2847_G126	86.8	11.8	0.513	0.06573	0.00276	1.14436
S2847_G127	60.2	7.5	0.6288	0.06121	0.00294	0.94974
S2847_G128	276	98.6	0.5366	0.12181	0.00304	5.42053
S2847_G129	254	29.2	0.4244	0.06212	0.00192	0.94163
S2847_G130	101	9.9	0.3263	0.05666	0.0023	0.75584
S2847_G131	156.6	18.7	0.5898	0.05941	0.00216	0.8896
S2847_G132	30.3	4.8	0.7594	0.06781	0.00428	1.26855
S2847_G133	632	67.8	1.3784	0.06938	0.00192	0.88633
S2847_G134	924.5	80.1	0.5555	0.11552	0.00298	1.30579
S2847_G135	328.8	58.6	1.1715	0.06691	0.00192	1.29242
S2847_G136	181.4	14.7	0.7145	0.05555	0.00234	0.54664
S2847_G137	37.7	4.5	0.5949	0.06543	0.00438	0.99072
S2847_G138	132.7	13.4	0.8165	0.06178	0.00266	0.73413
S2847_G139	971.8	74	0.401	0.07319	0.00204	0.76689
S2847_G140	948.4	60.8	1.3568	0.052	0.00156	0.3472
S2847_G141				0.94567	0.7807	121.75606
S2847_G142	257.7	29.1	0.3202	0.10629	0.00322	1.58331
S2847_G143	29.9	20	1.6938	0.17264	0.00528	11.08545
S2847_G144	63.4	5	0.3404	0.0557	0.00356	0.5879
S2847_G145	113.4	12.3	0.4563	0.05958	0.00264	0.84446
S2847_G146	546.5	83.6	0.6173	0.06532	0.0018	1.24298
S2847_G147	794.6	350.4	0.3424	0.16815	0.00406	9.63739
S2847_G148	61.1	6.7	0.6591	0.05923	0.00312	0.80507
S2847_G149	26.6	2.4	0.2797	0.05296	0.00512	0.66656
S2847_G150	344	55.2	0.3745	0.07078	0.00198	1.5017
X2847S_G001	44.3	3.9	0.2761	0.06239	0.00528	0.7642
X2847S_G002	284.2	6.9	0.7542	0.047	0.00346	0.13883
X2847S_G003				0.77435	0.05008	453.14423
X2847S_G004	145.8	16.6	0.7597	0.06076	0.00268	0.83234
X2847S_G005				0.80614	0.06214	452.76517
X2847S_G006	7197.3	354.3	1.7807	0.09014	0.00236	0.49234
X2847S_G007	53.2	5.5	0.5096	0.06084	0.00448	0.81784
X2847S_G008	60.6	6.9	0.4883	0.05923	0.0037	0.87819
X2847S_G009	220.2	30.8	1.329	0.05882	0.00228	0.86617
X2847S_G010	214.3	12.4	0.9823	0.04833	0.00284	0.31782

X2847S_G011	107.9	16	0.344	0.0654	0.003	1.30077
X2847S_G012	257.6	138.6	0.542	0.16966	0.00442	10.98983
X2847S_G013	281.7	41.2	0.6096	0.06591	0.0022	1.20738
X2847S_G014	3440.5	138	0.5643	0.09809	0.00272	0.52955
X2847S_G015	3694.7	19	0.8255	0.67268	0.0203	0.82013
X2847S_G016	1106.3	63.6	0.3343	0.075	0.00228	0.59022
X2847S_G017	155.2	20.2	0.2865	0.06037	0.0025	1.07105
X2847S_G018	188.7	23.3	0.474	0.06154	0.0025	0.98825
X2847S_G019	3903.5		1.4576	0.55954	0.01494	1.68927
X2847S_G020	4123.2		1.7643	0.4978	0.01384	0.95387

ages 80.0% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.06786	0.16312	0.00448	974.1	24.8	1031.4	30.4
0.04104	0.1433	0.00356	863.3	20	863	22.2
0.02712	0.06579	0.00188	410.7	11.4	456.6	20.8
0.03878	0.11869	0.00308	723	17.8	753.5	23
0.0259	0.09747	0.00244	599.6	14.4	590.1	18
0.01126	0.02247	0.00054	143.2	3.4	367.5	10.4
0.05166	0.15368	0.00386	921.6	21.6	999.3	24.6
0.02508	0.09561	0.00238	588.6	14	585.8	17.6
0.04544	0.12639	0.0034	767.2	19.4	786.6	25.6
0.04494	0.11079	0.00314	677.3	18.2	690.4	27.2
0.03208	0.10651	0.00274	652.4	16	654.9	20.8
0.02198	0.0689	0.00184	429.5	11	436	17.2
0.00654	0.01698	0.00048	108.5	3	113.9	6.8
0.0252	0.11065	0.00266	676.5	15.4	666.7	17
0.02524	0.10001	0.0024	614.5	14	672.9	17
0.02822	0.09537	0.00246	587.2	14.4	585.4	19.4
0.05582	0.17135	0.00434	1019.5	23.8	1041	25.4
0.09778	0.13077	0.00426	792.3	24.2	1123.5	40.4
0.04488	0.14451	0.00366	870.1	20.6	892.1	23.6
0.0219	0.07648	0.00192	475.1	11.4	525.8	16.4
0.02792	0.09795	0.0025	602.4	14.6	595.2	19.2
0.02734	0.10537	0.0026	645.8	15.2	645.6	18.2
0.00808	0.01608	0.00052	102.8	3.2	109.3	8.4
0.05	0.14548	0.00378	875.6	21.2	914.7	25.4
0.0141	0.0416	0.00114	262.7	7	258.5	12.8
0.02588	0.09608	0.0024	591.4	14.2	599.9	18
0.04134	0.13291	0.00342	804.4	19.4	805	23.2
0.10084	0.22057	0.00564	1284.9	29.8	1494.6	30
0.05076	0.08977	0.00298	554.2	17.6	559.8	33.6
0.03378	0.07245	0.00226	450.9	13.6	436.9	25.4
0.04806	0.12111	0.00342	736.9	19.6	749.1	27.8
0.0428	0.09764	0.00292	600.6	17.2	584	28
0.17448	0.13457	0.0037	813.9	21	1967.4	34.8
0.04856	0.12723	0.00356	772	20.4	761.3	27.6
0.04032	0.10487	0.00296	642.9	17.2	645.1	25.6
0.02878	0.09851	0.00254	605.7	15	598.3	19.8
0.03636	0.11446	0.00298	698.6	17.2	713.1	22.4
0.03992	0.13243	0.00338	801.7	19.2	802.2	22.6
0.03898	0.12635	0.00324	767	18.6	773.2	22.6
0.02576	0.10013	0.0025	615.2	14.6	599.1	17.8
0.03196	0.11713	0.00286	714	16.6	757.1	19.4
0.03592	0.09942	0.00274	611	16	612.5	23.6
0.03604	0.09551	0.00266	588	15.6	603.4	23.8
0.01242	0.01498	0.00062	95.9	4	89	12.4
0.0476	0.11236	0.00328	686.4	19	683.3	28.8
0.03382	0.1134	0.00292	692.5	17	687.6	21.2
0.0652	0.15801	0.00446	945.7	24.8	950.9	31.2
0.0872	0.18063	0.0054	1070.4	29.4	1070.8	36.8
0.77134	0.13322	0.02646				
0.06868	0.16335	0.00462	975.4	25.6	976.3	32

0.04738	0.14612	0.0038	879.2	21.4	866	25
0.04608	0.09857	0.00302	606	17.8	605.5	29.8
0.04018	0.09699	0.00286	596.7	16.8	580.5	26.8
0.0514	0.16447	0.00412	981.6	22.8	1001.9	24.4
0.03362	0.09492	0.00264	584.6	15.6	572.5	23
0.03716	0.12976	0.00328	786.5	18.8	777.5	21.6
0.05636	0.11821	0.00366	720.3	21	702.9	33.2
0.07698	0.07567	0.00182	470.2	11	1404.8	25.6
0.03484	0.09158	0.0026	564.9	15.4	567	23.8
0.02226	0.08996	0.0022	555.3	13	569.4	16.2
0.1666	0.35359	0.00884	1951.7	42.2	1967.2	31.2
0.03634	0.08104	0.00244	502.3	14.6	500.9	25.8
0.05104	0.13181	0.0037	798.2	21	798.7	28.2
0.03334	0.10933	0.00284	668.9	16.6	665.6	21.4
0.03334	0.11994	0.00296	730.2	17	764.1	20
0.06012	0.1388	0.00366	837.9	20.8	1037	27.4
0.03086	0.1035	0.0027	634.9	15.8	621.5	20.6
0.0279	0.10863	0.00268	664.8	15.6	666.5	18.4
0.02836	0.09819	0.0025	603.8	14.6	627.1	19.2
0.0373	0.12692	0.00322	770.3	18.4	769.9	21.8
0.03632	0.09323	0.00266	574.6	15.6	572.3	24.6
0.04762	0.14425	0.0037	868.7	20.8	907	24.4
0.03602	0.10188	0.00278	625.4	16.2	634.8	23.4
142.46438	-0.3879	1.63824				
0.04456	0.12935	0.00346	784.2	19.8	788.4	25.2
0.0265	0.08022	0.00196	497.4	11.6	678.2	17.6
0.0235	0.09804	0.0024	602.9	14	592.9	16.6
0.05064	0.09922	0.00316	609.8	18.6	615.1	32.2
0.0324	0.11068	0.00284	676.7	16.4	668	20.8
0.08118	0.09291	0.004	572.7	23.6	590.9	51.4
0.02008	0.00455	0.0005	29.3	3.2	88.1	22.8
0.04586	0.09242	0.003	569.8	17.8	549.5	31
0.0723	0.13977	0.0045	843.4	25.4	830	37.8
0.02882	0.08636	0.00216	534	12.8	682	18.8
0.0867	0.12967	0.00452	786	25.8	896.6	42.8
0.02076	0.07489	0.00182	465.5	11	565.9	15.4
0.03392	0.08895	0.00252	549.3	15	549.9	23.4
0.04334	0.1271	0.00338	771.3	19.4	774.1	24.8
0.02814	0.09761	0.00252	600.4	14.8	587.2	19.4
0.0352	0.12291	0.00306	747.3	17.6	781.3	20.6
0.0431	0.12825	0.00338	777.9	19.4	790.8	24.4
0.03518	0.10429	0.00266	639.5	15.6	752.3	21.2
0.02016	0.0706	0.00184	439.8	11	433.3	16
0.01818	0.0675	0.00172	421.1	10.4	435.9	14.6
0.24658	0.40002	0.00972	2169.1	44.8	2371.1	31.2
0.10482	0.13124	0.00546	794.9	31.2	717	58
0.03042	0.0947	0.0025	583.3	14.8	596.5	20.8
0.0406	0.13688	0.00348	827	19.8	819.9	22.6
0.10896	0.28244	0.00708	1603.6	35.6	1582.7	29.6
0.02854	0.09578	0.0025	589.6	14.8	582.9	19.8
0.02816	0.10066	0.00258	618.3	15.2	607.5	19.2
0.039	0.09398	0.00276	579	16.2	577.6	26
0.04482	0.09228	0.00288	569	17	600.7	29.4
0.06934	0.12633	0.00416	766.9	23.8	787.9	37.8

0.047	0.11188	0.00322	683.7	18.6	711	28
0.12168	0.10801	0.00542	661.2	31.6	729.5	67.8
0.08066	0.14365	0.00488	865.3	27.6	831.3	41.6
0.05218	0.14876	0.00398	894	22.4	892.3	26.6
0.05932	0.1437	0.00406	865.6	22.8	888.1	30
0.04978	0.15685	0.00402	939.2	22.4	933.2	24.8
0.02288	0.06872	0.00168	428.4	10.2	609.7	16.2
0.05476	0.09258	0.0032	570.8	18.8	583.1	35.8
0.0359	0.07096	0.00174	441.9	10.4	855.3	20.2
0.01564	0.05131	0.00128	322.6	7.8	419.3	13.2
0.03916	0.091	0.00272	561.4	16	566.4	26.4
0.02942	0.10515	0.00268	644.5	15.6	643.3	19.4
0.04074	0.13143	0.00336	796	19.2	820	22.8
0.0571	0.12569	0.0037	763.2	21.2	802.8	31.2
0.02978	0.09814	0.00258	603.5	15.2	591	20.4
0.03534	0.12974	0.00324	786.4	18.4	778.5	20.8
0.04722	0.12373	0.00354	752	20.4	712.1	28
0.04468	0.12388	0.00344	752.9	19.8	725.8	26.4
0.07552	0.11411	0.00412	696.6	23.8	702.3	43.6
0.06934	0.17198	0.0048	1023	26.4	1015.3	31.2
0.04816	0.12633	0.00352	766.9	20.2	774.6	27.4
0.04536	0.11259	0.00326	687.8	18.8	678	27.8
0.14874	0.32288	0.00792	1803.8	38.6	1888.1	30
0.03052	0.10998	0.00278	672.6	16.2	673.7	19.6
0.0311	0.09679	0.00262	595.6	15.4	571.6	21.4
0.03312	0.10865	0.00286	664.9	16.6	646.2	21.4
0.07852	0.13574	0.00452	820.5	25.6	831.7	40.6
0.02616	0.09269	0.0023	571.4	13.6	644.4	17.8
0.03654	0.08201	0.00202	508.1	12	848.3	20.6
0.03944	0.14016	0.0035	845.6	19.8	842.4	21.8
0.02308	0.0714	0.00194	444.6	11.6	442.8	18
0.0648	0.10987	0.00372	672	21.6	699.1	38
0.03156	0.08623	0.00238	533.2	14.2	559	22
0.02276	0.07602	0.00188	472.3	11.2	578	16.4
0.011	0.04844	0.0012	304.9	7.4	302.6	10.2
89.7697	0.93419	0.84974				
0.05008	0.10809	0.0028	661.6	16.2	963.7	24.8
0.36312	0.46592	0.01316	2465.6	57.8	2530.3	38.8
0.03684	0.07659	0.00242	475.7	14.4	469.5	26.8
0.03744	0.10284	0.00286	631	16.8	621.6	24.4
0.0368	0.13806	0.00342	833.7	19.4	820.2	20.8
0.25808	0.41586	0.01008	2241.7	45.8	2400.7	31.4
0.04194	0.09862	0.00292	606.3	17.2	599.7	27.4
0.06276	0.09133	0.00352	563.4	20.8	518.6	42.2
0.04502	0.15394	0.00384	923	21.4	931.1	22.8
0.0621	0.08887	0.00322	548.9	19	576.4	40.4
0.00988	0.02143	0.00064	136.7	4	132	9.8
74.24446	4.24608	0.70756				
0.0356	0.09939	0.00254	610.8	14.8	614.9	23.6
86.5441	4.07519	0.79522				
0.01288	0.03963	0.00086	250.5	5.4	406.5	11.4
0.05798	0.09754	0.00326	600	19.2	606.8	37
0.05314	0.10759	0.00326	658.7	19	640	33
0.03272	0.10685	0.0026	654.4	15.2	633.5	21.6
0.01804	0.04772	0.00132	300.5	8.2	280.2	16

0.05826	0.14432	0.00388	869	21.8	846.1	30.6
0.29032	0.46999	0.01056	2483.5	46.4	2522.3	32
0.03988	0.13291	0.00312	804.4	17.8	804	22.6
0.0146	0.03917	0.00088	247.7	5.4	431.5	12.6
0.02242	0.00885	0.00022	56.8	1.4	608.1	17.8
0.01776	0.0571	0.0013	358	8	471	14.4
0.04322	0.12872	0.00324	780.6	18.6	739.3	25.4
0.03924	0.11652	0.00292	710.5	16.8	697.8	24
0.04408	0.02191	0.0005	139.7	3.2	1004.5	22.4
0.02544	0.0139	0.00032	89	2	680.1	17.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
1155.8	75.4	-5.6	-15.7	974.1	24.8
862.8	60.6	0	0.1	863.3	20
695.4	103.4	-10	-40.9	410.7	11.4
845.5	71.8	-4	-14.5	723	17.8
554.5	69.2	1.6	8.1	599.6	14.4
2237.6	40.8	-61	-93.6		
1174.6	58	-7.8	-21.5	921.6	21.6
575.6	66.8	0.5	2.3	588.6	14
842.4	80	-2.5	-8.9	767.2	19.4
734	98.2	-1.9	-7.7	677.3	18.2
664.1	74.2	-0.4	-1.8	652.4	16
471.3	90.2	-1.5	-8.9	429.5	11
227.2	130.4	-4.7	-52.2	108.5	3
634.6	53.8	1.5	6.6	676.5	15.4
874.6	51	-8.7	-29.7	614.5	14
579.2	77	0.3	1.4	587.2	14.4
1087.1	59.8	-2.1	-6.2	1019.5	23.8
1836.6	90.4	-29.5	-56.9		
947.6	62.6	-2.5	-8.2	870.1	20.6
753.5	65.6	-9.7	-36.9	475.1	11.4
568.9	74.4	1.2	5.9	602.4	14.6
645.6	62.6	0	0	645.8	15.2
253.4	168.6	-5.9	-59.4	102.8	3.2
1010.9	67.4	-4.3	-13.4	875.6	21.2
220.8	113.4	1.6	19	262.7	7
633.2	66.6	-1.4	-6.6	591.4	14.2
807.3	69	-0.1	-0.4	804.4	19.4
1806.8	51.6	-14	-28.9		
583.6	153.4	-1	-5	554.2	17.6
364.8	144.8	3.2	23.6	450.9	13.6
786.3	92.6	-1.6	-6.3	736.9	19.6
521	122.4	2.8	15.3	600.6	17.2
3571.5	44.6	-58.6	-77.2		
730.7	91.8	1.4	5.7	772	20.4
653.6	97.8	-0.3	-1.6	642.9	17.2
571.5	76.6	1.2	6	605.7	15
759.7	73.8	-2	-8	698.6	17.2
804.2	66.6	-0.1	-0.3	801.7	19.2
792	69.2	-0.8	-3.2	767	18.6
539.6	66.8	2.7	14	615.2	14.6
887.3	56	-5.7	-19.5	714	16.6
619	93.6	-0.2	-1.3	611	16
662.3	95.2	-2.5	-11.2	588	15.6
-89.6	340.4	7.6	-207		
673.8	107	0.5	1.9	686.4	19
672.4	72.6	0.7	3	692.5	17
963.7	85.4	-0.6	-1.9	945.7	24.8
1072.2	94.2	0	-0.2	1070.4	29.4
979.1	86.4	-0.1	-0.4	975.4	25.6

833.1	71	1.5	5.5	879.2	21.4
604.3	124.8	0.1	0.3	606	17.8
518.4	115.6	2.8	15.1	596.7	16.8
1047.5	58.2	-2	-6.3	981.6	22.8
525.6	97.8	2.1	11.2	584.6	15.6
752.5	65	1.2	4.5	786.5	18.8
648.7	123.4	2.5	11	720.3	21
3399	36.4	-66.5	-86.2		
576.3	102	-0.4	-2	564.9	15.4
626.8	59.8	-2.5	-11.4	555.3	13
1984.2	45.8	-0.8	-1.6	1984.2	45.8
495	128.2	0.3	1.5	502.3	14.6
801	89.2	-0.1	-0.3	798.2	21
655.4	75.4	0.5	2.1	668.9	16.6
865.2	58	-4.4	-15.6	730.2	17
1485.6	62.4	-19.2	-43.6		
573.7	78	2.2	10.7	634.9	15.8
673.1	60.8	-0.3	-1.2	664.8	15.6
712.9	68	-3.7	-15.3	603.8	14.6
769.5	66.2	0.1	0.1	770.3	18.4
563.8	105	0.4	1.9	574.6	15.6
1002.2	64.4	-4.2	-13.3	868.7	20.8
669.3	88.6	-1.5	-6.6	625.4	16.2
801.3	78.2	-0.5	-2.1	784.2	19.8
1337.1	50	-26.7	-62.8		
555.6	61	1.7	8.5	602.9	14
635.4	133.6	-0.9	-4	609.8	18.6
639.9	72.6	1.3	5.7	676.7	16.4
662.3	228	-3.1	-13.5	572.7	23.6
2282.1	423.6	-66.8	-98.7		
467	144.6	3.7	22	569.8	17.8
795.2	122	1.6	6.1	843.4	25.4
1207.8	56.4	-21.7	-55.8		
1181.1	124.6	-12.3	-33.5	786	25.8
993.8	52.4	-17.7	-53.2		
553	103.4	-0.1	-0.7	549.3	15
782.7	78.6	-0.4	-1.5	771.3	19.4
537.3	76.6	2.2	11.7	600.4	14.8
880.4	59.2	-4.3	-15.1	747.3	17.6
828.1	74.4	-1.6	-6.1	777.9	19.4
1105	61.2	-15	-42.1	639.5	15.6
400	83.6	1.5	9.9	439.8	11
515.7	71.6	-3.4	-18.4	421.1	10.4
2550.1	39.8	-8.5	-14.9	2550.1	39.8
481.1	231.4	10.9	65.2		
648	80.6	-2.2	-10	583.3	14.8
801.6	65.6	0.9	3.2	827	19.8
1555.8	50.6	1.3	3.1	1555.8	50.6
557.8	78.6	1.2	5.7	589.6	14.8
568.6	72.2	1.8	8.7	618.3	15.2
573	111.8	0.2	1.1	579	16.2
723	120.4	-5.3	-21.3	569	17
848.6	126	-2.7	-9.6	766.9	23.8

799.4	97.4	-3.8	-14.5	683.7	18.6
946.4	246.4	-9.4	-30.1	661.2	31.6
742.3	137.4	4.1	16.6	865.3	27.6
888.8	74.6	0.2	0.6	894	22.4
945.6	86.4	-2.5	-8.5	865.6	22.8
919.5	64.8	0.7	2.1	939.2	22.4
1358.3	49.2	-29.7	-68.5		
632.5	156.6	-2.1	-9.8	570.8	18.8
2166.2	43.4	-48.3	-79.6		
994.1	59	-23.1	-67.6		
587.3	115.2	-0.9	-4.4	561.4	16
639.9	68.4	0.2	0.7	644.5	15.6
886.4	65	-2.9	-10.2	796	19.2
915.1	98.2	-4.9	-16.6	763.2	21.2
544.4	80.8	2.1	10.9	603.5	15.2
757.1	60.8	1	3.9	786.4	18.4
589.1	101.2	5.6	27.7		
644.2	91.4	3.7	16.9	752.9	19.8
721.7	165.4	-0.8	-3.5	696.6	23.8
999.7	80.6	0.8	2.3	1023	26.4
797.8	88	-1	-3.9	766.9	20.2
646.6	103.2	1.4	6.4	687.8	18.8
1982.9	44.4	-4.5	-9	1982.9	44.4
678.2	66	-0.2	-0.8	672.6	16.2
478.3	89.8	4.2	24.5	595.6	15.4
582.2	79	2.9	14.2	664.9	16.6
862.8	131	-1.3	-4.9	820.5	25.6
910.1	57	-11.3	-37.2	571.4	13.6
1888	46.4	-40.1	-73.1		
835	59.8	0.4	1.3	845.6	19.8
434.4	93.8	0.4	2.3	444.6	11.6
788.2	140.6	-3.9	-14.7	672	21.6
666.5	92.2	-4.6	-20	533.2	14.2
1019.2	56.4	-18.3	-53.7		
285.4	68.6	0.8	6.8	304.9	7.4
1736.7	55.6	-31.3	-61.9		
2583.4	51	-2.6	-4.6	2583.4	51
440.4	142.2	1.3	8	475.7	14.4
588.4	96.2	1.5	7.3	631	16.8
784.7	57.8	1.6	6.2	833.7	19.4
2539.3	40.4	-6.6	-11.7	2539.3	40.4
575.6	114.6	1.1	5.3	606.3	17.2
327.1	219.4	8.6	72.2		
951.1	57.2	-0.9	-2.9	923	21.4
687.5	180.6	-4.8	-20.2	548.9	19
49.2	175.8	3.5	177.7	136.7	4
630.7	95	-0.7	-3.2	610.8	14.8
1428.5	50	-38.4	-82.5		
633.6	158.6	-1.1	-5.3	600	19.2
575.6	135.8	2.9	14.5	658.7	19
560.4	84.4	3.3	16.8	654.4	15.2
115.5	138.6	7.2	160.3		

787.2	96.4	2.7	10.4	869	21.8
2554.3	43.6	-1.5	-2.8	2554.3	43.6
803.5	69.8	0.1	0.1	804.4	17.8
1588.1	51.8	-42.6	-84.4		
4673.4	43.4	-90.7	-98.8		
1068.5	61.2	-24	-66.5		
616.9	89.4	5.6	26.5		
658.2	87.2	1.8	8	710.5	16.8
4406.3	39	-86.1	-96.8		
4234.7	41	-86.9	-97.9		

Sample 2899S Main Nile @ 3th cataract 231 grain analysed 44 concordant

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2899S_G001	47.1	0.3	0.9618	0.16299	0.05142	0.09746
X2899S_G002	130.3	18.2	0.6215	0.06579	0.00232	1.13273
X2899S_G003	582	68	0.6418	0.07083	0.00196	1.01428
X2899S_G004	93.3	13.8	0.7407	0.06363	0.00248	1.13623
X2899S_G005				1.03481	0.44828	638.98126
X2899S_G006	327.9	54.1	0.6718	0.07991	0.00212	1.60376
X2899S_G007	979	212.8	0.3578	0.13985	0.00318	4.04282
X2899S_G008	145.1	48.3	0.4083	0.15718	0.00414	6.92922
X2899S_G009				0.81466	0.12272	188.68019
X2899S_G010	153.8	21.1	0.6174	0.06587	0.00224	1.12315
X2899S_G011	510.8	69.9	0.6181	0.069	0.00172	1.17549
X2899S_G012	894.2	83.8	0.9229	0.076	0.0019	0.83932
X2899S_G013				0.88491	0.7431	197.73334
X2899S_G014	134.1	14.1	1.3194	0.06065	0.00304	0.67763
X2899S_G015	1440.9	72.2	0.769	0.16947	0.0042	1.034
X2899S_G016	835.8	28.4	0.7604	0.04258	0.00472	0.17097
X2899n_G001	209.1	28.7	0.676	0.06225	0.002	1.04539
X2899n_G002	89.1	12	0.5622	0.07054	0.00292	1.19126
X2899n_G003	718.8	79.9	0.406	0.06515	0.00168	0.97549
X2899n_G004				0.36201	0.71888	-65.06522
X2899n_G005				0.15519	0.22524	67.97797
X2899n_G006	226.4	30.1	0.3437	0.06457	0.00196	1.15045
X2899n_G007				0.68408	0.01986	39.51293
X2899n_G008				0.43658	0.05556	10.70723
X2899n_G009				0.7515	0.09262	9.15391
X2899n_G010				0.20579	0.01614	3.70401
X2899n_G011				0.12698	0.342	498.18579
X2899n_G012				-11.05178	112.38534	
X2899n_G013				0.8502	1.91008	264.39786
X2899n_G014				0.86088	0.02472	
X2899n_G015				1.19391	1.31928	
X2899n_G016	400.1	42.7	0.5399	0.0589	0.0017	0.80025
X2899n_G017				0.81467	0.01962	645.89978
X2899n_G018				0.69852	0.53748	169.67809
X2899n_G019				0.16557	0.20788	68.40109
X2899n_G020	252	25.3	0.2362	0.05988	0.00196	0.83442
X2899n_G021	153.3	16.4	0.5211	0.06013	0.00226	0.81936
X2899n_G022				0.47416	0.30434	608.03705
X2899n_G023				0.24679	0.59518	
X2899n_G024						
X2899n_G025				0.74635	0.05168	
X2899n_G026	102.6	12.1	0.4503	0.06166	0.00262	0.94653
X2899n_G027				4.33022	18.3277	102.5185
X2899n_G028				1.05041	0.3053	
X2899n_G029				0.82282	0.03508	
X2899n_G030				0.59319	1.63282	
X2899n_G031				1.07117	0.77606	672.27496
X2899n_G032				0.84813	0.03644	
X2899n_G033				0.82167	0.65162	231.13699
X2899n_G034				0.05811	0.80922	2.57551

X2899n_G035				1.12601	4.85896	324.15161
X2899n_G036	438	45.3	0.6441	0.06014	0.00172	0.78314
X2899n_G037	1212.6	118.1	0.2621	0.0588	0.00148	0.79042
X2899n_G038				0.80258	0.01874	
X2899n_G039				0.79348	0.08346	174.88936
X2899n_G040				0.58088	0.01584	4.40591
X2899n_G041				0.74453	0.99542	468.07867
X2899n_G042	96.8	14	0.6401	0.06336	0.00248	1.12962
X2899n_G043	421.3	67.2	0.6945	0.069	0.00414	1.3392
X2899n_G044				0.62147	0.46584	145.94135
X2899n_G045				0.90379	0.05686	
X2899n_G046				0.67143	1.88348	223.73691
X2899n_G047				0.75429	0.66996	75.91071
X2899n_G048	222.5	31.5	0.3877	0.06858	0.00216	1.27898
X2899n_G049	388	66.4	2.1547	0.06911	0.00194	1.15596
X2899n_G050				0.86584	0.09644	799.14575
X2899n_G051				0.65025	0.13756	3.38508
X2899n_G052				0.31023	0.0221	6.79099
X2899n_G053				7.97857	9.41644	
X2899n_G054				0.80856	0.0244	455.0097
X2899n_G055				0.69387	0.8906	
X2899n_G056	40.4	4.7	1.026	0.06159	0.00426	0.8217
X2899n_G057				0.67794	0.14744	293.92026
X2899n_G058				0.83191	0.32244	306.95905
X2899n_G059				-12.71757	708.6482	226.19861
X2899n_G060				0.78417	0.06556	891.87738
X2899n_G061	110.9	46	1.0287	0.11877	0.00326	5.42665
X2899n_G062	344.4	42	0.9004	0.06042	0.00184	0.85366
X2899n_G063				0.52004	0.40386	128.00943
X2899n_G064				1.00044	0.88348	
X2899n_G065				0.4685	0.02308	13.40717
X2899n_G066				0.79776	0.0607	246.96307
X2899n_G067				-0.16527	1.10946	
X2899n_G068				0.3643	0.04158	7.83264
X2899n_G069				0.87158	0.72942	204.55707
X2899n_G070				0.92839	0.61476	867.91357
X2899n_G071				0.73629	0.1557	357.1062
X2899n_G072				0.84107	0.05716	272.8002
X2899n_G073				0.75175	2.07974	
X2899n_G074				5.6728	31.1876	
X2899n_G075				0.16259	0.56176	
X2899n_G076	25	3.5	0.3479	0.06997	0.0045	1.30906
X2899n_G077				0.20592	0.01626	4.07449
X2899n_G078				0.90774	0.0893	
X2899n_G079				0.88933	0.04732	
X2899n_G080				0.71273	0.01782	74.76343
X2899n_G081				2.96345	8.62018	714.61377
X2899n_G082				0.57074	0.58156	334.10168
X2899n_G083	189.8	22.2	0.1976	0.06797	0.00222	1.1226
X2899n_G084				-0.57814	1.17878	225.71655
X2899n_G085				0.96066	0.95152	983.50586
X2899n_G086				0.1434	0.00988	2.29022
X2899n_G087				3.26487	8.6962	270.33612
X2899n_G088				0.53381	0.3849	59.41283
X2899n_G089				3.03087	4.45508	369.55569

X2899n_G090				0.20433	0.00826	3.36812
X2899n_G091				0.62772	0.23326	5.4442
X2899n_G092				0.66362	0.51552	1.89333
X2899n_G093				6.9358	34.09284	200.37692
X2899n_G094				-0.07565	0.95708	-12.94398
X2899n_G095				-1.00625	2.0364	266.11096
X2899n_G096	209.1	29.7	0.2614	0.07993	0.00246	1.53923
X2899n_G097				1.68075	1.9004	866.30176
X2899n_G098				0.81686	0.11416	
X2899n_G099				0.15042	0.00796	2.39018
X2899n_G100				0.41396	0.46112	256.88214
X2899n_G101				1.18063	1.59328	
X2899n_G102				0.16719	0.00978	2.74595
X2899n_G103				0.81035	0.1256	
X2899n_G104				0.15485	0.01184	2.56358
X2899n_G105	130.2	19.3	0.601	0.06668	0.00246	1.2215
X2899n_G106				0.50481	0.2936	78.91154
X2899n_G107				3.38121	35.8958	98.45258
X2899n_G108				0.24269	0.84214	
X2899n_G109				0.19471	0.02202	2.58933
X2899n_G110				0.577	0.56688	117.05179
X2899n_G111				0.296	0.34958	
X2899n_G112				0.69383	0.11796	61.02545
X2899n_G113				0.69966	0.08572	66.51342
X2899n_G114				0.73697	0.66558	120.44802
X2899n_G115				0.86415	0.0247	
X2899n_G116				-0.37514	0.56714	
X2899n_G117				0.92371	0.56756	153.74809
X2899n_G118				1.08789	0.92232	372.44092
X2899n_G119				0.56814	0.04934	19.05741
X2899n_G120				1.3723	1.56772	
X2899n_G121				0.16372	0.00896	3.17064
X2899n_G122				0.78331	0.18004	
X2899n_G123				0.40245	0.05856	8.10071
X2899n_G124				-0.6272	3.70258	
X2899n_G125				1.12	3.14884	
X2899n_G126				3.75576	7.6763	764.43945
X2899n_G127				0.82318	0.40052	750.40167
X2899n_G128				0.12645	0.15404	2.97506
X2899n_G129				2.92393	9.98636	
X2899n_G130				0.13589	0.00586	2.06491
X2899n_G131				0.81056	0.18038	796.11493
X2899n_G132	2146.3	95.9	0.1123	0.15943	0.00446	1.01979
X2899n_G133				1.25254	0.56444	
X2899n_G134				0.73578	0.28354	700.46521
X2899n_G135				0.16646	0.01196	2.16211
X2899n_G136				1.09488	0.68256	456.96021
X2899n_G137				3.63021	15.71174	
X2899n_G138				3.52041	9.85572	127.8897
X2899n_G139				0.83362	0.03008	170.47064
X2899n_G140				0.86696	0.04012	377.55725
X2899n_G141				0.88467	0.06536	
X2899n_G142	105.8	10.1	0.4169	0.05812	0.00264	0.73173
X2899n_G143				-0.41809	0.83356	
X2899n_G144				0.1475	0.13676	309.37341

X2899n_G145				0.73077	0.24668	430.3959
X2899n_G146				0.46366	0.5735	175.64935
X2899n_G147				1.12475	2.49124	121.30037
X2899n_G148				0.77341	0.48518	
X2899n_G149				0.88875	1.43912	262.1579
X2899n_G150				0.32004	0.23868	141.47784
X2899n_G151				0.8041	0.07866	66.92515
X2899n_G152				0.80261	0.9018	353.29575
X2899n_G153				-0.46607	1.30224	344.37973
X2899n_G154				0.68137	0.83784	145.52046
X2899n_G155				1.08724	1.40114	
X2899n_G156	106.4	16.6	0.587	0.065	0.0026	1.2661
X2899n_G157				0.2262	0.01078	4.09485
X2899n_G158				0.50931	0.0414	16.12952
X2899n_G159				1.0103	1.16218	
X2899n_G160				0.80689	0.2061	94.88361
X2899n_G161				0.6766	0.30602	10.50132
X2899n_G162				2.30481	9.82806	
X2899n_G163				0.79693	0.02662	143.69821
X2899n_G164				1.10328	0.5475	
X2899n_G165				0.10204	0.00654	1.87101
X2899n_G166				0.82	0.05612	5.22906
X2899n_G167				0.76627	0.03444	37.69232
X2899n_G168				0.42739	0.35146	92.40526
X2899n_G169				-2.46953	7.36894	
X2899n_G170				0.52568	0.81372	249.36731
X2899n_G171				0.2709	0.02006	4.27858
X2899n_G172				0.90796	0.54454	435.18747
X2899n_G173				0.92896	0.2574	395.99155
X2899n_G174				0.82183	0.41056	
X2899n_G175	271.3	35.8	0.4391	0.06408	0.00204	1.10623
X2899n_G176				0.83579	0.10584	
X2899n_G177				0.23557	0.5562	24.26844
X2899n_G178				0.65177	1.1432	
X2899n_G179				0.10009	0.00454	1.65501
X2899n_G180				0.57512	0.7503	451.65479
X2899n_G181				-29.97249	1018.77588	
X2899n_G182				0.54418	0.28484	227.03661
X2899n_G183	170.6	17.6	0.4574	0.06152	0.00244	0.82497
X2899n_G184				0.24671	0.0145	3.99326
X2899n_G185				1.24703	1.32886	107.48511
X2899n_G186				1.65901	2.8003	572.55524
X2899n_G187				1.32409	2.12652	97.6114
X2899n_G188				4.91036	17.08904	613.5813
X2899n_G189				1.93647	4.4182	
X2899n_G190				0.51726	0.0326	15.19784
X2899n_G191				-0.51439	0.50122	-13.69502
X2899n_G192				0.88538	0.03068	
X2899n_G193				0.58418	0.0182	4.96716
X2899n_G194				0.8206	0.14082	
X2899n_G195				-0.28076	0.9724	
X2899n_G196				0.81977	0.71728	
X2899n_G197				0.7765	0.50166	929.07703
X2899n_G198				0.96652	1.35612	
X2899n_G199				0.15813	0.24064	

X2899L_G001	1270.8	114.3	1.202	0.16809	0.0048	1.7096
X2899L_G002	385.8	38.9	0.3784	0.06009	0.00206	0.8082
X2899L_G003	392.5	43.1	0.5376	0.06601	0.00226	0.92733
X2899L_G004	21.3	2.4	1.0073	0.06536	0.00778	0.83155
X2899L_G005				0.93436	0.67472	
X2899L_G006				1.712	1.65684	125.21554
X2899L_G007	225.9	28.3	1.1769	0.05742	0.00234	0.77909
X2899L_G008	248.6	32.7	0.4621	0.06604	0.00308	1.12907
X2899L_G009	98.6	14.3	1.0337	0.06634	0.00328	1.08112
X2899L_G010	92	13.4	0.9384	0.06558	0.00332	1.09755
X2899L_G011	255.9	147.9	0.9127	0.16216	0.00454	10.34409
X2899L_G012	78	12.2	0.8906	0.06089	0.0035	1.10017
X2899L_G013	65.3	11	0.7056	0.07734	0.00384	1.56321
X2899L_G014	88.6	14.4	0.9184	0.06592	0.00316	1.22871
X2899L_G015	173.9	28.7	0.8311	0.06718	0.0026	1.30006
X2899L_G016	465.8	36	0.1057	0.06052	0.00268	0.67788

ages 19.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.0276	0.00433	0.00062	27.9	4	94.4	31.2
0.04	0.1248	0.00314	758.1	18	769.1	23.4
0.02876	0.10379	0.00244	636.6	14.2	711	18.6
0.04388	0.12943	0.00336	784.6	19.2	770.7	25.2
541.58966	4.47573	4.01112				
0.04406	0.14546	0.0034	875.5	19.2	971.7	22.2
0.09768	0.20953	0.0048	1226.3	25.6	1642.9	26.2
0.1906	0.31953	0.00796	1787.4	38.8	2102.4	32.2
31.03444	1.67874	0.3083				
0.03824	0.1236	0.00306	751.3	17.6	764.5	22.6
0.03058	0.12348	0.00282	750.6	16.2	789.2	18.6
0.02188	0.08005	0.00184	496.4	11	618.8	15.8
217.68134	1.61964	2.0507				
0.03302	0.08098	0.00228	502	13.6	525.3	23.6
0.02626	0.04422	0.00104	278.9	6.4	720.9	17.6
0.0182	0.02911	0.00118	185	7.4	160.3	17.4
0.03482	0.12192	0.00308	741.6	17.6	726.6	21.2
0.04928	0.12259	0.00342	745.5	19.6	796.5	27.6
0.02698	0.1087	0.00262	665.2	15.2	691.3	17.8
220.73962	-1.30475	3.62054				
110.92202	3.17978	3.24986				
0.0365	0.12934	0.00324	784.1	18.4	777.5	21.4
1.21332	0.41931	0.013				
1.13986	0.17804	0.0193				
0.80802	0.08843	0.00946				
0.25968	0.13066	0.00712				
	28.48181	202.37266				
	2.42725	33.8739				
527.5617	2.25753	5.0815				
1917.5774	78.5456	16.17778				
	11.80613	121.11244				
0.02436	0.09863	0.00242	606.4	14.2	597	17.2
22.97928	5.7554	0.2007				
141.9478	1.76336	1.66624				
95.99546	2.99904	2.3377				
0.0281	0.10116	0.00256	621.2	15	616.1	19.2
0.03122	0.09892	0.0026	608.1	15.2	607.7	21
909.78564	9.30875	13.72466				
	-2.17823	47.196				
	76.47248	67.7305				
0.04008	0.11143	0.00306	681	17.8	676.3	25
65.05688	0.17186	0.72938				
1515.65992	9.26528	10.6283				
	431.91614	386.66058				
586.23876	-2.07317	6.97316				
1861.1792	4.55584	12.8092				
314.33908	15.27643	2.7068				
356.44468	2.04198	3.23206				
35.7168	0.32172	0.46238				

941.60566	2.0897	8.911				
0.02354	0.09452	0.00232	582.2	13.6	587.3	16.8
0.0215	0.09757	0.00234	600.2	13.8	591.4	15.6
34.63668	9.88722	0.30076				
28.52166	1.59993	0.27636				
0.12076	0.05506	0.00146				
	4.56359	19.85274				
0.04468	0.12942	0.0035	784.6	20	767.6	25.6
0.07828	0.14088	0.00474	849.6	26.8	862.9	40
120.77504	1.70461	1.49248				
	53.97356	28.0241				
785.35108	2.41884	8.82412				
63.95938	0.73052	0.63922				
0.04176	0.13538	0.00342	818.5	19.4	836.4	23
0.03426	0.12141	0.00298	738.7	17.2	780.1	20.4
300.41378	6.69961	2.55564				
0.47128	0.03779	0.00646				
0.42492	0.15889	0.00884				
	-3.76391	11.8142				
24.86766	4.08476	0.22414				
	-8.65181	47.87836				
0.05514	0.09684	0.00332	595.9	19.6	609	35.4
130.66796	3.14696	1.43382				
216.53228	2.67828	1.97212				
453.49412	-0.1291	7.19078				
257.46694	8.25556	2.41038				
0.1596	0.33165	0.0084	1846.4	40.6	1889.1	32
0.02718	0.10256	0.00256	629.4	15	626.7	18.4
145.43966	1.78669	2.04724				
	8.28272	49.68608				
0.59894	0.20772	0.00928				
34.08996	2.24701	0.3226				
0.76104	0.15606	0.01372				
177.8369	1.70352	1.77698				
1268.77966	6.78556	10.29552				
169.32236	3.52035	1.71674				
34.17068	2.35423	0.30658				
	-7.46419	55.18332				
675.63946	-0.38691	2.27918				
0.08184	0.13579	0.00468	820.8	26.6	849.7	42
0.29058	0.14362	0.00778				
	76.50069	125.96022				
	217.23091	234.0906				
2.08402	0.76137	0.01984				
1049.20948	1.75026	5.61892				
741.71784	4.24878	9.40134				
0.03788	0.11987	0.00306	729.8	17.6	764.2	22.2
457.02148	-2.83373	5.70864				
	7.43069	25.59956				
0.14614	0.11592	0.00504				
268.96586	0.60098	1.66824				
40.8827	0.80783	0.53762				
297.17252	0.88498	1.44268				

0.13026	0.11964	0.00378				
1.4071	0.06295	0.01902				
0.91648	0.02071	0.01276				
162.87342	0.20968	1.03792				
163.2131	1.24185	2.17292				
225.89538	-1.91942	4.01508				
0.04922	0.13976	0.00354	843.3	20	946.2	24.6
	3.74089	11.6603				
0.11914	0.11533	0.00414				
653.01008	4.50378	11.32744				
0.14938	0.1192	0.0047				
	-22.95223	23.13534				
0.18024	0.12015	0.00576				
0.04572	0.13294	0.00352	804.6	20	810.5	25.4
51.01302	1.13451	0.6859				
198.53904	0.21132	2.22282				
0.25784	0.09652	0.0069				
142.17526	1.4723	1.70448				
	-12.69963	83.63446				
10.87604	0.63833	0.12382				
8.9994	0.68994	0.10182				
97.427	1.18614	1.16342				
307.69174	3.38218	4.60686				
100.9246	1.20798	0.90616				
493.56818	2.4846	3.58998				
1.4493	0.24344	0.01968				
	6.32404	14.28356				
0.1634	0.14054	0.00532				
	26.36552	73.76222				
0.97156	0.14608	0.01714				
	3.75955	65.75554				
1826.98034	1.47712	4.5864				
896.66784	6.6156	8.03808				
3.52366	0.17075	0.06218				
1073.30334	-1.02923	4.31204				
0.08628	0.11028	0.00338				
649.7221	7.12778	5.87924				
0.02992	0.04642	0.00116	292.5	7.2	713.8	19.2
	8.48321	13.19496				
1055.07128	6.90871	10.44266				
0.1416	0.09426	0.00428				
641.65436	3.02878	4.4505				
116.33194	0.26363	0.75796				
8.40156	1.48401	0.07406				
34.2106	3.16037	0.29266				
	229.23752	451.07342				
0.03318	0.09137	0.00254	563.6	15	557.6	22.8
1164.87292	15.22031	55.92194				

301.04648	4.27397	3.06504				
310.48722	2.74908	4.50096				
163.26088	0.78261	1.69578				
	14.67141	30.10684				
539.57904	2.14055	5.07756				
168.19286	3.20794	3.37136				
7.09372	0.60397	0.0708				
737.51954	3.19424	6.7785				
	-5.36193	32.47276				
200.09056	1.54979	2.2052				
0.05104	0.14135	0.00384	852.3	21.6	830.6	27.4
0.18252	0.13136	0.00474				
1.14662	0.22981	0.01684				
	7.54744	16.79362				
26.69068	0.85329	0.26702				
3.32678	0.11262	0.04188				
	6.52949	165.77358				
6.099	1.30842	0.05486				
1582.6029	8.86202	10.97636				
0.11492	0.13305	0.00498				
0.2552	0.04627	0.00274				
1.65626	0.35693	0.01648				
83.01722	1.56886	1.284				
987.4237	3.44211	13.30822				
0.27696	0.1146	0.00618				
748.9516	3.47787	6.13234				
201.62052	3.09309	1.66228				
525.01464	-4.94568	4.87548				
0.0367	0.12527	0.00316	760.8	18.2	756.4	21.6
1122.92724	16.73432	9.81522				
56.50022	0.74752	0.71282				
1617.406	-3.81543	17.91312				
0.07366	0.11998	0.0036				
999.5431	5.69823	12.49076				
915.6853	0.08779	2.99136				
192.2272	3.02722	2.53394				
0.03306	0.0973	0.0026	598.6	15.2	610.8	22
0.2133	0.11744	0.00496				
84.45468	0.62539	0.68094				
867.05798	2.50409	5.34522				
84.7107	0.53489	0.85484				
1638.56726	0.90664	3.94444				
1320.521	-2.35068	6.96374				
0.8477	0.21318	0.01202				
10.82862	0.19317	0.12474				
462.29742	25.90498	3.78544				
0.15282	0.06169	0.00172				
	28.51645	28.7878				
	23.78641	203.33814				
1370.73754	8.6811	12.99666				
1109.65198	-3.89682	9.05538				
	-90.82253					

0.04836	0.07379	0.0017	458.9	10.2	1012.1	23.6
0.0274	0.09759	0.00232	600.3	13.6	601.4	19
0.03138	0.10192	0.00244	625.7	14.2	666.2	20.4
0.095	0.0923	0.0043	569.1	25.4	614.5	59
70.37664	0.53065	0.5454				
0.03106	0.09844	0.00246	605.3	14.4	585	21.2
0.05108	0.12404	0.00338	753.8	19.4	767.3	29
0.05176	0.11823	0.00328	720.4	19	744.2	30
0.05398	0.12143	0.00344	738.8	19.8	752.2	30.8
0.29312	0.4628	0.01068	2451.9	47	2466.1	33.6
0.06134	0.13108	0.00394	794	22.4	753.4	34.6
0.07528	0.14665	0.00426	882.2	24	955.7	35.6
0.0573	0.13523	0.00374	817.6	21.2	813.8	31
0.04942	0.1404	0.00352	846.9	19.8	845.7	26.4
0.0292	0.08126	0.00212	503.6	12.6	525.5	21

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2486.9	531.8	-70.5	-98.9		
799.7	73.8	-1.4	-5.2	758.1	18
952.5	56.6	-10.5	-33.2	636.6	14.2
729.4	82.6	1.8	7.6	784.6	19.2
1194.8	52.4	-9.9	-26.7	875.5	19.2
2225.4	39.4	-25.4	-44.9		
2425.5	44.6	-15	-26.3		
802.2	71.2	-1.7	-6.4	751.3	17.6
898.7	51.4	-4.9	-16.5	750.6	16.2
1095.1	50	-19.8	-54.7		
626.8	108	-4.4	-19.9	502	13.6
2552.4	41.6	-61.3	-89.1		
-192.1	277.4	15.4	-196.3		
682.7	68.6	2.1	8.6	741.6	17.6
944.1	84.8	-6.4	-21	745.5	19.6
779.2	54.2	-3.8	-14.6	665.2	15.2
760.4	64	0.9	3.1	784.1	18.4
563.4	62.8	1.6	7.6	606.4	14.2
599.2	70.8	0.8	3.7	621.2	15
608.3	81.2	0.1	0	608.1	15.2
662.3	91	0.7	2.8	681	17.8

608.6	61.8	-0.9	-4.3	582.2	13.6
559.7	54.8	1.5	7.2	600.2	13.8
720.3	83	2.2	8.9	784.6	20
898.7	123.8	-1.5	-5.5	849.6	26.8
886.1	65	-2.1	-7.6	818.5	19.4
902	57.8	-5.3	-18.1	738.7	17.2
659.9	148.2	-2.2	-9.7	595.9	19.6
1937.8	49.2	-2.3	-4.7	1937.8	49.2
618.6	65.8	0.4	1.7	629.4	15
927.5	132	-3.4	-11.5	820.8	26.6
867.6	67.8	-4.5	-15.9	729.8	17.6

1195.3	60.8	-10.9	-29.4	843.3	20
827.8	77	-0.7	-2.8	804.6	20
2449.6	47.4	-59	-88.1		
534.3	99.4	1.1	5.5	563.6	15

774.3	84.2	2.6	10.1	852.3	21.6
744.3	67.4	0.6	2.2	760.8	18.2
657.5	85	-2	-9	598.6	15.2

2538.7	47.8	-54.7	-81.9		
606.8	74.2	-0.2	-1.1	600.3	13.6
806.7	71.6	-6.1	-22.4	625.7	14.2
785.9	250	-7.4	-27.6	569.1	25.4
507.7	89.6	3.5	19.2	605.3	14.4
807.6	97.6	-1.8	-6.7	753.8	19.4
817.1	103.4	-3.2	-11.8	720.4	19
793	106.2	-1.8	-6.8	738.8	19.8
2478.3	47.2	-0.6	-1.1	2478.3	47.2
635.4	123.8	5.4	25		
1130	98.8	-7.7	-21.9	882.2	24
803.8	100.4	0.5	1.7	817.6	21.2
843.4	80.6	0.1	0.4	846.9	19.8
622.2	95.6	-4.2	-19.1	503.6	12.6

Sample 45 Main Nile @ Wadi Halfa 59 grain analysed 47 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X45_G001	295.2	50.3	0.7037	0.08421	0.0027	1.73869
X45_G002	116.6	14.8	0.2394	0.06427	0.00342	1.13158
X45_G003	33.3	3.6	0.2733	0.06349	0.0064	0.93864
X45_G004	551.1	55.6	0.6827	0.0584	0.00196	0.72365
X45_G005	64	28.8	1.0256	0.11888	0.00388	5.89592
X45_G006	363.2	52.3	0.6011	0.06829	0.00222	1.23788
X45_G007	74	6.4	0.3081	0.05951	0.00406	0.69971
X45_G008	235.9	34.1	0.5884	0.06467	0.00208	1.1749
X45_G009	88.6	12.2	0.3147	0.06618	0.00258	1.23777
X45_G010				-20.68902	927.17578	203.1976
X45_G011	107.3	10.3	0.071	0.06071	0.00256	0.8535
X45_G012	195.3	23.2	0.3526	0.0669	0.00252	1.07023
X45_G013	142.6	19	0.4849	0.06415	0.00284	1.10196
X45_G014	247.9	31.3	0.4422	0.06899	0.00228	1.1387
X45_G015	68.6	7.9	0.2948	0.0637	0.0041	0.99704
X45_G016	138.6	18.2	0.6034	0.06923	0.00278	1.13765
X45_G017						
X45_G018	79.3	9.4	0.705	0.12907	0.00608	1.92096
X45_G019	441.2	55.6	0.4407	0.06378	0.00194	1.06488
X45_G020	697.7	79	0.3474	0.07241	0.00206	1.10781
X45_G021	197.9	27.6	0.677	0.06737	0.00258	1.15345
X45_G022	335.9	32.1	0.013	0.0624	0.00194	0.8926
X45_G023	273.2	39	0.2721	0.06878	0.00218	1.34823
X45_G024	118	20.4	0.3015	0.07624	0.00274	1.77872
X45_G025	347.2	43.1	0.2734	0.07169	0.00224	1.22312
X45_G026	102	12.1	0.9987	0.06006	0.00322	0.81284
X45_G027	388.5	35.1	0.2421	0.13097	0.0039	1.65235
X45_G028	11188.9	211.8	1.004	0.09646	0.00264	0.22339
X45_G029	1043.6	180.4	1.4629	0.06907	0.00184	1.32792
X45_G030	1534.1	100.1	0.8707	0.08069	0.00216	0.67149
X45_G031	1311.5	116.8	0.4268	0.06219	0.0017	0.72206
X45_G032	58.6	8	0.6401	0.06404	0.00388	1.076
X45_G033	86	0.4	0.7652	0.05854	0.03152	0.03092
X45_G034	193.3	20.4	0.7872	0.06069	0.00274	0.76814
X45_G035	149.9	14.2	0.1995	0.06239	0.00296	0.82703
X45_G036	283.2	38.7	0.5234	0.06651	0.00216	1.16135
X45_G037	116.6	16.3	0.5512	0.06579	0.0029	1.16851
X45_G038	425.2	53.3	0.439	0.06318	0.00196	1.03645
X45_G039	363.2	54.6	0.8724	0.07776	0.00238	1.35411
X45_G040	195.9	26.3	0.3897	0.06722	0.00232	1.19811
X45_G041	392.5	44.8	0.3948	0.06476	0.00202	0.97166
X45_G042	1258.8	116.7	0.1569	0.13132	0.00354	1.64305
X45_G043	1788.6	248.8	0.2375	0.06797	0.00182	1.30799
X45_G044	179.9	28.3	0.7195	0.06573	0.00246	1.25892
X45_G045	6109.6	259.2	0.8158	0.05882	0.00162	0.31544
X45_G046	181.9	24.4	0.4112	0.06688	0.00266	1.18549
X45_G047	337.9	76	1.4418	0.07595	0.0025	1.75122
X45_G048	74.6	33.4	0.3794	0.17641	0.00566	10.16329
X45_G049	371.2	46.3	0.5509	0.06453	0.0023	1.02229
X45_G050	87.3	0.5	1.3502	0.10573	0.03558	0.0616

X45_G051	169.9	26.2	0.8132	0.06694	0.00252	1.218
X45_G052	196.6	28.4	0.3944	0.06628	0.00238	1.26726
X45_G053	246.6		1.8967	0.13709	0.00422	2.88071
X45_G054	102	14.1	0.5389	0.06425	0.00292	1.12243
X45_G055	134.6	31.3	0.9232	0.07428	0.00264	1.97145
X45_G056	369.2	43.6	0.8269	0.06257	0.00222	0.87238
X45_G057	122	14.7	0.7931	0.06205	0.00308	0.898
X45_G058	122.6	18.6	0.6928	0.06681	0.00322	1.24149
X45_G059	4194.4	54	0.5728	0.25071	0.0075	0.39384

79.7% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.05324	0.1498	0.00348	899.8	19.6	1023	25.6
0.05828	0.12773	0.00352	774.9	20.2	768.5	32.4
0.0913	0.10725	0.0042	656.8	24.4	672.2	53.2
0.02356	0.08989	0.002	554.9	11.8	552.8	17.2
0.1912	0.35982	0.00916	1981.3	43.4	1960.6	36
0.03902	0.13151	0.00296	796.5	16.8	817.9	22.2
0.04606	0.0853	0.00258	527.7	15.4	538.6	31.2
0.03658	0.13181	0.00294	798.2	16.8	788.9	21.4
0.04674	0.13569	0.00328	820.2	18.6	817.9	25.8
511.51822	-0.07125	3.1949				
0.03466	0.102	0.0025	626.1	14.6	626.6	22.8
0.03894	0.11606	0.00276	707.8	16	738.9	23.4
0.04712	0.12462	0.00314	757.1	18	754.3	27.2
0.03636	0.11974	0.00272	729.1	15.6	771.9	21.6
0.06194	0.11356	0.00344	693.4	20	702.3	36
0.04416	0.11922	0.00292	726.1	16.8	771.4	25.4
0.0846	0.10798	0.0032	661	18.6	1088.4	37.2
0.03168	0.12113	0.00266	737.1	15.2	736.2	19.6
0.0307	0.111	0.0024	678.6	14	757.1	19
0.04276	0.12421	0.00298	754.7	17	778.9	24.6
0.02706	0.10378	0.00228	636.5	13.4	647.8	18.2
0.04164	0.14222	0.00318	857.2	18	866.8	22.6
0.06226	0.16926	0.00406	1008	22.4	1037.7	28
0.03732	0.12378	0.00276	752.3	15.8	811.2	21.4
0.04198	0.09819	0.00268	603.8	15.8	604	27.4
0.0473	0.09153	0.00208	564.6	12.2	990.5	23.6
0.00594	0.0168	0.00036	107.4	2.2	204.7	6.4
0.03474	0.13949	0.00296	841.8	16.8	858	19.8
0.0176	0.06037	0.00128	377.9	7.8	521.6	14
0.01934	0.08423	0.00178	521.3	10.6	551.9	14.8
0.06298	0.12189	0.00362	741.4	20.8	741.7	35.6
0.0164	0.00383	0.00038	24.6	2.4	30.9	16.6
0.03352	0.09183	0.00232	566.4	13.6	578.7	22.8
0.03766	0.09616	0.0025	591.9	14.8	612	24.8
0.03664	0.12667	0.00284	768.8	16.2	782.6	21.6
0.0496	0.12885	0.0033	781.3	18.8	785.9	27.8
0.03134	0.11901	0.00262	724.9	15	722.1	19.6
0.0404	0.12634	0.0028	767	16	869.3	22
0.0402	0.1293	0.00298	783.9	17	799.7	23
0.02964	0.10886	0.00242	666.1	14	689.3	19.2
0.0434	0.09077	0.00194	560.1	11.4	986.9	21.8
0.0344	0.1396	0.00296	842.4	16.8	849.2	19.6
0.04586	0.13896	0.00332	838.8	18.8	827.4	25.2
0.00856	0.03891	0.00082	246.1	5	278.4	8.4
0.04574	0.12859	0.00314	779.8	18	793.9	25.8
0.05642	0.16729	0.00384	997.2	21.2	1027.6	26
0.32418	0.41797	0.01064	2251.3	48.4	2449.7	37.8
0.03552	0.11493	0.00268	701.3	15.4	715.1	21.8
0.01984	0.00423	0.00042	27.2	2.6	60.7	20.6

0.04468	0.132	0.00316	799.3	18	808.9	24.8
0.0444	0.13871	0.00326	837.4	18.4	831.2	24.4
0.08616	0.15245	0.0035	914.7	19.6	1376.9	29
0.04936	0.12674	0.00326	769.2	18.6	764.1	28
0.06838	0.19256	0.00458	1135.2	24.8	1105.8	28.8
0.03012	0.10115	0.00234	621.1	13.6	636.9	20
0.04298	0.105	0.0028	643.6	16.4	650.7	27
0.05792	0.13481	0.00364	815.2	20.6	819.6	31
0.01134	0.0114	0.00026	73.1	1.6	337.2	10.8

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
1297.4	62.4	-12	-30.6	899.8	19.6
750.5	112.4	0.8	3.2	774.9	20.2
724.7	213.8	-2.3	-9.4	656.8	24.4
544.8	73.4	0.4	1.9	554.9	11.8
1939.5	58.4	1.1	2.2	1939.5	58.4
877.4	67.2	-2.6	-9.2	796.5	16.8
585.8	148	-2	-9.9	527.7	15.4
763.6	67.8	1.2	4.5	798.2	16.8
812.1	81.6	0.3	1	820.2	18.6
629	90.8	-0.1	-0.5	626.1	14.6
834.7	78.4	-4.2	-15.2	707.8	16
746.6	93.6	0.4	1.4	757.1	18
898.4	68.2	-5.5	-18.9	729.1	15.6
731.7	136.4	-1.3	-5.2	693.4	20
905.6	82.8	-5.9	-19.8	726.1	16.8
2085.3	82.8	-39.3	-68.3		
734.3	64.4	0.1	0.4	737.1	15.2
997.5	57.8	-10.4	-32	678.6	14
849.2	79.6	-3.1	-11.1	754.7	17
687.8	66.4	-1.7	-7.5	636.5	13.4
892.1	65.4	-1.1	-3.9	857.2	18
1101.4	71.8	-2.9	-8.5	1008	22.4
977.2	63.6	-7.3	-23	752.3	15.8
605.7	116	0	-0.3	603.8	15.8
2111	52.2	-43	-73.3		
1556.7	51.4	-47.5	-93.1		
900.8	55	-1.9	-6.6	841.8	16.8
1213.9	52.6	-27.6	-68.9		
680.6	58.4	-5.5	-23.4	521.3	10.6
743	128.2	0	-0.2	741.4	20.8
550	1175.6	-20.3	-95.5		
628.3	97.2	-2.1	-9.9	566.4	13.6
687.5	101.2	-3.3	-13.9	591.9	14.8
822.5	67.8	-1.8	-6.5	768.8	16.2
799.7	92.4	-0.6	-2.3	781.3	18.8
714.3	66	0.4	1.5	724.9	15
1140.7	60.8	-11.8	-32.8	767	16
844.6	71.8	-2	-7.2	783.9	17
766.5	65.8	-3.4	-13.1	666.1	14
2115.7	47.2	-43.2	-73.5		
867.6	55.6	-0.8	-2.9	842.4	16.8
797.8	78.4	1.4	5.1	838.8	18.8
560.4	60	-11.6	-56.1	246.1	5
834	82.8	-1.8	-6.5	779.8	18
1093.8	66	-3	-8.8	997.2	21.2
2619.4	53.4	-8.1	-14.1	2619.4	53.4
759	75.2	-1.9	-7.6	701.3	15.4
1727	617.8	-55.2	-98.4		

835.9	78.4	-1.2	-4.4	799.3	18
815.2	75	0.7	2.7	837.4	18.4
2190.8	53.6	-33.6	-58.2		
749.9	96	0.7	2.6	769.2	18.6
1049.1	71.6	2.7	8.2		
693.6	75.6	-2.5	-10.5	621.1	13.6
675.8	106.2	-1.1	-4.8	643.6	16.4
831.9	100.4	-0.5	-2	815.2	20.6
3189.3	47.4	-78.3	-97.7		

Sample 46 Main Nile @ Aswan 4 grain analysed 1 concordant ages 25.0

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X46_G001				0.43384	0.1174	14.3692
X46_G002	702.4	68.9	0.449	0.06998	0.00224	0.88448
X46_G003				0.04472	0.06686	27.49713
X46_G004	1506.1	115.8	0.7112	0.08052	0.00248	0.77839

% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
3.2134	0.2403	0.0451				
0.02816	0.0917	0.00214	565.6	12.6	643.4	18.8
48.4406	4.46092	4.29558				
0.02374	0.07013	0.00162	436.9	9.8	584.6	17.2

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
927.8	65.8	-12.1	-39	565.6	12.6
1209.8	60.6	-25.3	-63.9		

Sample 2408L Main Nile @ Aswan 32 grain analysed 27 concordant ages

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X2408L_G001	53.6	5.5	0.8557	0.05832	0.00404	0.69406
X2408L_G002	353.8	28.2	0.3237	0.05523	0.00184	0.59993
X2408L_G003	53.6	0.2	0.6788	0.0472	0.04218	0.024
X2408L_G004	265.8	28.6	0.3004	0.06179	0.00202	0.90678
X2408L_G005	206.1	22.1	0.7544	0.06018	0.00224	0.77825
X2408L_G006	407.4	79.5	0.9755	0.07274	0.00192	1.60523
X2408L_G007	949	17.8	20.3946	0.30268	0.01222	0.20395
X2408L_G008				-0.21735	1.03982	
X2408L_G009	211.8	30.6	0.4476	0.06543	0.00204	1.23979
X2408L_G010	75.8	11.6	0.8343	0.1245	0.00482	2.15532
X2408L_G011	55.3	7.9	0.4394	0.07342	0.00348	1.36067
X2408L_G012				-0.69132	2.96764	-76.76031
X2408L_G013	35.3	3.6	0.9113	0.05648	0.00444	0.6607
X2408L_G014	5475.3	378.7	0.099	0.06332	0.00156	0.63306
X2408L_G015	166.4	20.7	0.5933	0.06568	0.00262	1.01866
X2408L_G016	758.2	81.6	0.6923	0.06448	0.00188	0.84987
X2408L_G017	99.3	13.9	0.501	0.06878	0.00302	1.23248
X2408L_G018	103.7	13.5	0.3822	0.0652	0.00264	1.12981
X2408L_G019	60.1	7.1	0.2649	0.06691	0.00386	1.09236
X2408L_G020	418.3	41	0.3334	0.05806	0.00192	0.77038
X2408L_G021	85	17.1	0.7719	0.07299	0.00282	1.74254
X2408L_G022	128.1	18.3	0.746	0.06539	0.0025	1.11813
X2408L_G023	65.8	8.3	0.461	0.07175	0.00348	1.16471
X2408L_G024	163.4	17.6	0.3435	0.06558	0.00224	0.95291
X2408L_G025	198.3	28.6	0.6938	0.06257	0.00198	1.09857
X2408L_G026	69.7	9.2	0.4361	0.06551	0.003	1.1336
X2408L_G027	205.7	45.8	0.6122	0.07864	0.00226	2.17273
X2408L_G028	31.4	0.1	1.1	0.09884	0.08704	0.03466
X2408L_G029	54.9	6.9	0.7568	0.06509	0.00384	0.99105
X2408L_G030	139.9	19	0.8775	0.06226	0.00258	0.96047
X2408L_G031	599.1	79	1.0747	0.0603	0.0018	0.88458
X2408L_G032	634.4	92.4	0.4599	0.06499	0.00182	1.22893

84.4% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.04612	0.08634	0.00268	533.9	16	535.2	31.6
0.01944	0.0788	0.00176	489	10.6	477.2	15.2
0.02116	0.00369	0.00054	23.7	3.4	24.1	21.6
0.0288	0.10646	0.0024	652.2	14	655.3	19.2
0.02806	0.09382	0.0022	578.1	13	584.5	19.6
0.04156	0.1601	0.00342	957.3	19	972.3	21.2
0.00698	0.00489	0.00014	31.4	0.8	188.5	8.6
0.03778	0.13745	0.00308	830.2	17.4	818.8	21.6
0.07884	0.12559	0.00334	762.7	19.2	1166.8	32.6
0.06212	0.13445	0.00368	813.2	21	872.2	32
346.93338	0.80551	1.97316				
0.0499	0.08486	0.00284	525.1	16.8	515	34.6
0.01538	0.07253	0.00152	451.4	9.2	498	12.8
0.03922	0.11252	0.00276	687.4	16	713.2	24
0.02412	0.09563	0.00208	588.7	12.2	624.6	17
0.05202	0.13	0.00336	787.9	19.2	815.5	28.6
0.04422	0.1257	0.0031	763.3	17.8	767.7	25.6
0.0605	0.11844	0.00352	721.6	20.2	749.6	34.4
0.02472	0.09626	0.00216	592.5	12.8	580	17.6
0.0652	0.1732	0.00432	1029.7	23.8	1024.4	29.6
0.04148	0.12405	0.003	753.8	17.2	762.1	24.2
0.05434	0.11776	0.00322	717.7	18.6	784.2	30.4
0.0316	0.10541	0.00242	646	14.2	679.6	20.4
0.03386	0.12738	0.00286	772.9	16.4	752.7	20.6
0.04994	0.12554	0.0033	762.4	19	769.5	28.4
0.06122	0.20044	0.00444	1177.7	23.8	1172.4	25.2
0.0297	0.00254	0.00052	16.4	3.4	34.6	30.8
0.05598	0.11046	0.0033	675.4	19.2	699.3	33.4
0.03854	0.11191	0.00278	683.8	16.2	683.5	24
0.02568	0.10642	0.00232	651.9	13.6	643.5	17.6
0.03374	0.13719	0.00296	828.8	16.8	813.9	19.8

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
541.8	151.4	-0.3	-1.5	533.9	16
421.5	74.4	2.5	16	489	10.6
59.4	2130	-1.4	-60	23.7	3.4
666.8	70	-0.5	-2.2	652.2	14
610.1	80.4	-1.1	-5.2	578.1	13
1006.7	53.6	-1.5	-4.9	957.3	19
3484	62.4	-83.3	-99.1		
788.2	65.4	1.4	5.3	830.2	17.4
2021.7	68.6	-34.6	-62.3		
1025.6	95.8	-6.8	-20.7	813.2	21
471.3	174	1.9	11.4	525.1	16.8
719	52.4	-9.4	-37.2	451.4	9.2
796.2	83.6	-3.6	-13.7	687.4	16
757.4	61.6	-5.7	-22.3	588.7	12.2
892.1	90.6	-3.4	-11.7	787.9	19.2
780.8	85.2	-0.6	-2.2	763.3	17.8
835	120.2	-3.7	-13.6	721.6	20.2
532	72.4	2.2	11.4	592.5	12.8
1013.7	78.2	0.5	1.6	1029.7	23.8
786.9	80.2	-1.1	-4.2	753.8	17.2
978.9	98.8	-8.5	-26.7	717.7	18.6
793	71.6	-4.9	-18.5	646	14.2
693.6	67.4	2.7	11.4	772.9	16.4
790.8	96	-0.9	-3.6	762.4	19
1163.1	57	0.5	1.3	1163.1	57
1602.3	1642.6	-52.7	-99		
777.2	124	-3.4	-13.1	675.4	19.2
683.1	88.4	0	0.1	683.8	16.2
614.4	64.4	1.3	6.1	651.9	13.6
774	59	1.8	7.1	828.8	16.8

Sample 2401B Main Nile @ Luxor 20 grain analysed 15 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X2401S_G001	55.7	4.9	0.6105	0.12364	0.0075	1.29691
X2401S_G002	325.1	22.6	0.1849	0.05712	0.00216	0.56545
X2401S_G003	201.5	26.7	0.6005	0.06163	0.00226	1.02235
X2401S_G004	198.5	24.8	0.2818	0.06354	0.00236	1.08526
X2401S_G005	73.9	8.3	0.287	0.06783	0.00366	1.03266
X2401S_G006	155.6	20.7	1.5383	0.0568	0.0025	0.74639
X2401S_G007	84.7	8	0.2614	0.06049	0.00364	0.7911
X2401S_G008	2635.7	262.5	0.1199	0.06155	0.00158	0.88563
X2401S_G009	1775.7	146.8	2.4026	0.08572	0.00238	0.6752
X2401S_G010	96.5	11.9	0.4582	0.06055	0.00296	0.97706
X2401S_G011	162.1	24	0.3465	0.06514	0.0024	1.29736
X2401S_G012	529	61.1	0.2349	0.06616	0.00198	1.05773
X2401S_G013	42.9	12.7	0.7979	0.02125	0.00168	0.7641
X2401S_G014	81.8	0.4	0.5692	0.0645	0.02772	0.04067
X2401S_G015	463	62.9	0.4053	0.19457	0.00524	3.27577
X2401S_G016	789.1	88.8	0.1252	0.06332	0.0018	1.02584
X2401S_G017	146.3	6.2	0.506	0.05011	0.0039	0.27434
X2401S_G018	145.3	17.5	0.5493	0.06145	0.00264	0.94747
X2401S_G019	118.2	11.3	0.3342	0.0601	0.0033	0.78002
X2401S_G020	83.2	9.6	1.1215	0.05909	0.00364	0.74564

75.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.0729	0.07613	0.00264	473	15.8	844.4	40
0.02082	0.07184	0.0017	447.2	10.2	455.1	16.4
0.03672	0.12039	0.00286	732.8	16.4	715.1	22.4
0.03924	0.12395	0.00298	753.3	17	746.2	23.4
0.0538	0.11048	0.00318	675.5	18.4	720.3	31.6
0.03196	0.09536	0.0024	587.2	14.2	566.1	22
0.04586	0.0949	0.0028	584.5	16.4	591.8	30
0.0228	0.10442	0.00224	640.3	13	644	16
0.01852	0.05716	0.00126	358.3	7.6	523.9	14.6
0.04618	0.1171	0.00314	713.9	18.2	692.1	28
0.04664	0.14453	0.00348	870.2	19.6	844.6	25.2
0.03128	0.11601	0.0026	707.6	15	732.7	19.6
0.0599	0.26088	0.00736	1494.3	37.6	576.4	37
0.01704	0.00458	0.00046	29.5	3	40.5	17.6
0.08692	0.12217	0.00274	743	15.8	1475.3	27.2
0.02912	0.11755	0.0026	716.4	15	716.8	18.6
0.02062	0.03973	0.00124	251.2	7.6	246.2	18.4
0.03946	0.11187	0.00284	683.6	16.4	676.8	24.6
0.04136	0.09417	0.00266	580.2	15.6	585.5	27.4
0.04426	0.09156	0.00272	564.8	16	565.7	29.6

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
2009.4	107.6	-44	-76.5		
496.2	83.4	-1.7	-9.9	447.2	10.2
661.3	78.6	2.5	10.8	732.8	16.4
726.4	78.8	0.9	3.7	753.3	17
863.4	112	-6.2	-21.8	675.5	18.4
483.8	97.2	3.7	21.4	587.2	14.2
621.1	129.8	-1.2	-5.9	584.5	16.4
658.5	55	-0.6	-2.8	640.3	13
1331.9	53.8	-31.6	-73.1		
623.3	105.4	3.1	14.5	713.9	18.2
778.9	77.4	3	11.7	870.2	19.6
811.4	62.6	-3.4	-12.8	707.6	15
		159.3			
758.1	906.6	-27.2	-96.1		
2781.2	44.2	-49.6	-73.3		
719	60.4	-0.1	-0.4	716.4	15
200.1	180.8	2	25.5	251.2	7.6
655	92.2	1	4.4	683.6	16.4
607.2	118.8	-0.9	-4.5	580.2	15.6
570.4	134	-0.2	-1	564.8	16

Sample 1989S Wadi Qena @ Qena 120 grain analysed 88 concordant ages

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X1989S_G001	320.1	117	0.263	0.1176	0.00262	5.69632
X1989S_G002	134.3	15.2	1.1166	0.07447	0.00294	0.9209
X1989S_G003	51.4	6.1	0.4076	0.06274	0.0037	0.98796
X1989S_G004	131.2	17.5	0.5309	0.06364	0.00246	1.08303
X1989S_G005	152.3	25.5	1.2125	0.06616	0.00228	1.18792
X1989S_G006	123.3	15.1	0.9741	0.05847	0.00246	0.81246
X1989S_G007	150.3	23.6	2.0407	0.07915	0.003	1.11532
X1989S_G008	273.9	35.5	0.3294	0.06396	0.002	1.12242
X1989S_G009	68.9	13.6	0.4429	0.07353	0.00318	1.86941
X1989S_G010	29.5	8.4	2.1436	0.07683	0.00452	1.92468
X1989S_G011	187.1	31.5	0.7918	0.06842	0.00228	1.36642
X1989S_G012	301.5	35.8	0.8737	0.06175	0.00194	0.85398
X1989S_G013	47.5	6	1.1297	0.05973	0.0044	0.82129
X1989S_G014	341.5	64.1	0.3683	0.07332	0.00182	1.82281
X1989S_G015	570	95.4	0.3626	0.07175	0.0017	1.59808
X1989S_G016	2184.3	91.1	0.221	0.13101	0.00354	0.71876
X1989S_G017	68.6	9.4	0.3605	0.06413	0.00304	1.16777
X1989S_G018	39.4	6.7	0.3452	0.07484	0.00372	1.69843
X1989S_G019	195.3	26.8	0.8153	0.06563	0.00216	1.06414
X1989S_G020	304.9		2.023	0.34191	0.00806	5.17154
X1989S_G021	232	78.1	0.8876	0.10205	0.00242	3.94513
X1989S_G022	216.4	26.8	0.4871	0.06	0.00192	0.95733
X1989S_G023	74.9	11	0.4904	0.06484	0.00278	1.22071
X1989S_G024	71.8	11	0.572	0.07055	0.0031	1.36044
X1989S_G025	438.3	44.9	0.3362	0.05987	0.00166	0.82878
X1989S_G026	102.7	12	0.4677	0.06332	0.00266	0.96331
X1989S_G027	47.1	5.4	0.7648	0.05699	0.00364	0.77705
X1989S_G028	557.4	62.8	0.0161	0.06394	0.0016	1.07302
X1989S_G029	1072.4	68.4	0.3062	0.08349	0.00218	0.74963
X1989S_G030	378.3	40.9	0.7347	0.05899	0.00178	0.77218
X1989S_G031	188.2	19.4	0.4571	0.05817	0.00204	0.78503
X1989S_G032	10831.4	256.1	0.2899	0.08755	0.00192	0.27302
X1989S_G033	669.6	79.8	0.7086	0.07115	0.002	1.04037
X1989S_G034	52.2	7.5	0.6599	0.06656	0.00348	1.17672
X1989S_G035	254.9	32.5	0.8366	0.05978	0.00188	0.89612
X1989S_G036	92.9	44.2	0.5854	0.16048	0.00394	9.26199
X1989S_G037	227.5	36.1	0.8722	0.06508	0.00198	1.2053
X1989S_G038	558	94.1	1.1499	0.06676	0.00166	1.22375
X1989S_G039	509.7	46.7	1.1955	0.07577	0.00216	0.78659
X1989S_G040	141.1	62.8	1.042	0.12345	0.00308	5.98119
X1989S_G041	332	7	0.9237	0.30043	0.01116	0.72649
X1989S_G042	58.8	6.5	0.8291	0.06031	0.0041	0.78378
X1989S_G043	2696.1	108.7	2.4267	0.09925	0.0028	0.38887
X1989S_G044	164.8	17	0.454	0.05934	0.00268	0.80011
X1989S_G045	126.3	10.3	0.0261	0.06005	0.00256	0.72842
X1989S_G046	761.1	110.8	0.7914	0.08796	0.0021	1.52203
X1989S_G047	58.9	5.7	0.7361	0.07272	0.00418	0.86301
X1989S_G048	698.8	80.3	0.1309	0.06392	0.00156	1.06723
X1989S_G049	478.4	60.8	0.6845	0.06035	0.00158	0.93787
X1989S_G050	868.4	68.8	0.0799	0.06368	0.00208	0.74344

X1989S_G051	102.7	14.1	0.3039	0.06461	0.00286	1.20867
X1989S_G052				1.02221	0.5418	776.35217
X1989S_G053	1170	114.7	1.5767	0.07762	0.00188	0.87647
X1989S_G054				1.53112	2.0154	
X1989S_G055	240.2	111.2	1.2963	0.1475	0.00336	7.10728
X1989S_G056	169.8	34.3	0.7704	0.07376	0.00222	1.7693
X1989S_G057	112	11.6	0.3936	0.05677	0.00252	0.78214
X1989S_G058	73.7	8.9	0.9672	0.05839	0.00322	0.80621
X1989S_G059	156.6	22.7	0.4174	0.07074	0.00232	1.34194
X1989S_G060	342	47	0.4659	0.06386	0.00178	1.13747
X1989S_G061	171.3	49.5	0.1666	0.11226	0.00278	4.48885
X1989S_G062	171.5	20.7	0.352	0.06218	0.00218	1.01127
X1989S_G063	17.1	2.1	1.1561	0.06578	0.00742	0.89095
X1989S_G064				0.79091	0.06724	59.31997
X1989S_G065	221.8	33.8	0.2515	0.07169	0.00208	1.50717
X1989S_G066	220.1	50.9	1.2709	0.07562	0.00208	1.80638
X1989S_G067				0.11812	0.00574	1.68413
X1989S_G068	4170.5	332.5	0.3476	0.16114	0.00342	1.58478
X1989S_G069				0.94464	0.15378	226.61081
X1989S_G070	472.8	168	0.595	0.10925	0.00246	4.78218
X1989S_G071				0.78952	0.03122	
X1989S_G072	119	12.5	0.4733	0.05952	0.0026	0.81157
X1989S_G073				0.9289	0.16392	682.80847
X1989S_G074	468.8	50.3	0.5808	0.05795	0.0016	0.78309
X1989S_G075				0.75023	0.08592	495.71719
X1989S_G076	68.1	10.8	0.726	0.07123	0.00316	1.37177
X1989S_G077	132.1	22.4	0.3609	0.07128	0.00236	1.61108
X1989S_G078	301.1	30.7	0.3904	0.05932	0.00186	0.80256
X1989S_G079	326.7	43.7	0.6585	0.06193	0.00178	1.02706
X1989S_G080	91.3	12.6	1.6675	0.0613	0.00298	0.81669
X1989S_G081	462.7	53.4	0.1056	0.06353	0.00168	1.06093
X1989S_G082	148.8	31.8	1.3024	0.07168	0.00228	1.60761
X1989S_G083	389.4	75.6	0.5136	0.07242	0.00182	1.79343
X1989S_G084	60	6.9	0.8021	0.06008	0.00356	0.82107
X1989S_G085				0.23	0.01684	3.84316
X1989S_G086	141.9	14.4	0.0997	0.06337	0.00234	0.93567
X1989S_G087	265.9	148.3	0.9402	0.17563	0.0038	10.92314
X1989S_G088	3107.4	86.5	0.8335	0.12066	0.00288	0.36722
X1989S_G089	327.4	46.6	0.4607	0.06484	0.00178	1.207
X1989S_G090				0.76863	0.0605	
X1989S_G091	89.2	10.3	0.3636	0.06421	0.00292	0.98722
X1989S_G092	389.5	45.8	0.1807	0.06412	0.00178	1.06227
X1989S_G093				0.80798	0.0179	476.44827
X1989S_G094	41	4.5	0.6717	0.06207	0.00436	0.84097
X1989S_G095	567.9	56.6	0.0924	0.06672	0.0017	0.97088
X1989S_G096	184.7	65.9	0.4506	0.16222	0.00388	7.53586
X1989S_G097	1265.1	115.5	0.7848	0.06076	0.0018	0.70569
X1989S_G098	3044.6	121	1.3246	0.06504	0.00192	0.29888
X1989S_G099	267.9	30.4	0.5719	0.0604	0.00222	0.86278
X1989S_G100	348.1		1.8112	0.05908	0.00184	0.75314
X1989S_G101	38.6	4	0.4481	0.05238	0.00408	0.70196
X1989S_G102	245.6	29.9	0.6772	0.0609	0.00196	0.91079
X1989S_G103	151.3	14.2	0.1066	0.05993	0.00232	0.81525
X1989S_G104	455.2	35.6	0.6741	0.05576	0.00172	0.53688
X1989S_G105	252.3	26.9	0.5882	0.06018	0.00204	0.80584

X1989S_G106	270.8	25.5	0.0572	0.05901	0.00192	0.81865
X1989S_G107	288.6	167.6	0.5085	0.17342	0.00374	11.97164
X1989S_G108	310.8	43.3	0.6648	0.06459	0.00178	1.11048
X1989S_G109	123.4	71.1	0.8562	0.15746	0.0037	10.07179
X1989S_G110	306.8	38.1	0.5737	0.06371	0.00186	0.99634
X1989S_G111	431.4	52.5	0.5611	0.0605	0.00164	0.93306
X1989S_G112	168.9	22.5	0.3105	0.06466	0.00216	1.16989
X1989S_G113				0.81727	0.01736	
X1989S_G114	418.4	169.3	0.5867	0.12599	0.00274	6.21136
X1989S_G115	154.8	17.7	0.9008	0.07072	0.0027	0.9257
X1989S_G116	159.8	16.8	0.4532	0.06294	0.00292	0.86786
X1989S_G117	1197.8	309.7	0.3877	0.14997	0.0032	5.44482
X1989S_G118	593	60.4	0.0522	0.06451	0.00174	0.97931
X1989S_G119	14.3	3.9	0.076	0.13088	0.00688	5.10743
X1989S_G120	663.5	76.1	0.3553	0.06988	0.00184	1.0722

73.3% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.13632	0.35109	0.008	1939.8	38.2	1930.8	27.6
0.0357	0.08963	0.00236	553.3	14	662.8	23
0.05668	0.11414	0.00352	696.7	20.4	697.7	33.6
0.04172	0.12334	0.00318	749.8	18.2	745.1	24.6
0.04118	0.13015	0.00324	788.7	18.4	795	23.4
0.03368	0.10073	0.00264	618.7	15.4	603.8	22.6
0.0417	0.10214	0.00268	626.9	15.6	760.7	24.6
0.03552	0.12719	0.00306	771.8	17.6	764.1	21.2
0.07996	0.18427	0.00518	1090.3	28.2	1070.3	34.2
0.1103	0.18158	0.00608	1075.6	33.2	1089.7	45.2
0.04588	0.14475	0.00358	871.5	20.2	874.6	24.4
0.02712	0.10024	0.0024	615.8	14	626.8	18.4
0.05852	0.09967	0.00342	612.5	20	608.8	37.2
0.04778	0.18019	0.00416	1068	22.8	1053.7	22.2
0.03998	0.16143	0.00366	964.7	20.4	969.5	20.4
0.01958	0.03977	0.00094	251.4	5.8	549.9	15.2
0.05434	0.13199	0.00372	799.2	21.2	785.6	30.2
0.08276	0.16449	0.00494	981.7	27.4	1007.9	37.2
0.0353	0.11753	0.00288	716.3	16.6	735.9	21.4
0.12572	0.10964	0.00262	670.7	15.2	1847.9	28.6
0.09964	0.28022	0.00648	1592.5	32.6	1623	26.8
0.03098	0.11564	0.0028	705.4	16.2	681.9	20
0.05158	0.13645	0.00368	824.6	20.8	810.1	28.2
0.0588	0.13977	0.00388	843.4	22	872.1	30.4
0.0236	0.10034	0.00234	616.4	13.8	612.9	16.6
0.03994	0.11027	0.00292	674.3	17	685	24.8
0.04828	0.09883	0.00312	607.5	18.4	583.8	31.6
0.02804	0.12164	0.00278	740	16	740.2	17.8
0.02016	0.06508	0.0015	406.4	9	568	15.2
0.02366	0.09488	0.00224	584.3	13.2	581	17
0.02772	0.09782	0.00242	601.6	14.2	588.3	19.2
0.0064	0.0226	0.0005	144.1	3.2	245.1	6.8
0.03008	0.10598	0.0025	649.4	14.6	724.1	19
0.06014	0.12814	0.0038	777.2	21.8	789.8	33
0.02862	0.10866	0.0026	665	15.2	649.7	19
0.24252	0.41834	0.01016	2252.9	46.2	2364.3	31.6
0.0373	0.13423	0.00322	812	18.4	803	21.4
0.03198	0.13287	0.00304	804.2	17.2	811.5	18.8
0.02278	0.07524	0.00178	467.6	10.6	589.2	16.6
0.15782	0.3512	0.0084	1940.3	40	1973.1	30
0.0238	0.01753	0.00052	112	3.2	554.5	20.4
0.0516	0.0942	0.0031	580.3	18.2	587.6	33.6
0.01106	0.0284	0.00068	180.5	4.2	333.5	10.6
0.03556	0.09774	0.00264	601.2	15.6	596.9	23.8
0.03056	0.08792	0.00232	543.2	13.8	555.6	21.4
0.03838	0.12542	0.00286	761.7	16.4	939.3	20.2
0.04766	0.08602	0.00268	532	16	631.8	30.8
0.0273	0.12102	0.00276	736.4	15.8	737.4	17.6
0.02568	0.11263	0.0026	688	15	671.8	17.2
0.02442	0.08462	0.00206	523.6	12.2	564.4	17.6

0.05256	0.1356	0.00372	819.7	21.2	804.6	29
1130.65394	5.50495	8.0915				
0.02226	0.08184	0.00186	507.1	11	639.1	15.8
	-5.03547	28.53604				
0.17312	0.34926	0.00808	1931.1	38.6	2125	28.8
0.05424	0.17387	0.00422	1033.4	23.2	1034.3	25
0.03418	0.09985	0.00266	613.5	15.6	586.7	23
0.04336	0.10007	0.00294	614.8	17.2	600.3	28.4
0.0445	0.13751	0.0034	830.6	19.2	864.1	23.8
0.03262	0.12912	0.00302	782.8	17.2	771.3	19.6
0.11716	0.28984	0.00684	1640.7	34.2	1728.9	28.4
0.03546	0.11789	0.00294	718.4	17	709.5	22
0.09648	0.09817	0.00452	603.7	26.6	646.9	58.2
5.29938	0.54364	0.05454				
0.04474	0.15237	0.00364	914.2	20.4	933.3	23
0.05146	0.17315	0.0041	1029.4	22.6	1047.8	23.8
0.07774	0.10335	0.00326				
0.03626	0.07128	0.0016	443.9	9.6	964.2	19.2
63.32246	1.73881	0.51264				
0.11586	0.31728	0.00724	1776.4	35.4	1781.8	27
230.12312	13.59534	2.12784				
0.03488	0.09884	0.00264	607.6	15.4	603.3	23.2
337.95246	5.32802	2.70278				
0.02242	0.09794	0.00228	602.3	13.4	587.2	16
147.77878	4.78936	1.4486				
0.0599	0.13959	0.0039	842.3	22	876.9	30.8
0.054	0.16383	0.0041	978	22.8	974.5	26
0.0256	0.09806	0.00234	603	13.8	598.3	17.8
0.03022	0.12021	0.00282	731.8	16.2	717.5	19
0.03884	0.09657	0.0027	594.3	15.8	606.2	25.6
0.02914	0.12104	0.0028	736.5	16.2	734.3	18.4
0.05178	0.16256	0.004	971	22.2	973.2	25.2
0.04714	0.17951	0.00414	1064.3	22.6	1043.1	22.2
0.04724	0.09906	0.00304	608.9	17.8	608.6	30.6
0.24906	0.12111	0.00622				
0.03454	0.10703	0.00272	655.5	15.8	670.6	22
0.257	0.4508	0.01028	2398.8	45.6	2516.6	29.2
0.00914	0.02206	0.0005	140.7	3.2	317.6	9
0.03416	0.13492	0.00316	815.9	18	803.8	20
	100.08569	89.75538				
0.04394	0.11145	0.00306	681.2	17.8	697.3	26.8
0.0303	0.12008	0.0028	731	16.2	734.9	19
15.11756	4.27417	0.13656				
0.05708	0.09821	0.0033	603.9	19.4	619.7	36.2
0.02588	0.10547	0.00242	646.4	14.2	688.9	17.2
0.19142	0.33673	0.008	1870.9	38.6	2177.3	30.2
0.02134	0.08419	0.00198	521.1	11.8	542.2	15.8
0.00892	0.03331	0.00078	211.2	4.8	265.5	8.8
0.03158	0.10354	0.0026	635.1	15.2	631.6	21
0.02372	0.09241	0.0022	569.8	13	570	17
0.05308	0.09714	0.00326	597.6	19.2	540	35.6
0.02976	0.10841	0.00262	663.5	15.2	657.5	19.4
0.03144	0.0986	0.00252	606.2	14.8	605.4	21.2
0.01688	0.06979	0.00166	434.9	10	436.4	13.8
0.02734	0.09706	0.00238	597.2	14	600.1	19

0.02702	0.10056	0.00244	617.7	14.2	607.3	18.6
0.2806	0.50037	0.0114	2615.4	49	2602.2	29.4
0.03172	0.12462	0.00292	757.1	16.8	758.4	19.4
0.25374	0.46362	0.011	2455.5	48.4	2441.4	30.8
0.02966	0.11335	0.00268	692.2	15.6	702	19
0.02622	0.11179	0.0026	683.1	15	669.2	17.6
0.03928	0.13114	0.00324	794.4	18.4	786.6	22.8
245.63978	41.38657	2.17914				
0.1463	0.35735	0.00808	1969.6	38.4	2006	27.4
0.03484	0.09487	0.00244	584.3	14.4	665.4	22.4
0.03934	0.09995	0.00274	614.1	16	634.4	25.4
0.12558	0.26316	0.0059	1506	30.2	1891.9	26.6
0.02722	0.11004	0.00256	673	14.8	693.3	17.8
0.26308	0.28286	0.01052	1605.7	52.8	1837.3	54.6
0.02924	0.11121	0.00258	679.8	15	739.8	18.4

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
1920.1	40	0.5	1	1920.1	40
1054.2	79.6	-16.5	-47.5		
699.4	125.6	-0.1	-0.4	696.7	20.4
729.7	82	0.6	2.8	749.8	18.2
811.4	72	-0.8	-2.8	788.7	18.4
547.4	92	2.5	13	618.7	15.4
1175.9	75	-17.6	-46.7		
740.3	66.2	1	4.3	771.8	17.6
1028.6	87.4	1.9	6	1090.3	28.2
1116.8	117.4	-1.3	-3.7	1075.6	33.2
881.3	69	-0.4	-1.1	871.5	20.2
665.5	67.2	-1.8	-7.5	615.8	14
593.8	159.6	0.6	3.1	612.5	20
1022.8	50.2	1.4	4.4	1068	22.8
978.9	48.2	-0.5	-1.4	964.7	20.4
2111.5	47.4	-54.3	-88.1		
745.9	100.2	1.7	7.1	799.2	21.2
1064.2	100	-2.6	-7.8	981.7	27.4
794.6	69	-2.7	-9.8	716.3	16.6
3671.3	36	-63.7	-81.7		
1661.7	43.8	-1.9	-4.2	1661.7	43.8
603.6	69.2	3.4	16.9	705.4	16.2
769.1	90.2	1.8	7.2	824.6	20.8
944.4	90	-3.3	-10.7	843.4	22
598.9	60	0.6	2.9	616.4	13.8
719	89.2	-1.6	-6.2	674.3	17
491.1	140.8	4.1	23.7	607.5	18.4
739.6	53	0	0	740	16
1280.7	50.8	-28.4	-68.3		
566.7	65.6	0.6	3.1	584.3	13.2
536.2	76.8	2.3	12.2	601.6	14.2
1372.6	42.2	-41.2	-89.5		
961.7	57.4	-10.3	-32.5	649.4	14.6
824	109.2	-1.6	-5.7	777.2	21.8
595.6	68.2	2.4	11.6	665	15.2
2460.7	41.4	-4.7	-8.4	2460.7	41.4
776.9	64	1.1	4.5	812	18.4
830.3	51.8	-0.9	-3.1	804.2	17.2
1089	57.2	-20.6	-57.1		
2006.7	44.2	-1.7	-3.3	2006.7	44.2
3472.4	57.6	-79.8	-96.8		
614.7	146.8	-1.2	-5.6	580.3	18.2
1610.1	52.6	-45.9	-88.8		
579.6	98.2	0.7	3.7	601.2	15.6
605.4	92.2	-2.2	-10.3	543.2	13.8
1381.6	45.8	-18.9	-44.9		
1006.2	116.6	-15.8	-47.1		
739	51.6	-0.1	-0.3	736.4	15.8
616.1	56.6	2.4	11.7	688	15
731	69.2	-7.2	-28.4	523.6	12.2

761.7	93.4	1.9	7.6	819.7	21.2
1137.2	48.2	-20.7	-55.4		
2317.1	39	-9.1	-16.7		
1034.9	60.8	-0.1	-0.1	1033.4	23.2
482.6	98	4.6	27.1	613.5	15.6
544.4	120.6	2.4	12.9	614.8	17.2
949.9	67.2	-3.9	-12.6	830.6	19.2
737	59	1.5	6.2	782.8	17.2
1836.3	44.8	-5.1	-10.7	1836.3	44.8
680.3	75	1.3	5.6	718.4	17
799.4	236.4	-6.7	-24.5	603.7	26.6
977.2	59.2	-2	-6.4	914.2	20.4
1085	55.2	-1.7	-5.1	1029.4	22.6
2467.7	35.8	-54	-82		
1786.9	41	-0.3	-0.6	1786.9	41
586.2	94.8	0.7	3.7	607.6	15.4
527.9	60.6	2.6	14.1	602.3	13.4
964	90.6	-3.9	-12.6	842.3	22
965.5	67.6	0.4	1.3	978	22.8
578.9	68.2	0.8	4.2	603	13.8
671.7	61.4	2	8.9	731.8	16.2
649.8	104.4	-2	-8.5	594.3	15.8
726	56	0.3	1.4	736.5	16.2
976.9	64.8	-0.2	-0.6	971	22.2
997.8	51	2	6.7	1064.3	22.6
606.5	128.2	0	0.4	608.9	17.8
720.7	78.4	-2.3	-9	655.5	15.8
2612	36	-4.7	-8.2	2612	36
1966	42.6	-55.7	-92.8		
769.1	57.8	1.5	6.1	815.9	18
748.6	96	-2.3	-9	681.2	17.8
745.6	58.6	-0.5	-2	731	16.2
676.5	150.2	-2.5	-10.7	603.9	19.4
829	53.2	-6.2	-22	646.4	14.2
2478.9	40.4	-14.1	-24.5		
630.7	63.8	-3.9	-17.4	521.1	11.8
775.6	62	-20.4	-72.8		
617.9	79.4	0.6	2.8	635.1	15.2
570	67.8	0	0	569.8	13
302	177.6	10.7	97.9		
635.7	69.2	0.9	4.4	663.5	15.2
601	83.8	0.1	0.9	606.2	14.8
442.8	68.6	-0.3	-1.8	434.9	10
610.1	73.2	-0.5	-2.1	597.2	14

567.5	70.8	1.7	8.9	617.7	14.2
2590.9	36	0.5	0.9	2590.9	36
761	58.2	-0.2	-0.5	757.1	16.8
2428.6	39.8	0.6	1.1	2428.6	39.8
732	61.8	-1.4	-5.4	692.2	15.6
621.5	58.4	2.1	9.9	683.1	15
763.3	70.4	1	4.1	794.4	18.4
2042.8	38.4	-1.8	-3.6	2042.8	38.4
949.3	78.2	-12.2	-38.5	584.3	14.4
706.2	98.6	-3.2	-13	614.1	16
2345.6	36.4	-20.4	-35.8		
758.4	56.8	-2.9	-11.3	673	14.8
2109.8	92.2	-12.6	-23.9		
924.8	54	-8.1	-26.5	679.8	15

Sample IV Main Nile @ Tora 118 grain analysed 97 concordant ages 82.

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X14_G001	59.4	6.2	0.5289	0.05932	0.00316	0.78644
X14_G002	117.9	18.2	0.5391	0.06874	0.00266	1.37295
X14_G003	46.5	7.6	0.6589	0.06927	0.00328	1.38875
X14_G004				0.83448	0.04516	461.34439
X14_G005	282.2	28.4	0.6618	0.0601	0.00188	0.77897
X14_G006	422	46.3	0.0914	0.06105	0.0017	0.97358
X14_G007	765.8	87.1	0.3449	0.06495	0.0017	1.02163
X14_G008	93.4	12.5	1.4513	0.06109	0.0029	0.84459
X14_G009	461.6	42.3	0.9451	0.07059	0.00204	0.82469
X14_G010	110.1	22.2	0.489	0.0751	0.00236	1.95084
X14_G011	293.8	50.9	1.4313	0.06476	0.00184	1.18895
X14_G012	104.1	18.8	0.6331	0.07089	0.00238	1.58402
X14_G013	279.2	169.6	0.5739	0.19156	0.00454	13.74306
X14_G014	926.7	40.2	0.508	0.05558	0.00164	0.31434
X14_G015	250	40.8	0.9138	0.06444	0.00188	1.21801
X14_G016	468.9	124.5	0.6811	0.1429	0.00344	4.8008
X14_G017	407.4	137.5	0.5883	0.12735	0.00308	5.48827
X14_G018	691.3	78.8	0.6695	0.05966	0.00158	0.84148
X14_G019	168.6	11.9	0.5758	0.05996	0.00296	0.53526
X14_G020	59.8	6.3	0.5477	0.05937	0.00354	0.80583
X14_G021	749	75.3	0.0392	0.06141	0.00168	0.91285
X14_G022	2056	81.1	1.1849	0.11707	0.00334	0.5259
X14_G023	1474.8	106.2	0.2839	0.08479	0.00218	0.86945
X14_G024	57.6	19.5	0.6292	0.11435	0.00394	4.76682
X14_G025	171.7	16.1	0.0003	0.05851	0.00206	0.82247
X14_G026	29.3	4.1	0.5139	0.06741	0.00416	1.20473
X14_G027	987.8	55.1	0.57	0.07494	0.00226	0.53781
X14_G028	123.9	15	1.0707	0.05836	0.00234	0.78954
X14_G029	118.3	18.6	0.2389	0.07212	0.0024	1.56623
X14_G030	90.8	7.9	0.5396	0.05649	0.00274	0.62756
X14_G031	93.4	18.3	1.9323	0.06622	0.00256	1.19259
X14_G032	169.1	68.4	0.5443	0.11876	0.00306	5.9111
X14_G033	311.9	1.3	0.3972	0.05465	0.00764	0.02955
X14_G034	684.5	100.5	0.0403	0.09717	0.00244	2.10986
X14_G035	165.6	19.7	0.8314	0.08242	0.00286	1.13602
X14_G036	166.9	27	0.8454	0.06707	0.00216	1.27641
X14_G037	89.9		1.8571	0.22941	0.00914	3.1943
X14_G038	51.6	8	0.5902	0.09521	0.00496	1.81739
X14_G039	216	31.5	0.344	0.06723	0.00206	1.31449
X14_G040	46.9	1.5	0.8928	0.05415	0.00682	0.20586
X14_G041	256	34.9	0.6136	0.06343	0.002	1.0795
X14_G042	158.7	18.3	0.5175	0.06002	0.00222	0.88854
X14_G043	265.4	33.6	0.964	0.06042	0.00196	0.86824
X14_G044	53.3	9	0.8056	0.06672	0.00348	1.33315
X14_G045	364	54.3	0.7994	0.06594	0.00198	1.19211
X14_G046	5810.9	197.4	0.0553	0.06137	0.00166	0.30741
X14_G047	236.2	28.5	0.2719	0.06234	0.00202	1.03462
X14_G048	216.8	32.7	1.0639	0.06418	0.00224	1.07799
X14_G049	266.7	118.2	1.0809	0.12347	0.00326	6.12513
X14_G050	74.9	14.8	0.9239	0.07042	0.00292	1.59929

X14_G051	183.7	20.6	0.81	0.05778	0.0022	0.77268
X14_G052	437.5	42.7	0.0759	0.0624	0.00202	0.88632
X14_G053	119.6	12.1	0.4511	0.05911	0.00256	0.78597
X14_G054	70.6	9.2	1.2775	0.05838	0.003	0.80095
X14_G055	762.8	111.8	0.8211	0.06893	0.00186	1.26758
X14_G056	281.4	15.1	1.4065	0.05284	0.0023	0.28959
X14_G057	206.1	32.2	0.6129	0.06566	0.00208	1.27745
X14_G058	96.4	14.1	0.8702	0.07212	0.00284	1.21722
X14_G059	431.9	119.8	0.3789	0.14314	0.0039	5.30343
X14_G060	493.9	34.5	0.3671	0.06512	0.0021	0.60221
X14_G061	179.4	30.4	0.3945	0.07148	0.0024	1.60328
X14_G062	2833.4	128.4	0.4342	0.08941	0.00242	0.53618
X14_G063	119.6	13.7	0.7389	0.07728	0.00298	1.08116
X14_G064	260.3	25.7	0.0123	0.0641	0.00258	0.9442
X14_G065	270.6	40.3	0.4397	0.06607	0.002	1.28739
X14_G066	55.5	6.5	0.5442	0.05854	0.00342	0.87349
X14_G067	189.3	22.7	1.0546	0.08458	0.00352	1.10368
X14_G068	537.3	70.7	0.3661	0.06528	0.00186	1.14967
X14_G069	305	43.9	0.7753	0.06586	0.00202	1.13235
X14_G070	330.4	45.4	0.3593	0.06461	0.00194	1.18751
X14_G071	56.4	9.1	0.7869	0.06571	0.00316	1.26693
X14_G072	1008.8	65.8	0.3786	0.06464	0.0019	0.57431
X14_G073	146.3	47.9	0.7136	0.11812	0.00348	4.71598
X14_G074	49.5	4.5	0.0045	0.06132	0.00392	0.83532
X14_G075	1192.5	63.2	1.1088	0.07616	0.00278	0.47963
X14_G076	307.2	42.4	0.3791	0.06573	0.00206	1.2093
X14_G077	55.1	11.7	1.34	0.07536	0.0034	1.67396
X14_G078	486.6	49.8	0.3056	0.06587	0.0021	0.91845
X14_G079	237	168.3	1.4196	0.17464	0.00472	12.15558
X14_G080	460.8	55.8	0.5173	0.06934	0.00208	1.06213
X14_G081	142	22.9	2.8079	0.058	0.00238	0.72431
X14_G082	759.8	50	0.6547	0.07422	0.00228	0.61642
X14_G083	347.2	64.1	0.5828	0.07163	0.00218	1.65518
X14_G084	110.1	44.8	0.8775	0.12163	0.0037	5.64714
X14_G085	63.2	8.8	0.7697	0.06628	0.00316	1.10458
X14_G086	112.7	94.9	0.9049	0.30915	0.00858	29.34567
X14_G087	248.2	36.3	0.6844	0.07036	0.0023	1.27004
X14_G088	37.9	4.3	0.5172	0.05711	0.0038	0.8285
X14_G089	77	11.4	0.7826	0.06952	0.00298	1.23961
X14_G090	144.6	103.1	1.2023	0.17887	0.00508	13.02824
X14_G091	260.7	0.4	0.7092	0.15675	0.02784	0.02536
X14_G092	129.9	45.6	0.564	0.12201	0.00372	5.30093
X14_G093	54.2	9.9	2.1024	0.06365	0.00332	1.03012
X14_G094	467.2	47.9	0.7863	0.07124	0.00278	0.89095
X14_G095	263.3	114.2	0.3581	0.14248	0.0041	7.95041
X14_G096	191.4	19.8	0.247	0.0595	0.0023	0.85437
X14_G097	206.9	31.1	0.6078	0.06436	0.00226	1.21384
X14_G098	294.7	31	0.2958	0.05875	0.00212	0.8454
X14_G099				0.57443	0.03292	32.87436
X14_G100	344.2	39.7	0.6883	0.06064	0.0021	0.85702
X14_G101	282.6	35.4	1.4893	0.06115	0.00226	0.78922
X14_G102	98.9	9.8	0.0628	0.06014	0.00284	0.87472
X14_G103	216.4	42.2	0.9501	0.07103	0.0024	1.58782
X14_G104	571.3	57.9	0.3515	0.05802	0.00188	0.79226
X14_G105	77.9	11.3	0.5535	0.06415	0.00294	1.17507

X14_G106	93.8	13.7	0.5385	0.06406	0.00282	1.1814
X14_G107	59.8	6.4	0.1838	0.06593	0.0047	0.99316
X14_G108	837.2	54.2	2.3142	0.05315	0.00188	0.29141
X14_G109	1818.1	176.2	0.8624	0.06474	0.00198	0.79558
X14_G110	317.5	42.5	0.3012	0.06456	0.00216	1.17696
X14_G111	805.8	165.4	0.3574	0.08694	0.00262	2.36559
X14_G112	214.7	21.3	0.4321	0.06079	0.00232	0.7916
X14_G113	290	31	0.4358	0.06327	0.0023	0.88661
X14_G114	861.7	107.8	0.3545	0.07966	0.0025	1.32675
X14_G115	144.1	21.4	0.5217	0.06756	0.00258	1.27906
X14_G116				0.77638	0.09482	818.84454
X14_G117	312.8	34.4	0.4104	0.05954	0.00212	0.86514
X14_G118	300.7	1.9	0.7366	0.08688	0.00914	0.06446

2% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.04058	0.09616	0.00272	591.9	16	589.2	27
0.0519	0.14486	0.00368	872.1	20.8	877.4	27.2
0.06408	0.14543	0.00406	875.3	22.8	884.2	32.4
60.87112	4.01011	0.53988				
0.0242	0.09402	0.00218	579.3	12.8	584.9	17.4
0.02728	0.11567	0.0026	705.6	15	690.3	18
0.0269	0.11409	0.00252	696.5	14.6	714.7	17.6
0.0389	0.10029	0.00272	616.1	16	621.7	25.4
0.02378	0.08475	0.00192	524.4	11.4	610.7	16.8
0.06118	0.18842	0.00448	1112.8	24.4	1098.7	26.4
0.03396	0.13317	0.00302	805.9	17.2	795.5	20
0.05272	0.16209	0.00392	968.4	21.8	964	25.8
0.33512	0.52041	0.01148	2700.9	48.6	2732.2	30.6
0.00924	0.04103	0.00092	259.2	5.6	277.5	9
0.03566	0.1371	0.00314	828.2	17.8	808.9	20.6
0.11836	0.24369	0.00536	1405.9	27.8	1785	27.4
0.13594	0.3126	0.0069	1753.5	33.8	1898.8	28.2
0.02266	0.10232	0.00228	628	13.4	620	16
0.02542	0.06475	0.00176	404.4	10.6	435.3	20
0.04646	0.09845	0.00296	605.3	17.4	600.1	30.2
0.02526	0.10783	0.00242	660.1	14	658.6	17.2
0.0148	0.03259	0.00076	206.7	4.8	429.1	12.8
0.02266	0.07438	0.00164	462.5	9.8	635.3	16
0.1639	0.30238	0.00804	1703.1	39.8	1779.1	36.6
0.02866	0.10197	0.00244	625.9	14.2	609.4	19.6
0.0718	0.12963	0.00412	785.8	23.6	802.8	38.6
0.01612	0.05206	0.0012	327.2	7.4	437	13.4
0.03088	0.09813	0.00244	603.4	14.4	590.9	21.2
0.05172	0.15753	0.0038	943	21.2	956.9	25.4
0.02948	0.08058	0.00214	499.6	12.8	494.6	21.6
0.04516	0.13065	0.00328	791.6	18.8	797.2	25.4
0.15508	0.36105	0.00818	1987.1	38.8	1962.9	29.8
0.00396	0.00392	0.00018	25.2	1.2	29.6	4.2
0.0538	0.15751	0.00348	942.9	19.4	1152	23
0.03856	0.09999	0.00244	614.4	14.2	770.6	23
0.04082	0.13805	0.00326	833.6	18.4	835.3	22.8
0.11688	0.10101	0.00306	620.3	18	1455.8	38.8
0.09038	0.13847	0.00436	836	24.6	1051.7	39.8
0.04026	0.14185	0.0033	855.1	18.6	852.1	22.2
0.02494	0.02758	0.0012	175.4	7.6	190.1	23.2
0.03394	0.12346	0.00288	750.4	16.6	743.4	20.6
0.0324	0.10738	0.00262	657.5	15.2	645.6	21.2
0.02782	0.10424	0.00242	639.2	14.2	634.6	18.8
0.06764	0.14495	0.00422	872.6	23.8	860.3	34.6
0.03576	0.13115	0.00302	794.4	17.2	796.9	20.8
0.00836	0.03634	0.0008	230.1	5	272.2	8.4
0.03328	0.1204	0.00282	732.9	16.2	721.2	20.6
0.03722	0.12185	0.00294	741.2	16.8	742.7	22.4
0.16426	0.35988	0.00818	1981.6	38.8	1993.8	30.4
0.06486	0.16476	0.00434	983.2	24	969.9	30.6

0.0289	0.09701	0.00238	596.9	14	581.3	20
0.02842	0.10304	0.0024	632.2	14	644.4	19
0.03314	0.09647	0.00248	593.7	14.6	588.9	22.6
0.03992	0.09952	0.00276	611.6	16.2	597.4	26.4
0.03442	0.13342	0.00298	807.3	17	831.3	19.8
0.01226	0.03976	0.001	251.3	6.2	258.2	11.4
0.04042	0.14115	0.0033	851.2	18.6	835.7	22.4
0.04676	0.12245	0.00312	744.6	18	808.5	26.2
0.1457	0.26879	0.00616	1534.7	31.2	1869.4	30.4
0.0193	0.06709	0.00156	418.6	9.4	478.6	15.2
0.05338	0.16271	0.00392	971.8	21.8	971.5	25.8
0.01464	0.04351	0.00098	274.6	6	435.9	12.4
0.04056	0.1015	0.00256	623.2	15	744.2	24.4
0.03704	0.10687	0.0027	654.5	15.8	675.1	23.4
0.03898	0.14137	0.00326	852.4	18.4	840.1	21.8
0.04952	0.10826	0.00322	662.6	18.8	637.5	31
0.0444	0.09467	0.0025	583.1	14.8	755.1	26.2
0.03284	0.12776	0.00288	775.1	16.4	777.1	19.8
0.03478	0.12473	0.00288	757.7	16.6	768.9	20.8
0.03582	0.13333	0.00306	806.8	17.4	794.8	20.8
0.05912	0.13988	0.00388	844	22	831	31.6
0.01684	0.06445	0.00146	402.6	8.8	460.8	13.8
0.13944	0.28965	0.00682	1639.8	34	1770.1	31.6
0.0515	0.09884	0.0031	607.6	18.2	616.6	33
0.01706	0.04569	0.00112	288	7	397.8	14.4
0.03788	0.13347	0.0031	807.6	17.6	804.9	21.6
0.0735	0.16116	0.00442	963.2	24.6	998.7	33.6
0.02902	0.10116	0.00234	621.2	13.6	661.5	19.2
0.33444	0.50497	0.01144	2635.1	49	2616.5	33
0.0319	0.11113	0.00254	679.3	14.8	734.9	19.8
0.02912	0.0906	0.00228	559.1	13.4	553.2	20.6
0.01884	0.06025	0.00138	377.1	8.4	487.6	14.8
0.05028	0.16766	0.00386	999.2	21.4	991.5	24.2
0.1726	0.33684	0.00806	1871.4	38.8	1923.3	33.4
0.05124	0.1209	0.00332	735.7	19	755.6	29.4
0.83108	0.68869	0.01602	3377.6	61.2	3465.2	35.6
0.0411	0.13095	0.00308	793.3	17.6	832.4	22.8
0.05336	0.10526	0.0033	645.2	19.2	612.8	33.8
0.0519	0.12937	0.0034	784.3	19.4	818.7	28.2
0.37554	0.52844	0.01224	2734.9	51.6	2681.7	34.6
0.00408	0.00117	0.0001	7.5	0.6	25.4	5
0.16184	0.31521	0.00746	1766.3	36.6	1869	33
0.05224	0.11742	0.00334	715.7	19.2	719	30.6
0.03404	0.09074	0.00228	559.9	13.4	646.9	22.2
0.23062	0.40486	0.00928	2191.4	42.6	2225.4	33.2
0.03252	0.10418	0.00256	638.9	15	627	21.4
0.04206	0.13685	0.00328	826.8	18.6	807	23.6
0.03016	0.1044	0.0025	640.1	14.6	622.1	20.2
1.8756	0.41522	0.02396				
0.02928	0.10254	0.00242	629.3	14.2	628.5	19.6
0.02864	0.09365	0.00226	577.1	13.4	590.7	19.8
0.0402	0.10553	0.00282	646.7	16.4	638.1	25.8
0.0532	0.16218	0.00386	968.9	21.4	965.4	25.8
0.02554	0.09907	0.0023	609	13.4	592.5	17.8
0.05248	0.13291	0.00356	804.4	20.2	789	29.2

0.0509	0.1338	0.00352	809.5	20	792	28.2
0.06796	0.10929	0.00376	668.6	21.8	700.3	40
0.01016	0.03978	0.00094	251.5	5.8	259.7	9.8
0.02434	0.08916	0.00204	550.6	12	594.3	17.2
0.0391	0.13228	0.0031	800.9	17.6	789.9	22.4
0.07126	0.19741	0.0045	1161.4	24.2	1232.3	27
0.0297	0.09448	0.0023	582	13.6	592.1	20.4
0.03184	0.10168	0.00246	624.2	14.4	644.5	20.8
0.0416	0.12084	0.00278	735.4	16	857.5	22.6
0.04792	0.13736	0.0034	829.7	19.2	836.4	26
316.72082	7.65251	2.99676				
0.03036	0.10543	0.0025	646.2	14.6	632.9	20.2
0.00632	0.00538	0.00024	34.6	1.6	63.4	7

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
578.9	115.8	0.5	2.2	591.9	16
890.9	80	-0.6	-2.1	872.1	20.8
906.8	97.6	-1	-3.5	875.3	22.8
607.2	67.6	-1	-4.6	579.3	12.8
641	59.8	2.2	10.1	705.6	15
772.7	55	-2.6	-9.9	696.5	14.6
642.4	102	-0.9	-4.1	616.1	16
945.6	59.2	-14.1	-44.5	524.4	11.4
1071.2	63.2	1.3	3.9	1071.2	63.2
766.5	59.8	1.3	5.1	805.9	17.2
954.2	68.6	0.5	1.5	968.4	21.8
2755.6	39	-1.1	-2	2755.6	39
435.6	65.8	-6.6	-40.5	259.2	5.6
756.1	61.6	2.4	9.5	828.2	17.8
2262.6	41.6	-21.2	-37.9		
2061.7	42.6	-7.7	-14.9	2061.7	42.6
591.3	57.4	1.3	6.2	628	13.4
602.1	106.8	-7.1	-32.8	404.4	10.6
580.7	129.6	0.9	4.2	605.3	17.4
653.6	58.8	0.2	1	660.1	14
1912	51.2	-51.8	-89.2		
1310.7	49.8	-27.2	-64.7		
1869.7	62.2	-4.3	-8.9	1869.7	62.2
548.9	76.8	2.7	14	625.9	14.2
850.5	128.2	-2.1	-7.6	785.8	23.6
1066.9	60.6	-25.1	-69.3		
543.3	87.6	2.1	11.1	603.4	14.4
989.3	67.6	-1.5	-4.7	943	21.2
471.7	107.4	1	5.9	499.6	12.8
813.3	80.8	-0.7	-2.7	791.6	18.8
1937.7	46.2	1.2	2.6	1937.7	46.2
397.9	313.4	-14.7	-93.7	25.2	1.2
1570.5	47	-18.2	-40		
1255.5	67.8	-20.3	-51.1		
839.9	67	-0.2	-0.8	833.6	18.4
3047.9	63.8	-57.4	-79.6		
1532.2	98	-20.5	-45.4		
844.9	63.8	0.4	1.2	855.1	18.6
377.3	283.4	-7.7	-53.5	175.4	7.6
722.7	66.8	0.9	3.8	750.4	16.6
604.3	80	1.8	8.8	657.5	15.2
618.6	70	0.7	3.3	639.2	14.2
829	108.8	1.4	5.3	872.6	23.8
804.5	62.8	-0.3	-1.2	794.4	17.2
652.2	58	-15.5	-64.7		
685.8	69.2	1.6	6.9	732.9	16.2
747.6	73.8	-0.2	-0.9	741.2	16.8
2007	46.8	-0.6	-1.3	2007	46.8
940.6	85	1.4	4.5	983.2	24

521.4	83.6	2.7	14.5	596.9	14
687.8	69	-1.9	-8.1	632.2	14
571.1	94.2	0.8	3.9	593.7	14.6
544.1	112.4	2.4	12.4	611.6	16.2
896.6	55.6	-2.9	-10	807.3	17
321.9	98.8	-2.7	-21.9	251.3	6.2
795.6	66.4	1.8	7	851.2	18.6
989.3	80.2	-7.9	-24.7	744.6	18
2265.5	47	-17.9	-32.3		
778.2	67.8	-12.5	-46.2	418.6	9.4
971.2	68.4	0	0.1	971.8	21.8
1413	51.8	-37	-80.6		
1128.4	76.8	-16.3	-44.8		
744.9	85	-3	-12.1	654.5	15.8
808.6	63.4	1.5	5.4	852.4	18.4
550	127.6	3.9	20.5	662.6	18.8
1305.9	80.8	-22.8	-55.3		
783.4	59.8	-0.3	-1.1	775.1	16.4
801.9	64.2	-1.4	-5.5	757.7	16.6
761.7	63.4	1.5	5.9	806.8	17.4
797.2	100.8	1.6	5.9	844	22
762.6	62	-12.6	-47.2	402.6	8.8
1928	52.8	-7.4	-14.9	1928	52.8
650.5	137.2	-1.5	-6.6	607.6	18.2
1099.3	73	-27.6	-73.8		
797.8	65.6	0.3	1.2	807.6	17.6
1078.1	90.6	-3.6	-10.7	963.2	24.6
802.2	66.8	-6.1	-22.6	621.2	13.6
2602.6	45	0.7	1.2	2602.6	45
908.9	61.8	-7.6	-25.3	679.3	14.8
529.8	90	1.1	5.5	559.1	13.4
1047.5	62	-22.7	-64		
975.4	62	0.8	2.4	999.2	21.4
1980.3	54.2	-2.7	-5.5	1980.3	54.2
815.2	99.6	-2.6	-9.8	735.7	19
3516.7	42.8	-2.5	-4	3516.7	42.8
938.9	67	-4.7	-15.5	793.3	17.6
495.8	146.6	5.3	30.1		
914.2	88.2	-4.2	-14.2	784.3	19.4
2642.4	47.2	2	3.5	2642.4	47.2
2420.9	301.4	-70.4	-99.7		
1985.8	54.2	-5.5	-11.1	1985.8	54.2
730	110.6	-0.5	-2	715.7	19.2
964.3	79.6	-13.4	-41.9	559.9	13.4
2257.6	49.6	-1.5	-2.9	2257.6	49.6
585.4	83.8	1.9	9.1	638.9	15
753.5	74.2	2.5	9.7	826.8	18.6
557.8	78.6	2.9	14.8	640.1	14.6
626.5	74.6	0.1	0.4	629.3	14.2
644.5	79.4	-2.3	-10.5	577.1	13.4
608.6	102	1.3	6.3	646.7	16.4
958.3	69	0.4	1.1	968.9	21.4
530.5	71	2.8	14.8	609	13.4
746.6	96.8	2	7.8	804.4	20.2

743.6	93	2.2	8.9	809.5	20
804.2	149.2	-4.5	-16.9	668.6	21.8
335.2	80.2	-3.2	-25	251.5	5.8
765.9	64.4	-7.4	-28.1	550.6	12
760	70.6	1.4	5.4	800.9	17.6
1359.2	58	-5.8	-14.6	1359.2	58
631.8	82.2	-1.7	-7.9	582	13.6
717.3	77.2	-3.1	-13	624.2	14.4
1188.6	62	-14.2	-38.1	735.4	16
855.1	79.4	-0.8	-3	829.7	19.2
586.9	77.2	2.1	10.1	646.2	14.6
1357.8	202.8	-45.5	-97.5		

Sample 51 Main Nile @ Cairo Ma'adi 10 grain analysed 5 concordant ages

grain	concentrations U [ppm]	Pb [ppm]	Th/U	isotopic ratios Pb207/Pb206	2σ 76	Pb207/U235
X51_G001	89.6	14	0.6199	0.06281	0.00296	1.22487
X51_G002	44.3	17.9	0.774	-0.00403	0.00476	-0.17637
X51_G003	163.5	27.7	0.9901	0.06147	0.0028	1.17208
X51_G004	287.2	44.3	1.1935	0.064	0.00246	1.05602
X51_G005	79.8	13.1	0.6212	0.06566	0.00336	1.34248
X51_G006	53.7	8	0.3887	0.06644	0.00368	1.31058
X51_G007	400.5	45	0.5965	0.05699	0.00208	0.80184
X51_G008	121.7	15.9	0.5518	0.05787	0.0027	0.96006
X51_G009	325.1	70.2	0.2968	0.08595	0.00278	2.50824
X51_G010	40.9	4.8	0.3963	0.05475	0.00456	0.85732

50.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.05652	0.14161	0.0039	853.8	22	812	30.6
0.20852	0.31776	0.00958	1778.8	46.8	-197	-257.2
0.0522	0.13847	0.00376	836	21.2	787.6	29
0.04008	0.11983	0.00302	729.6	17.4	731.9	24
0.06684	0.1485	0.0043	892.5	24.2	864.3	34.2
0.07068	0.14326	0.00434	863.1	24.4	850.4	36.4
0.0291	0.10219	0.0025	627.2	14.6	597.9	19.8
0.04394	0.1205	0.00326	733.4	18.8	683.3	26.8
0.08162	0.21197	0.0051	1239.3	27.2	1274.4	29.2
0.0691	0.11373	0.00412	694.4	23.8	628.7	42.6

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
701.8	100.4	5.1	21.7		
		-1002.8			
655.7	97.8	6.1	27.5		
741.6	81.2	-0.3	-1.6	729.6	17.4
795.6	107.2	3.3	12.2	892.5	24.2
820.3	115.6	1.5	5.2	863.1	24.4
491.1	80.4	4.9	27.7	627.2	14.6
524.8	102.4	7.3	39.7		
1337.1	62.6	-2.8	-7.3	1337.1	62.6
402	186.6	10.5	72.7		

Sample 3290S Nile Delta beach @ Idku east 150 grain analysed 124 concor

grain	concentrations			isotopic ratios		
	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
S3290_G001	253.1	36.6	0.7726	0.06252	0.00178	1.07699
S3290_G002	139.1	25	0.354	0.07322	0.00216	1.74865
S3290_G003	62.7	7.8	0.2538	0.06441	0.00286	1.10602
S3290_G004	171.5	19.7	0.8731	0.06128	0.00254	0.82194
S3290_G005	78.4	11.2	0.4743	0.06243	0.0026	1.14647
S3290_G006	789.5	151.8	1.5302	0.0668	0.00158	1.27534
S3290_G007	228.5	34.9	0.5491	0.06769	0.0019	1.30557
S3290_G008	6706.4	122.9	1.1952	0.10169	0.00242	0.21638
S3290_G009	59.6	9	0.5275	0.06714	0.00288	1.29163
S3290_G010	198.2	30	1.9952	0.06061	0.002	0.82757
S3290_G011	91.5	12.1	0.676	0.06697	0.0026	1.07802
S3290_G012	325.2	51	0.6945	0.06723	0.00178	1.28395
S3290_G013	603.9	35.9	0.2406	0.10927	0.00284	0.86965
S3290_G014	61.7	7.6	0.5533	0.0623	0.003	0.96268
S3290_G015	586.1	58.9	0.4022	0.06081	0.00156	0.80905
S3290_G016	251.5	42	0.322	0.0714	0.00192	1.59891
S3290_G017	201.3	15.9	0.5015	0.06123	0.00218	0.61854
S3290_G018	43.4	6.5	0.4389	0.0743	0.00346	1.44161
S3290_G019	423.5	18.6	0.2599	0.05348	0.00182	0.32775
S3290_G020	94.1	14.8	0.5094	0.08553	0.00288	1.6878
S3290_G021	133.9	19	0.4011	0.06527	0.00216	1.21946
S3290_G022	3558.1	290.8	0.0407	0.05953	0.00132	0.72201
S3290_G023	135.9	18.1	0.6196	0.06275	0.00224	1.03628
S3290_G024	471.1	58.2	0.3812	0.06469	0.00166	1.06185
S3290_G025	221.7	25.2	0.7777	0.06095	0.00194	0.82127
S3290_G026	91	9.8	0.7451	0.05968	0.00266	0.77132
S3290_G027	108.2	13.2	1.1542	0.05977	0.00248	0.79081
S3290_G028	180.4	19.8	0.5256	0.05937	0.00202	0.83134
S3290_G029	158.4	16.1	0.3036	0.05862	0.00216	0.80854
S3290_G030	324.2	48	0.4384	0.06895	0.00182	1.33689
S3290_G031	151.6	64.1	0.4614	0.13295	0.00318	7.01126
S3290_G032	511.4	59.7	1.0065	0.05929	0.00158	0.77844
S3290_G033	232.7	30.5	0.1978	0.06586	0.0019	1.21024
S3290_G034	68	28.2	1.1163	0.11646	0.00454	5.19894
S3290_G035	286.5	93.9	0.1873	0.11715	0.0028	5.2226
S3290_G036	122.4	15.4	1.0233	0.06013	0.0024	0.84504
S3290_G037	229.5	24.7	0.7771	0.05904	0.00192	0.75699
S3290_G038	98.3	0.5	0.523	0.05199	0.01474	0.03573
S3290_G039	668.2	239.7	0.2998	0.15224	0.00336	7.31259
S3290_G040	314.8	25.7	0.0176	0.05904	0.0018	0.72033
S3290_G041	82.6	16.7	0.646	0.07378	0.00266	1.83474
S3290_G042	40.8	0.2	0.601	0.03279	0.03546	0.02163
S3290_G043	265.6	51.7	3.0041	0.06055	0.00182	0.87704
S3290_G044	121.8	49.3	0.852	0.11348	0.0029	5.23142
S3290_G045	950.6	77.9	0.7142	0.07569	0.00188	0.78715
S3290_G046	123.4	12	0.4225	0.05983	0.0029	0.76972
S3290_G047	203.4	78.1	0.4056	0.1202	0.00302	5.85795
S3290_G048	95.2	10.3	0.1711	0.06271	0.00266	0.96104
S3290_G049	79	11.6	0.5257	0.06709	0.00278	1.25193
S3290_G050	30502.8	75	0.6571	0.56754	0.01264	0.23805

S3290_G051	120.3	15.1	0.4545	0.08536	0.00292	1.37792
S3290_G052	159	20.8	0.6394	0.06646	0.0022	1.07018
S3290_G053	235.3	26.3	0.3327	0.06343	0.00198	0.95678
S3290_G054	213.9	21.8	0.4249	0.05977	0.002	0.80655
S3290_G055	116.1	16.7	0.4571	0.06528	0.00234	1.21603
S3290_G056	116.6	14.9	0.5496	0.06309	0.00236	1.01962
S3290_G057	586.7	70.3	0.8402	0.06014	0.00156	0.8462
S3290_G058	533.3	75.6	0.6364	0.0642	0.00162	1.12486
S3290_G059	243.1	30.5	0.5626	0.06215	0.00188	0.9815
S3290_G060				0.3076	0.01918	5.62695
S3290_G061	297	28.5	0.1	0.06055	0.00182	0.84376
S3290_G062	2021.9	109	0.5837	0.07835	0.00188	0.51797
S3290_G063	129.7	19.6	0.1952	0.09906	0.00306	2.0183
S3290_G064	615.9	88.8	0.272	0.06776	0.00166	1.33266
S3290_G065	64.3	7.7	0.6115	0.06245	0.00306	0.93552
S3290_G066	289.7	122	0.8852	0.12398	0.00288	5.96796
S3290_G067	96.2	9.9	0.6436	0.06048	0.00272	0.76563
S3290_G068	253.6	95.6	0.4855	0.11264	0.00268	5.2879
S3290_G069	305.9	38.5	0.3696	0.06757	0.00192	1.13191
S3290_G070	115.6	12	0.5801	0.05897	0.00248	0.76922
S3290_G071	89.4	9.9	1.1181	0.05955	0.00284	0.72577
S3290_G072	232.2	35	0.4224	0.06845	0.002	1.34954
S3290_G073	159.5	19.4	0.2021	0.0654	0.0022	1.11407
S3290_G074	102.5	14.9	0.6616	0.06945	0.00254	1.23551
S3290_G075	731	75.4	0.3753	0.06026	0.00154	0.82832
S3290_G076	283.4	44	0.412	0.06887	0.00192	1.40405
S3290_G077	473.2	48.4	0.2588	0.06028	0.00164	0.85273
S3290_G078	85.2	9.2	0.6265	0.06069	0.00284	0.81142
S3290_G079	622.2	56.4	0.6577	0.06667	0.00178	0.75912
S3290_G080	6273.9	123.9	0.0547	0.25616	0.00582	0.64125
S3290_G081	82.6	9.6	0.7376	0.05886	0.00284	0.82603
S3290_G082	121.8	11.5	0.8259	0.05674	0.00252	0.62784
S3290_G083	83.7	8.5	0.8871	0.05848	0.00302	0.68143
S3290_G084	32.4	0.2	0.4918	-0.00216	0.0383	-0.00146
S3290_G085	72.2	9.7	0.3758	0.06808	0.00312	1.21649
S3290_G086	286.5	38.9	1.2079	0.06116	0.00184	0.88719
S3290_G087	197.1	22.8	0.8412	0.06279	0.00216	0.85289
S3290_G088	1369.4	95.8	0.497	0.14986	0.00354	1.33457
S3290_G089	221.2	28.5	0.3766	0.06525	0.00198	1.11833
S3290_G090	2039.2	161.3	0.3725	0.07465	0.00176	0.7934
S3290_G091	711.6	82	0.3567	0.06268	0.00158	0.98283
S3290_G092	492.5	55.7	0.3046	0.19456	0.0047	2.75788
S3290_G093	2209.7	85.6	1.3224	0.08605	0.00224	0.37562
S3290_G094	53.9	23.1	0.8497	0.12918	0.00382	6.30041
S3290_G095	549	51.6	0.0918	0.06045	0.00164	0.82689
S3290_G096	19.3	2.4	0.3246	0.06628	0.00544	1.13237
S3290_G097	198.2	23.9	0.4149	0.06654	0.00212	1.05331
S3290_G098	280.8	38.1	0.5587	0.06544	0.0019	1.12287
S3290_G099	6523.3		1.571	0.31971	0.0081	0.21074
S3290_G100				0.01141	0.93964	10.77196
S3290_G101	1392.9	126.5	0.2806	0.06475	0.00156	0.80203
S3290_G102	788.5	70.4	0.1052	0.06164	0.00158	0.80972
S3290_G103	55.9	7.9	0.2457	0.06317	0.003	1.21874
S3290_G104	1168.1	108.9	0.0318	0.05997	0.00146	0.83037
S3290_G105	145.9	19.2	1.3836	0.06168	0.0023	0.83689

S3290_G106	108.8	12.8	1.0185	0.05767	0.00252	0.76387
S3290_G107	285	38.6	0.418	0.06497	0.00192	1.15858
S3290_G108	340.4	50.8	0.6478	0.06408	0.0018	1.17842
S3290_G109	29.8	3.3	0.8063	0.06369	0.005	0.83981
S3290_G110	53.3	7.4	0.4514	0.06302	0.00328	1.13338
S3290_G111	76.9	9.9	0.5249	0.06523	0.00296	1.06786
S3290_G112	2294.9	71.7	0.4752	0.10181	0.00256	0.42834
S3290_G113	517.6	55.5	0.1727	0.06149	0.00166	0.93538
S3290_G114	82.1	11.8	0.4026	0.07044	0.00296	1.33714
S3290_G115	74.2	8.4	0.8783	0.05832	0.00306	0.77224
S3290_G116	114	14.7	1.4995	0.05565	0.00254	0.72302
S3290_G117	130.2	16.1	0.6885	0.05911	0.00238	0.89622
S3290_G118	454.9	208.8	0.9149	0.12594	0.0029	6.45836
S3290_G119	99.9	23.8	1.5619	0.07573	0.00266	1.79452
S3290_G120	789	71.1	0.2584	0.05859	0.00154	0.73054
S3290_G121	603.4	59.3	0.2334	0.06028	0.0016	0.82629
S3290_G122	139.6	21.1	0.3689	0.06842	0.00234	1.37143
S3290_G123	77.9	8.1	0.6577	0.05646	0.003	0.72183
S3290_G124	194.5	27.4	0.3766	0.06752	0.0021	1.25921
S3290_G125	99.9	14.5	0.4848	0.06603	0.00262	1.23538
S3290_G126	25.6	2.5	0.4118	0.05745	0.00562	0.75946
S3290_G127	61.2	8.7	0.4599	0.06324	0.00302	1.17198
S3290_G128	208.6	50.7	0.9803	0.10461	0.0028	2.9102
S3290_G129	434	60.1	0.5178	0.06565	0.0018	1.18193
S3290_G130	1228.7	38.8	0.7284	0.04942	0.00156	0.18918
S3290_G131	789	89.5	0.3038	0.0667	0.0017	1.02378
S3290_G132	463.8	95.4	0.6366	0.10544	0.0026	2.70794
S3290_G133	79.5	15.2	0.8162	0.07459	0.00286	1.679
S3290_G134	80	8.5	0.6007	0.06077	0.00296	0.81179
S3290_G135	1038.9	105.8	0.1657	0.08535	0.0021	1.22135
S3290_G136	283.4	24.3	0.261	0.05779	0.0019	0.68469
S3290_G137	95.2	11	0.5899	0.05985	0.00262	0.86938
S3290_G138	50.2	6.1	0.4431	0.06289	0.00388	0.98814
S3290_G139	118.7	11.8	0.3493	0.05887	0.00252	0.78384
S3290_G140	78.4	11.7	0.6296	0.06454	0.00282	1.19161
S3290_G141	32.4	0.1	0.415	0.04529	0.04716	0.02648
S3290_G142				-0.26686	0.70824	
S3290_G143				0.52829	0.02218	23.32735
S3290_G144	1121	93.5	0.4338	0.06309	0.0016	0.74
S3290_G145	2961	146.4	1.0728	0.29085	0.00676	1.63908
S3290_G146	615.4	96.6	0.5931	0.07649	0.00196	1.57346
S3290_G147	76.3	14.7	1.132	0.0681	0.00284	1.4324
S3290_G148	541.7	55.4	0.2692	0.05789	0.00166	0.81625
S3290_G149	878.4	115.3	1.0551	0.07041	0.0018	1.07149
S3290_G150	767.1	65.8	1.4041	0.06547	0.00188	0.6381

rdant ages 82.7% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.03256	0.12497	0.00312	759.1	17.8	742.2	20
0.05416	0.17324	0.0044	1029.9	24.2	1026.7	25.2
0.0489	0.12456	0.00352	756.8	20.2	756.3	28
0.03404	0.0973	0.00268	598.6	15.8	609.1	22.8
0.04786	0.13322	0.00368	806.2	21	775.6	27.2
0.03316	0.13849	0.00332	836.1	18.8	834.8	19.2
0.0389	0.13992	0.00348	844.2	19.6	848.2	21.6
0.00562	0.01544	0.00038	98.8	2.4	198.9	6.2
0.05532	0.13955	0.00396	842.1	22.4	842	29.4
0.02826	0.09905	0.00254	608.8	14.8	612.3	19.2
0.0422	0.11678	0.00318	712	18.4	742.7	25
0.03654	0.13855	0.0034	836.5	19.2	838.6	20.6
0.02416	0.05774	0.00142	361.9	8.6	635.4	17
0.04592	0.1121	0.00326	684.9	18.8	684.7	28
0.02244	0.09652	0.00234	594	13.8	601.9	16
0.04592	0.16244	0.00402	970.3	22.2	969.8	22.8
0.02246	0.07329	0.00192	455.9	11.6	488.9	17.2
0.0666	0.14076	0.0042	849	23.8	906.4	33.2
0.01146	0.04446	0.00114	280.4	7	287.8	10.6
0.05818	0.14315	0.00382	862.5	21.6	1003.9	27.4
0.04174	0.13553	0.00352	819.3	20	809.5	23.4
0.01806	0.08799	0.0021	543.6	12.4	551.9	13.8
0.03774	0.11981	0.00316	729.5	18.2	722.1	23
0.02958	0.11908	0.0029	725.3	16.8	734.7	18.6
0.02726	0.09775	0.0025	601.2	14.6	608.8	18.6
0.03424	0.09375	0.00262	577.7	15.4	580.5	23.2
0.0329	0.09599	0.00262	590.9	15.4	591.6	22.2
0.0292	0.10158	0.00262	623.7	15.4	614.4	19.6
0.03036	0.10006	0.00264	614.8	15.4	601.6	20.6
0.03812	0.14066	0.00346	848.4	19.6	861.9	21
0.18592	0.38259	0.00948	2088.4	44.2	2112.9	30.6
0.02236	0.09525	0.00234	586.5	13.8	584.6	16.2
0.03686	0.13331	0.00334	806.7	19	805.3	21.2
0.2071	0.32385	0.01004	1808.5	48.8	1852.4	42.4
0.13822	0.32341	0.00796	1806.4	38.8	1856.3	29.2
0.03402	0.10195	0.00276	625.8	16.2	621.9	22.4
0.02546	0.09303	0.00238	573.4	14	572.3	18.2
0.00988	0.00499	0.00034	32.1	2.2	35.6	10.2
0.18218	0.34847	0.00836	1927.3	40	2150.3	29.2
0.02298	0.08851	0.00222	546.7	13.2	550.9	16.8
0.06752	0.18042	0.00488	1069.3	26.6	1058	29.6
0.0232	0.00479	0.00066	30.8	4.2	21.7	23.4
0.02778	0.10509	0.00264	644.2	15.4	639.4	18.6
0.14606	0.33444	0.00844	1859.9	40.8	1857.7	30.6
0.02138	0.07544	0.00184	468.8	11	589.6	15.6
0.03682	0.09334	0.0027	575.3	16	579.6	25
0.16156	0.35357	0.0089	1951.6	42.4	1955	30.8
0.04096	0.11118	0.0031	679.6	18	683.8	25.2
0.05208	0.13537	0.0038	818.4	21.6	824.3	28.2
0.0059	0.00304	0.00008	19.6	0.6	216.8	6.8

0.048	0.11711	0.00312	713.9	18	879.6	25.6
0.0367	0.11683	0.00304	712.3	17.6	738.8	22.2
0.03124	0.10944	0.0028	669.5	16.2	681.6	20
0.02774	0.0979	0.00252	602.1	14.8	600.5	19.2
0.04444	0.13515	0.00358	817.2	20.4	808	24.8
0.03868	0.11725	0.00314	714.7	18.2	713.7	23.6
0.02384	0.10208	0.0025	626.6	14.6	622.6	16.6
0.03106	0.12711	0.0031	771.4	17.8	765.3	18.8
0.0313	0.11458	0.0029	699.3	16.8	694.4	19.8
0.30776	0.13271	0.00646				
0.02656	0.10109	0.00254	620.8	14.8	621.2	18.2
0.0137	0.04796	0.00116	302	7.2	423.8	11.8
0.06486	0.14781	0.00388	888.7	21.8	1121.7	27.6
0.03604	0.14268	0.00348	859.8	19.6	860	20
0.04536	0.10868	0.0032	665.1	18.6	670.5	28
0.1548	0.34923	0.00852	1930.9	40.8	1971.2	29.2
0.03432	0.09185	0.0026	566.5	15.4	577.3	23.4
0.13986	0.3406	0.00838	1889.6	40.2	1866.9	29.2
0.03428	0.12153	0.00304	739.4	17.4	768.7	20.4
0.03244	0.09464	0.0026	582.9	15.4	579.3	22.2
0.0343	0.08841	0.00252	546.1	15	554.1	23.8
0.04174	0.14304	0.00362	861.8	20.4	867.4	22.6
0.03872	0.12359	0.00322	751.2	18.4	760.1	22.8
0.04594	0.12906	0.00348	782.5	19.8	816.8	25.6
0.02308	0.09973	0.00244	612.8	14.4	612.7	16.2
0.0419	0.1479	0.0037	889.2	20.8	890.6	22.2
0.02482	0.10264	0.00254	629.9	14.8	626.1	17.2
0.03768	0.097	0.00278	596.8	16.4	603.3	25
0.0218	0.08261	0.00204	511.7	12.2	573.5	16
0.01622	0.01816	0.00044	116	2.8	503.1	13.2
0.03956	0.10182	0.00292	625.1	17	611.4	25.8
0.02776	0.08027	0.00224	497.7	13.4	494.7	20.6
0.03474	0.08454	0.00248	523.2	14.8	527.6	24.4
0.02594	0.00491	0.00062	31.6	4	-1.5	-26.4
0.05534	0.12965	0.00378	785.9	21.6	808.2	30.2
0.02806	0.10524	0.00266	645	15.6	644.9	18.8
0.03016	0.09854	0.00258	605.8	15.2	626.2	20.2
0.03486	0.06461	0.00158	403.6	9.6	860.9	19.8
0.03564	0.12435	0.00316	755.6	18.2	762.2	21.2
0.02082	0.07711	0.00186	478.8	11.2	593.1	15.2
0.02708	0.11376	0.00278	694.5	16	695.1	17.6
0.07282	0.10284	0.00254	631	14.8	1344.2	25.8
0.01052	0.03167	0.00078	201	4.8	323.8	10
0.1982	0.35386	0.0096	1953	45.8	2018.5	35.2
0.02408	0.09924	0.00246	610	14.4	611.9	16.8
0.08996	0.12396	0.00482	753.3	27.6	768.9	49
0.03508	0.11484	0.00296	700.8	17.2	730.5	21.4
0.03448	0.12448	0.00314	756.3	18	764.3	20.6
0.00564	0.00478	0.00012	30.7	0.8	194.2	6.4
886.84876	6.84662	17.0622				
0.02144	0.08986	0.00218	554.7	12.8	598	15.4
0.02274	0.09531	0.00234	586.9	13.8	602.3	16.2
0.05762	0.13997	0.00412	844.5	23.2	809.2	31.2
0.0224	0.10046	0.00244	617.1	14.2	613.8	15.8
0.03188	0.09844	0.00264	605.3	15.4	617.4	21.2

0.03356	0.0961	0.00268	591.5	15.8	576.2	22.8
0.03612	0.12937	0.00328	784.3	18.8	781.3	21.2
0.03528	0.13343	0.00334	807.4	19	790.6	20.6
0.06392	0.09567	0.00352	589	20.8	619	40.2
0.05842	0.13047	0.00398	790.5	22.6	769.4	32.6
0.04842	0.11877	0.00342	723.5	19.8	737.7	28.2
0.01172	0.03052	0.00076	193.8	4.8	362	10.8
0.02714	0.11036	0.00274	674.8	16	670.5	18
0.05662	0.13772	0.00392	831.8	22.2	862	29.4
0.04008	0.09607	0.00288	591.3	17	581	26.8
0.03298	0.09427	0.00266	580.7	15.6	552.4	22.8
0.03644	0.11001	0.003	672.8	17.4	649.7	23.4
0.16786	0.37206	0.00908	2039.1	42.6	2040.2	29.6
0.06502	0.17193	0.00466	1022.7	25.6	1043.5	29
0.02084	0.09046	0.00222	558.3	13.2	556.9	15.4
0.02388	0.09945	0.00246	611.2	14.4	611.6	16.6
0.04856	0.14542	0.00386	875.2	21.8	876.8	25.4
0.03786	0.09275	0.00276	571.8	16.2	551.7	26
0.0411	0.13531	0.00348	818.1	19.8	827.6	22.8
0.04976	0.13575	0.00376	820.6	21.4	816.8	27.2
0.07214	0.0959	0.00388	590.3	22.8	573.7	46.4
0.05562	0.13446	0.00398	813.3	22.6	787.6	30.8
0.0841	0.20184	0.00512	1185.2	27.4	1384.6	27.8
0.03496	0.13063	0.00326	791.5	18.6	792.2	20.4
0.00624	0.02778	0.0007	176.6	4.4	175.9	6.6
0.02848	0.11137	0.00274	680.7	15.8	715.8	18.2
0.07378	0.18634	0.0046	1101.5	25	1330.6	25.8
0.06548	0.16331	0.00454	975.1	25.2	1000.6	30.2
0.03914	0.09692	0.00284	596.3	16.6	603.5	25.8
0.03312	0.10382	0.00254	636.8	14.8	810.4	19.4
0.02348	0.08596	0.00222	531.6	13.2	529.6	17.2
0.03828	0.10539	0.00296	645.9	17.2	635.2	24.6
0.05964	0.114	0.0037	695.9	21.4	697.8	35.2
0.03378	0.0966	0.00268	594.5	15.8	587.7	22.8
0.05216	0.13397	0.00382	810.5	21.8	796.7	28.8
0.02732	0.00424	0.0006	27.3	3.8	26.5	27.6
541.8678	5.13813	8.63322				
0.95312	0.32037	0.01342				
0.02064	0.0851	0.0021	526.5	12.4	562.4	15.2
0.04258	0.04089	0.001	258.3	6.2	985.4	21.2
0.04406	0.14924	0.0037	896.7	20.8	959.8	22.2
0.06024	0.15262	0.00434	915.6	24.2	902.6	30.2
0.02506	0.1023	0.00256	627.9	15	606	17.4
0.03004	0.11041	0.00272	675.1	15.8	739.5	18.6
0.0196	0.07072	0.00178	440.5	10.8	501.1	15.2

age 207/206	2σ age 76	discordance Δ 68-75 [%]	Δ 68-76 [%]	preferred age age	2σ age
691.9	60.8	2.3	9.7	759.1	17.8
1020	59.8	0.3	1	1029.9	24.2
755.1	93.8	0.1	0.2	756.8	20.2
649.1	89	-1.7	-7.8	598.6	15.8
688.9	88.8	3.9	17	806.2	21
831.5	49.4	0.2	0.6	836.1	18.8
859.1	58.2	-0.5	-1.7	844.2	19.6
1655.2	44	-50.3	-94		
842.1	89.2	0	0	842.1	22.4
625.4	71.2	-0.6	-2.7	608.8	14.8
836.8	80.8	-4.1	-14.9	712	18.4
844.9	55	-0.3	-1	836.5	19.2
1787.3	47.4	-43	-79.8		
684.4	102.8	0	0.1	684.9	18.8
632.5	55.2	-1.3	-6.1	594	13.8
968.9	54.8	0.1	0.1	970.3	22.2
647.3	76.4	-6.7	-29.6	455.9	11.6
1049.6	93.8	-6.3	-19.1	849	23.8
349.2	77	-2.6	-19.7	280.4	7
1327.6	65.2	-14.1	-35	862.5	21.6
783.1	69.6	1.2	4.6	819.3	20
586.5	48.2	-1.5	-7.3	543.6	12.4
699.8	76	1	4.2	729.5	18.2
764.3	54	-1.3	-5.1	725.3	16.8
637.5	68.4	-1.2	-5.7	601.2	14.6
592	96.6	-0.5	-2.4	577.7	15.4
595.3	90	-0.1	-0.7	590.9	15.4
580.7	74	1.5	7.4	623.7	15.4
553	80.4	2.2	11.2	614.8	15.4
897.2	54.4	-1.6	-5.4	848.4	19.6
2137.3	41.8	-1.2	-2.3	2137.3	41.8
577.8	58	0.3	1.5	586.5	13.8
801.9	60.4	0.2	0.6	806.7	19
1902.6	70	-2.4	-4.9	1902.6	70
1913.2	42.8	-2.7	-5.6	1913.2	42.8
608.3	86.2	0.6	2.9	625.8	16.2
568.6	70.8	0.2	0.9	573.4	14
285	648.4	-10	-88.7	32.1	2.2
2371.2	37.6	-10.4	-18.7		
568.6	66.4	-0.8	-3.8	546.7	13.2
1035.5	72.8	1.1	3.3	1069.3	26.6
-893.7	3131.6	41.8	-103.4		
623.3	64.8	0.7	3.4	644.2	15.4
1855.9	46.2	0.1	0.2	1855.9	46.2
1086.9	49.8	-20.5	-56.9		
597.4	105	-0.7	-3.7	575.3	16
1959.2	44.8	-0.2	-0.4	1959.2	44.8
698.4	90.4	-0.6	-2.7	679.6	18
840.6	86.2	-0.7	-2.6	818.4	21.6
4427	32.4	-91	-99.6		

1323.7	66.2	-18.8	-46.1		
820.9	69.2	-3.6	-13.2	712.3	17.6
722.7	66.2	-1.8	-7.4	669.5	16.2
595.3	72.6	0.3	1.1	602.1	14.8
783.4	75.4	1.1	4.3	817.2	20.4
711.3	79.6	0.1	0.5	714.7	18.2
608.6	56	0.6	3	626.6	14.6
748.2	53.4	0.8	3.1	771.4	17.8
679.3	64.6	0.7	2.9	699.3	16.8
623.3	64.8	-0.1	-0.4	620.8	14.8
1155.8	47.6	-28.7	-73.9		
1606.5	57.6	-20.8	-44.7		
861.2	50.8	0	-0.2	859.8	19.6
689.6	104.6	-0.8	-3.5	665.1	18.6
2014.3	41.2	-2	-4.1	2014.3	41.2
620.8	97	-1.9	-8.8	566.5	15.4
1842.4	43	1.2	2.6	1842.4	43
855.4	59	-3.8	-13.6	739.4	17.4
566	91.6	0.6	3	582.9	15.4
587.3	103.4	-1.4	-7	546.1	15
882.2	60.4	-0.6	-2.3	861.8	20.4
787.2	70.6	-1.2	-4.6	751.2	18.4
912.1	75.2	-4.2	-14.2	782.5	19.8
612.9	55.2	0	0	612.8	14.4
894.8	57.6	-0.2	-0.6	889.2	20.8
613.6	58.8	0.6	2.6	629.9	14.8
628.3	100.8	-1.1	-5	596.8	16.4
827.5	55.6	-10.8	-38.2	511.7	12.2
3223.2	35.8	-76.9	-96.4		
561.9	105.2	2.2	11.2	625.1	17
481.4	98.2	0.6	3.4	497.7	13.4
547.8	112.8	-0.8	-4.5	523.2	14.8
		-2228.3			
871	95	-2.8	-9.8	785.9	21.6
644.9	64.6	0	0	645	15.6
701.1	73.2	-3.3	-13.6	605.8	15.2
2344.3	40.4	-53.1	-82.8		
782.4	63.8	-0.9	-3.4	755.6	18.2
1059.1	47.4	-19.3	-54.8		
697.4	53.8	-0.1	-0.4	694.5	16
2781.1	39.6	-53.1	-77.3		
1339.3	50.4	-37.9	-85		
2086.8	52	-3.2	-6.4	2086.8	52
619.7	58.6	-0.3	-1.6	610	14.4
815.2	171.6	-2	-7.6	753.3	27.6
823.4	66.6	-4.1	-14.9	700.8	17.2
788.5	61	-1.1	-4.1	756.3	18
3568.4	39	-84.2	-99.1		
766.2	50.8	-7.2	-27.6	554.7	12.8
661.6	55	-2.6	-11.3	586.9	13.8
714	101	4.4	18.3	844.5	23.2
602.5	52.6	0.5	2.4	617.1	14.2
663	79.8	-2	-8.7	605.3	15.4

517.2	96	2.7	14.4	591.5	15.8
773.4	62.2	0.4	1.4	784.3	18.8
744.3	59.4	2.1	8.5	807.4	19
731.4	166.4	-4.9	-19.5	589	20.8
708.9	110.6	2.8	11.5	790.5	22.6
781.8	95.4	-1.9	-7.5	723.5	19.8
1657.4	46.6	-46.5	-88.3		
656.4	58	0.7	2.8	674.8	16
941.2	86.2	-3.5	-11.6	831.8	22.2
541.8	114.8	1.8	9.1	591.3	17
438.4	101.6	5.1	32.5		
571.1	87.6	3.6	17.8	672.8	17.4
2042.1	40.8	-0.1	-0.1	2042.1	40.8
1087.9	70.4	-2	-6	1022.7	25.6
551.9	57.4	0.2	1.2	558.3	13.2
613.6	57.4	-0.1	-0.4	611.2	14.4
881.3	70.8	-0.2	-0.7	875.2	21.8
470.5	117.6	3.6	21.5	571.8	16.2
853.9	64.6	-1.1	-4.2	818.1	19.8
807.3	83	0.5	1.6	820.6	21.4
508.8	215	2.9	16	590.3	22.8
716.3	101.4	3.3	13.5	813.3	22.6
1707.5	49.2	-14.4	-30.6		
795.2	57.4	-0.1	-0.5	791.5	18.6
167.8	73.8	0.4	5.3	176.6	4.4
828.4	53.2	-4.9	-17.8	680.7	15.8
1722	45.2	-17.2	-36		
1057.5	77.2	-2.5	-7.8	975.1	25.2
631.1	105	-1.2	-5.5	596.3	16.6
1323.5	47.6	-21.4	-51.9		
521.8	72.2	0.4	1.9	531.6	13.2
598.2	94.8	1.7	8	645.9	17.2
704.5	131.2	-0.3	-1.2	695.9	21.4
562.3	93.2	1.2	5.7	594.5	15.8
759.4	92.2	1.7	6.7	810.5	21.8
-40	2529.2	2.8	-168.1	27.3	3.8

711.3	54	-6.4	-26	526.5	12.4
3422.2	36.2	-73.8	-92.5		
1107.9	51.2	-6.6	-19.1	896.7	20.8
871.6	86.4	1.4	5.1	915.6	24.2
525.6	62.8	3.6	19.5	627.9	15
940.3	52.4	-8.7	-28.2	675.1	15.8
789.5	60.2	-12.1	-44.2	440.5	10.8

Sample 3709P Nile Delta beach placer @ Rosetta 150 grain analysed 122 c

grain	concentrations			isotopic ratios		
	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
X3709P_G001	2823	128.6	0.4072	0.06959	0.00166	0.42916
X3709P_G002	133.1	21.9	0.5161	0.07381	0.00228	1.54755
X3709P_G003	113.3	14.9	0.5024	0.06596	0.00242	1.11956
X3709P_G004	259.9	99.1	0.694	0.15942	0.00368	7.45365
X3709P_G005	2398.9	187.2	0.6334	0.06127	0.00142	0.60388
X3709P_G006	500.6	155.8	0.4309	0.11867	0.00274	4.88366
X3709P_G007	94.9	17	0.4445	0.07219	0.00252	1.68465
X3709P_G008	121.8	14.6	1.3753	0.05875	0.00248	0.72709
X3709P_G009	546.6	96	0.2293	0.07335	0.00178	1.78228
X3709P_G010	140.9	17.1	1.224	0.05764	0.00236	0.75312
X3709P_G011	47.4	6.2	0.4538	0.06321	0.00344	1.08352
X3709P_G012	99.1	11	0.7217	0.06137	0.00276	0.82751
X3709P_G013	266.9	81.4	0.2083	0.13928	0.0033	5.85835
X3709P_G014	77.2	6.3	0.2399	0.05931	0.00312	0.67709
X3709P_G015	102	58.5	1.2227	0.16529	0.00408	10.0217
X3709P_G016	58.8	6.4	1.2335	0.05829	0.00358	0.68751
X3709P_G017	275.4	44.6	0.5055	0.0696	0.00196	1.44656
X3709P_G018	87.1	11.4	0.78	0.06358	0.00286	0.99679
X3709P_G019	150.8	20.3	0.5352	0.06376	0.00224	1.09858
X3709P_G020	237.9	25.8	0.7472	0.05603	0.00196	0.73481
X3709P_G021	44.6	5.1	0.5571	0.06109	0.00392	0.88214
X3709P_G022	328.5	56.2	0.4838	0.06903	0.00186	1.52395
X3709P_G023	160	17.3	0.4639	0.05804	0.00222	0.81978
X3709P_G024	372.4	47.9	0.6425	0.08705	0.0038	1.39678
X3709P_G025	46	6.5	1.0704	-0.23053	0.01146	-3.2368
X3709P_G026	1084	72.9	1.099	0.07395	0.00202	0.58584
X3709P_G027	163.6	21.2	0.2887	0.06846	0.00234	1.20348
X3709P_G028	67.3	10.2	0.7976	0.06335	0.00308	1.14427
X3709P_G029	148	13.8	0.6753	0.09002	0.00334	1.04725
X3709P_G030	86.4	9.2	0.6704	0.05849	0.00292	0.76494
X3709P_G031	179.8	16.3	0.5024	0.05789	0.00222	0.6768
X3709P_G032	81.4	18.7	1.3703	0.07098	0.0027	1.69301
X3709P_G033	273.3	25.5	0.1028	0.06043	0.0019	0.81918
X3709P_G034	785.9	15.9	0.5235	0.04664	0.00194	0.12191
X3709P_G035	265.5	26	0.2059	0.05843	0.00188	0.80337
X3709P_G036	445.4	-42.5	0.6273	0.04776	0.00538	0.03041
X3709P_G037	34.7	3.4	0.3333	0.06009	0.0045	0.80169
X3709P_G038	119.7	13.8	1.0886	0.0585	0.00244	0.75203
X3709P_G039	332.8	33.6	0.2507	0.05809	0.00172	0.81518
X3709P_G040	14.2	6.2	1.5633	0.1102	0.00544	4.72752
X3709P_G041	131	16.9	0.4241	0.06458	0.0023	1.10132
X3709P_G042	88.5	10	0.9948	0.06331	0.00292	0.80654
X3709P_G043	148	107	2.1035	0.16904	0.004	10.64897
X3709P_G044	177	16.2	0.3658	0.06012	0.00216	0.73969
X3709P_G045	613.2	75.8	0.3906	0.06578	0.00168	1.07839
X3709P_G046	436.9	38.9	0.0967	0.05845	0.00164	0.75877
X3709P_G047	52.4	5.6	0.546	0.06016	0.0035	0.8212
X3709P_G048	486.4	60.5	0.1064	0.06355	0.00174	1.14204
X3709P_G049	46.7	6.4	0.5115	0.06381	0.00354	1.11978
X3709P_G050	571.4	58.5	0.2302	0.06339	0.00166	0.90361

X3709P_G051	73.6	7.9	0.3107	0.07065	0.00318	1.02681
X3709P_G052	80.7	8.7	1.0907	0.05832	0.00292	0.69688
X3709P_G053	252.1	26.3	0.2547	0.0628	0.002	0.9097
X3709P_G054				-0.20382	1.76162	24.7821
X3709P_G055	120.4	15.3	0.6413	0.06541	0.00254	1.02896
X3709P_G056	119.7	12.4	0.6295	0.05736	0.00252	0.74297
X3709P_G057	73.6	34.1	0.2835	0.21167	0.00542	13.13029
X3709P_G058	204.6	74.4	0.5006	0.17912	0.00428	8.45249
X3709P_G059	45.3	4.8	0.4063	0.05947	0.0038	0.83962
X3709P_G060	1147.8		1.0947	0.53908	0.01218	9.16412
X3709P_G061	115.4	11.6	0.4339	0.05766	0.00252	0.76096
X3709P_G062	103.4	7.5	0.5308	0.05532	0.00308	0.51419
X3709P_G063	51	4.3	0.6675	0.05256	0.00404	0.54417
X3709P_G064	114	16.4	0.4777	0.06553	0.00246	1.22402
X3709P_G065	259.1	40.2	0.4218	0.06836	0.00202	1.39506
X3709P_G066	237.9	38.9	0.1332	0.07191	0.0021	1.67406
X3709P_G067	73.6	38.9	0.9108	0.16386	0.00436	9.75353
X3709P_G068	207.5	39.4	0.6553	0.07194	0.00216	1.68561
X3709P_G069	461.7	225	0.7063	0.16991	0.00388	9.89974
X3709P_G070	43.9	5.5	0.634	0.06521	0.00408	1.02682
X3709P_G071	44.6	5.5	0.5662	0.06352	0.00408	0.99726
X3709P_G072	36.1	2.9	0.2241	0.05927	0.00496	0.67391
X3709P_G073	492.1	158	0.0155	0.14597	0.00338	6.77911
X3709P_G074	157.2		0.4419	0.71417	0.01658	59.45008
X3709P_G075	271.9	24.9	0.1375	0.05998	0.00204	0.79018
X3709P_G076	262.7	117.8	0.2522	0.18114	0.00426	10.7745
X3709P_G077	121.1	15.6	0.7072	0.07243	0.00284	1.13637
X3709P_G078				0.52975	1.1656	-53.41385
X3709P_G079	355.4	37.5	0.4679	0.05935	0.0018	0.81612
X3709P_G080	231.5	25.4	0.7939	0.06823	0.0023	0.89878
X3709P_G081	53.8	6.9	0.3362	0.06382	0.0034	1.10861
X3709P_G082	310.1	28.8	0.1675	0.06088	0.00188	0.80673
X3709P_G083	131.7	24.1	0.3786	0.07386	0.00232	1.7812
X3709P_G084	64.4	9.4	0.447	0.06346	0.00292	1.20217
X3709P_G085	104.8	10.5	0.4455	0.05817	0.0026	0.76765
X3709P_G086	77.2	15.3	0.6977	0.07029	0.00266	1.6984
X3709P_G087	153.6	20	0.4006	0.06508	0.00224	1.11822
X3709P_G088	70.8	9.2	1.4627	0.06137	0.0034	0.81338
X3709P_G089	110.5	10.4	0.8448	0.05737	0.00274	0.63476
X3709P_G090	289.6	26.3	0.0282	0.05918	0.00196	0.79848
X3709P_G091	190.5	19	0.6002	0.05875	0.00226	0.73319
X3709P_G092	57.4	5.8	0.2337	0.058	0.00346	0.81604
X3709P_G093	36.1	20.3	0.9004	0.16638	0.00506	10.43345
X3709P_G094	51.7	6.2	0.1802	0.05893	0.00342	0.99009
X3709P_G095	39.7	6.5	0.3994	0.06829	0.00374	1.46248
X3709P_G096	486.4	55.5	0.6306	0.06754	0.00192	0.95542
X3709P_G097	191.2	77.5	0.7182	0.16232	0.00402	7.99504
X3709P_G098	5607.8	77.1	0.6446	0.18476	0.00456	0.30319
X3709P_G099	116.1	11.1	0.3245	0.05708	0.00266	0.74321
X3709P_G100	43.9	6.3	1.0521	0.06668	0.004	1.07469
X3709P_G101	502	51.2	0.1344	0.06095	0.00174	0.89309
X3709P_G102	506.3	112.2	0.2526	0.09913	0.00242	2.97079
X3709P_G103	38.9	18.9	1.826	0.109	0.00394	4.83484
X3709P_G104	191.2	26	0.3515	0.06639	0.0023	1.20607
X3709P_G105	286.1	38.5	0.4601	0.06231	0.00206	1.08826

X3709P_G106	195.4	24.2	0.3331	0.07009	0.00244	1.16796
X3709P_G107	134.5	23.7	0.7579	0.07123	0.00234	1.4926
X3709P_G108				-0.41889	3.748	
X3709P_G109	659.9	183.5	0.1153	0.10369	0.00246	4.06994
X3709P_G110	99.8	10.2	0.4251	0.06555	0.00292	0.8748
X3709P_G111	169.2		1.5489	0.31886	0.0088	5.78937
X3709P_G112	45.3	5	0.7885	0.06085	0.00404	0.80741
X3709P_G113	416.3	59	0.4725	0.06759	0.00188	1.24327
X3709P_G114	68.7	6.9	0.4289	0.06071	0.0035	0.80917
X3709P_G115	79.3	8.3	0.7344	0.06027	0.00332	0.76118
X3709P_G116	78.6	7.5	0.481	0.05627	0.00318	0.69359
X3709P_G117	383.8	158	0.8762	0.14781	0.00354	7.16346
X3709P_G118	87.8	10	0.7986	0.05333	0.0029	0.72451
X3709P_G119	41.1	4.9	1.168	0.05943	0.00448	0.76523
X3709P_G120	746.3	63.1	0.0693	0.05737	0.0016	0.71303
X3709P_G121	315.8	33.1	0.0549	0.06185	0.00192	0.95174
X3709P_G122	386.6	73.7	1.4474	0.11731	0.003	2.73061
X3709P_G123	183.4	67.3	0.6421	0.11988	0.00308	5.3338
X3709P_G124	230.8	21.9	0.4508	0.05978	0.0021	0.74328
X3709P_G125	160.7	15.1	0.2444	0.05953	0.00248	0.7734
X3709P_G126	278.3	40.6	0.3914	0.06782	0.00206	1.31155
X3709P_G127	266.2	25.6	0.4685	0.05725	0.00196	0.71515
X3709P_G128	199.7	30.9	0.6784	0.08434	0.00262	1.58678
X3709P_G129	66.6	5.9	0.3808	0.05937	0.0034	0.706
X3709P_G130	288.9	37.4	0.4647	0.06319	0.00194	1.06314
X3709P_G131	102	14	0.4869	0.29558	0.00884	4.9678
X3709P_G132	72.2	30.2	0.8726	0.11985	0.0036	5.70353
X3709P_G133	473.7	40.7	0.0262	0.05867	0.0018	0.75023
X3709P_G134	333.5	101.4	0.3421	0.12207	0.00306	4.92073
X3709P_G135	348.4	56.7	0.2794	0.0706	0.00202	1.57138
X3709P_G136	240	26.9	0.4697	0.06076	0.00208	0.87468
X3709P_G137	152.9	15.6	0.5848	0.05521	0.00246	0.70666
X3709P_G138	194	72.1	0.6827	0.11239	0.00298	4.9944
X3709P_G139	62.3	8.5	0.2539	0.06576	0.0033	1.23561
X3709P_G140	162.1	22.7	0.891	0.06167	0.0024	1.00801
X3709P_G141	400.1	52.4	0.5922	0.06375	0.00194	1.04913
X3709P_G142	321.5	1.6	0.6458	0.0482	0.0079	0.02928
X3709P_G143	186.9	18.1	0.2494	0.06168	0.0024	0.82457
X3709P_G144	728.6	69.4	0.0632	0.06155	0.00172	0.86861
X3709P_G145	271.9	31.9	0.5146	0.05938	0.00204	0.89381
X3709P_G146	429.8	45.3	0.2197	0.05953	0.00178	0.87798
X3709P_G147	2931.3	332.3	0.2332	0.06529	0.00158	0.93186
X3709P_G148	407.8	154.9	0.2565	0.15158	0.00368	7.71838
X3709P_G149	36.8	4.7	0.3477	0.06612	0.00426	1.12159
X3709P_G150	144.4	14.2	0.2109	0.09425	0.0054	1.2587

oncordant ages 81.3% concordant

			ages			
2σ 75	Pb206/U238	2σ 68	age 206/238	2σ age 68	age 207/235	2σ age 75
0.00992	0.04474	0.00092	282.1	5.6	362.6	9.6
0.04634	0.1521	0.0034	912.7	19	949.5	23.6
0.03954	0.12313	0.0029	748.6	16.6	762.8	23.4
0.16862	0.3392	0.00704	1882.8	33.8	2167.4	27.8
0.01366	0.07151	0.00144	445.2	8.6	479.7	11.8
0.11064	0.29855	0.00616	1684.1	30.6	1799.4	26
0.05682	0.1693	0.00398	1008.3	22	1002.7	26.8
0.02944	0.08979	0.00218	554.3	12.8	554.8	20.8
0.0421	0.17629	0.00364	1046.7	20	1039	20.8
0.02964	0.0948	0.00228	583.9	13.4	570	20.8
0.05664	0.12435	0.0035	755.6	20	745.4	32.4
0.03582	0.09782	0.00248	601.6	14.6	612.2	23.8
0.1359	0.30514	0.0064	1716.7	31.6	1955.1	27.4
0.03406	0.08282	0.00224	512.9	13.4	525	24.2
0.24498	0.43986	0.00968	2350	43.4	2436.8	30.6
0.04052	0.08558	0.00248	529.3	14.8	531.3	28.2
0.03946	0.15079	0.00324	905.4	18.2	908.4	21.2
0.04306	0.11374	0.0029	694.4	16.8	702.2	26.2
0.03732	0.12499	0.00288	759.2	16.6	752.7	22.4
0.0248	0.09515	0.00214	585.9	12.6	559.4	17.8
0.05446	0.10476	0.00318	642.2	18.6	642.1	33.8
0.03996	0.16016	0.0034	957.7	18.8	940.1	21
0.0302	0.10246	0.0024	628.8	14	607.9	20.6
0.05752	0.11641	0.00314	709.9	18.2	887.6	30.4
0.15	0.10186	0.0031	625.3	18.2		85.6
0.0154	0.05747	0.00122	360.2	7.4	468.2	13
0.03978	0.12754	0.00294	773.8	16.8	802.2	22.8
0.05338	0.13104	0.0035	793.8	20	774.5	30
0.03694	0.0844	0.00206	522.3	12.2	727.5	23
0.0367	0.09489	0.0025	584.4	14.8	576.9	24.8
0.02492	0.08482	0.00198	524.8	11.8	524.8	18.4
0.0625	0.17306	0.00424	1028.9	23.4	1005.9	28.8
0.02498	0.09835	0.00216	604.7	12.6	607.6	17.6
0.00486	0.01896	0.00044	121.1	2.8	116.8	5.2
0.02506	0.09975	0.0022	612.9	12.8	598.7	17.6
0.0033	0.00462	0.00016	29.7	1	30.4	3.6
0.0576	0.09679	0.0032	595.6	18.8	597.8	37
0.03024	0.09327	0.00226	574.8	13.4	569.4	21
0.02332	0.10181	0.00218	625	12.8	605.4	16.6
0.2286	0.31124	0.01034	1746.8	50.8	1772.1	49.8
0.03774	0.12373	0.00286	752	16.4	754	22.6
0.03558	0.09243	0.00236	569.9	14	600.5	24
0.24896	0.45703	0.00972	2426.4	43	2493	29.6
0.0255	0.08927	0.00204	551.2	12	562.2	18.4
0.02674	0.11894	0.00248	724.5	14.2	742.8	17.4
0.02074	0.09418	0.002	580.2	11.8	573.3	15.4
0.0458	0.09904	0.00284	608.8	16.6	608.7	29.8
0.0304	0.13037	0.00276	790	15.8	773.5	18.8
0.05964	0.12733	0.00366	772.6	21	762.9	33.6
0.02306	0.10342	0.00216	634.4	12.6	653.7	16.2

0.0441	0.10545	0.00274	646.3	16	717.3	26.8
0.0335	0.0867	0.00228	536	13.6	536.9	23.6
0.0279	0.1051	0.00232	644.2	13.6	656.9	18.8
208.18956	-0.88214	2.74294				
0.03856	0.11413	0.00274	696.7	15.8	718.4	23.6
0.03142	0.09398	0.00232	579	13.6	564.1	21.8
0.3341	0.45004	0.01034	2395.4	46	2689.1	32.4
0.19866	0.34236	0.00728	1898	35	2280.8	29
0.05164	0.10244	0.0031	628.7	18.2	618.9	32.8
0.20182	0.12334	0.00254	749.8	14.6	2354.5	28
0.03198	0.09575	0.00236	589.5	13.8	574.6	22
0.0275	0.06744	0.00182	420.7	11	421.3	21.4
0.0402	0.07512	0.0024	466.9	14.4	441.2	29.8
0.0443	0.13553	0.00322	819.3	18.2	811.6	24.8
0.04024	0.14807	0.00324	890.1	18.2	886.8	21.8
0.04746	0.1689	0.0037	1006	20.4	998.7	23.2
0.25766	0.43187	0.00998	2314.1	45	2411.8	32.4
0.04904	0.16999	0.00376	1012.1	20.8	1003.1	23.8
0.223	0.42272	0.00872	2272.8	39.6	2425.5	28.4
0.06172	0.11425	0.0035	697.4	20.2	717.3	35.8
0.0616	0.1139	0.00348	695.4	20.2	702.4	36
0.05422	0.08249	0.0029	511	17.2	523.1	37.2
0.15492	0.33694	0.00698	1871.9	33.6	2083	27.4
1.3818	0.60396	0.01326	3045.8	53.2	4164.9	32
0.02594	0.09559	0.00216	588.5	12.8	591.3	18.4
0.25036	0.43157	0.0091	2312.8	41	2503.9	29.4
0.04274	0.11382	0.00278	694.9	16	770.8	25
105.01892	-0.73154	1.3823				
0.02412	0.09977	0.00216	613.1	12.6	605.9	17
0.02916	0.09557	0.00218	588.4	12.8	651.1	19.6
0.05698	0.12603	0.00354	765.2	20.2	757.5	32.2
0.0242	0.09614	0.0021	591.7	12.4	600.6	17.2
0.05432	0.17498	0.00396	1039.5	21.8	1038.6	25.2
0.05342	0.13744	0.00358	830.2	20.2	801.6	29.4
0.03294	0.09574	0.00238	589.4	14	578.4	22.6
0.06208	0.17531	0.00428	1041.3	23.4	1007.9	28.8
0.03738	0.12467	0.00286	757.4	16.4	762.1	22.2
0.04316	0.09616	0.00268	591.9	15.8	604.3	28.2
0.0291	0.08027	0.00204	497.7	12.2	499.1	21.4
0.0255	0.09788	0.00218	602	12.8	596	18
0.02724	0.09054	0.00212	558.7	12.6	558.4	19.4
0.04678	0.10207	0.00292	626.5	17	605.8	30.2
0.31728	0.45498	0.0117	2417.4	51.8	2474	37
0.05536	0.1219	0.00354	741.5	20.4	698.8	32.8
0.07712	0.15538	0.00456	931.1	25.4	915	37.4
0.02626	0.10263	0.0022	629.8	12.8	680.9	17.6
0.19476	0.35737	0.0077	1969.7	36.6	2230.5	29.6
0.0072	0.01191	0.00026	76.3	1.6	268.9	7.8
0.03342	0.09447	0.0024	581.9	14.2	564.3	23
0.06168	0.11694	0.00356	712.9	20.6	741	35.4
0.02496	0.10631	0.00228	651.3	13.2	648	17.2
0.07132	0.21744	0.00454	1268.3	24	1400.2	24.4
0.17156	0.32183	0.00852	1798.7	41.6	1791	37.6
0.0406	0.1318	0.00304	798.1	17.4	803.4	23.2
0.03484	0.12671	0.00286	769.1	16.4	747.7	21.2

0.0391	0.1209	0.0028	735.7	16.2	785.7	22.8
0.04742	0.15203	0.00346	912.3	19.4	927.4	24.4
0.09526	0.28477	0.00588	1615.3	29.6	1648.3	25.6
0.03732	0.09682	0.00246	595.7	14.4	638.2	24.4
0.15062	0.13173	0.0031	797.7	17.6	1944.8	31.4
0.0513	0.09627	0.00298	592.5	17.6	601	33.2
0.03386	0.13347	0.00286	807.6	16.2	820.4	19.8
0.0448	0.09671	0.00276	595.1	16.2	602	29.2
0.0401	0.09164	0.00256	565.2	15.2	574.7	27.2
0.03784	0.08944	0.00248	552.2	14.6	535	26.2
0.16958	0.35164	0.00736	1942.4	35.2	2132	28.4
0.0381	0.09857	0.00266	606	15.6	553.3	26
0.05534	0.09343	0.00308	575.8	18.2	577	36.2
0.01946	0.09017	0.00192	556.5	11.4	546.5	14.8
0.0286	0.11164	0.00246	682.3	14.2	679	18.8
0.0683	0.16889	0.0036	1006	19.8	1336.8	24.8
0.13488	0.32281	0.00698	1803.4	34	1874.3	28.8
0.02514	0.09021	0.00206	556.8	12.2	564.3	18.2
0.031	0.09426	0.0023	580.7	13.6	581.7	21.4
0.0387	0.14032	0.0031	846.5	17.6	850.8	21.6
0.02366	0.09063	0.00204	559.3	12	547.8	17.4
0.04712	0.13651	0.00314	824.9	17.8	965	24
0.0388	0.08627	0.00244	533.4	14.4	542.4	26.8
0.03172	0.12207	0.00268	742.5	15.4	735.4	19.8
0.13832	0.12194	0.003	741.7	17.2	1813.9	32.8
0.16898	0.34529	0.00822	1912.1	39.4	1931.9	33.2
0.0224	0.09278	0.00202	572	12	568.4	16.4
0.12154	0.29248	0.00622	1653.9	31	1805.8	27.8
0.0439	0.16149	0.0035	965.1	19.4	959	22.2
0.02906	0.10445	0.00236	640.4	13.8	638.1	19.4
0.03042	0.09287	0.0023	572.5	13.6	542.8	21.4
0.13074	0.32242	0.00706	1801.5	34.4	1818.4	29
0.05978	0.13632	0.00372	823.8	21.2	816.9	32
0.03786	0.1186	0.00284	722.5	16.4	707.9	23.2
0.03104	0.11941	0.00262	727.2	15	728.5	19.6
0.00466	0.00441	0.0002	28.4	1.2	29.3	5
0.03102	0.09699	0.0023	596.7	13.6	610.6	21
0.02358	0.10239	0.00218	628.4	12.8	634.8	16.6
0.0299	0.1092	0.00248	668.1	14.4	648.4	19.8
0.02546	0.107	0.00232	655.3	13.6	639.9	17.6
0.0223	0.10355	0.00214	635.2	12.6	668.6	15.6
0.18512	0.36945	0.00774	2026.8	36.4	2198.7	28.8
0.06944	0.12307	0.0039	748.2	22.4	763.7	38.6
0.06766	0.09689	0.0031	596.2	18.2	827.3	37.2

		discordance		preferred age	
age 207/206	**2σ age 76**	**Δ 68-75 [%]**	**Δ 68-76 [%]**	**age**	**2σ age**
916.3	49	-22.2	-69.2		
1036.3	62.4	-3.9	-11.9	912.7	19
805.1	76.8	-1.9	-7	748.6	16.6
2449.5	39	-13.1	-23.1		
648.7	49.8	-7.2	-31.4	445.2	8.6
1936.3	41.4	-6.4	-13	1936.3	41.4
991.3	71	0.5	1.7	1008.3	22
557.8	92	-0.1	-0.6	554.3	12.8
1023.6	49.2	0.7	2.3	1046.7	20
516.1	90	2.4	13.1	583.9	13.4
715.3	115.6	1.4	5.6	755.6	20
652.2	96.6	-1.7	-7.8	601.6	14.6
2218.3	41	-12.2	-22.6		
578.5	114.4	-2.3	-11.3	512.9	13.4
2510.5	41.6	-3.6	-6.4	2510.5	41.6
540.7	134.4	-0.4	-2.1	529.3	14.8
916.6	58	-0.3	-1.2	905.4	18.2
727.7	95.4	-1.1	-4.6	694.4	16.8
733.7	74.4	0.9	3.5	759.2	16.6
453.6	77.6	4.7	29.2	585.9	12.6
642.4	138	0	0	642.2	18.6
899.6	55.6	1.9	6.5	957.7	18.8
531.3	83.8	3.4	18.4	628.8	14
1361.6	84.2	-20	-47.9		
1040.1	55.2	-23.1	-65.4		
882.5	70.6	-3.5	-12.3	773.8	16.8
720	103.2	2.5	10.2	793.8	20
1426	70.8	-28.2	-63.4		
548.2	109	1.3	6.6	584.4	14.8
525.6	84	0	-0.1	524.8	11.8
956.8	77.8	2.3	7.5	1028.9	23.4
619	67.8	-0.5	-2.3	604.7	12.6
30.8	99.6	3.7	292.7	121.1	2.8
545.9	70.4	2.4	12.3	612.9	12.8
87.4	267	-2.3	-66	29.7	1
606.8	162	-0.4	-1.9	595.6	18.8
548.5	91	1	4.8	574.8	13.4
533.2	64.8	3.2	17.2	625	12.8
1802.7	89.8	-1.4	-3.1	1802.7	89.8
760.7	75	-0.3	-1.1	752	16.4
718.7	98	-5.1	-20.7	569.9	14
2548.2	39.6	-2.7	-4.8	2548.2	39.6
607.9	77.6	-2	-9.3	551.2	12
799.4	53.6	-2.5	-9.4	724.5	14.2
546.7	61.2	1.2	6.1	580.2	11.8
609.3	125.8	0	-0.1	608.8	16.6
726.7	58	2.1	8.7	790	15.8
735.3	117.4	1.3	5.1	772.6	21
721.3	55.6	-2.9	-12	634.4	12.6

947.3	92.2	-9.9	-31.8	646.3	16
541.8	109.4	-0.2	-1.1	536	13.6
701.5	67.8	-1.9	-8.2	644.2	13.6
787.6	81.6	-3	-11.5	696.7	15.8
505.4	96.6	2.6	14.6	579	13.6
2918.4	41.4	-10.9	-17.9		
2644.7	39.6	-16.8	-28.2		
584.3	138.8	1.6	7.6	628.7	18.2
4351.8	33.2	-68.2	-82.8		
516.9	96	2.6	14	589.5	13.8
425.2	124.2	-0.1	-1.1	420.7	11
309.8	175	5.8	50.7		
791.4	78.8	1	3.5	819.3	18.2
879.5	61.2	0.4	1.2	890.1	18.2
983.4	59.4	0.7	2.3	1006	20.4
2495.9	44.8	-4	-7.3	2495.9	44.8
984.2	61.2	0.9	2.8	1012.1	20.8
2556.8	38.2	-6.3	-11.1	2556.8	38.2
781.1	131.4	-2.8	-10.7	697.4	20.2
725.7	136.2	-1	-4.2	695.4	20.2
577	181.8	-2.3	-11.4	511	17.2
2299.2	39.8	-10.1	-18.6		
4759.5	33.4	-26.9	-36		
602.9	73.6	-0.5	-2.4	588.5	12.8
2663.3	39	-7.6	-13.2	2663.3	39
998	79.6	-9.8	-30.4	694.9	16
580	65.8	1.2	5.7	613.1	12.6
875.5	69.8	-9.6	-32.8	588.4	12.8
735.7	112.8	1	4	765.2	20.2
635	66.4	-1.5	-6.8	591.7	12.4
1037.6	63.4	0.1	0.2	1039.5	21.8
723.7	97.6	3.6	14.7	830.2	20.2
536.2	97.8	1.9	9.9	589.4	14
936.8	77.6	3.3	11.2	1041.3	23.4
776.9	72.4	-0.6	-2.5	757.4	16.4
652.2	119	-2.1	-9.3	591.9	15.8
505.8	105	-0.3	-1.6	497.7	12.2
573.7	72	1	4.9	602	12.8
557.8	83.8	0.1	0.2	558.7	12.6
529.8	130.8	3.4	18.3	626.5	17
2521.6	51	-2.3	-4.1	2521.6	51
564.5	126.4	6.1	31.4		
877.4	113.4	1.8	6.1	931.1	25.4
854.5	59	-7.5	-26.3	629.8	12.8
2480	41.8	-11.7	-20.6		
2696.1	40.8	-71.6	-97.2		
494.6	102.8	3.1	17.6	581.9	14.2
827.8	125.2	-3.8	-13.9	712.9	20.6
637.5	61.4	0.5	2.2	651.3	13.2
1607.8	45.6	-9.4	-21.1		
1782.8	66	0.4	0.9	1782.8	66
818.7	72.4	-0.7	-2.5	798.1	17.4
684.8	70.6	2.9	12.3	769.1	16.4

931	71.4	-6.4	-21	735.7	16.2
964	67	-1.6	-5.4	912.3	19.4
1691.2	43.8	-2	-4.5	1691.2	43.8
792	93.4	-6.6	-24.8	595.7	14.4
3564.3	42.4	-59	-77.6		
633.9	143	-1.4	-6.5	592.5	17.6
856	57.8	-1.6	-5.7	807.6	16.2
629	124.2	-1.1	-5.4	595.1	16.2
613.3	119	-1.6	-7.8	565.2	15.2
463	125.2	3.2	19.3	552.2	14.6
2320.7	41	-8.9	-16.3		
342.9	123	9.5	76.8		
582.9	163.6	-0.2	-1.2	575.8	18.2
505.8	61.4	1.8	10	556.5	11.4
668.9	66.4	0.5	2	682.3	14.2
1915.6	45.8	-24.7	-47.5		
1954.4	45.8	-3.8	-7.7	1954.4	45.8
595.6	76.2	-1.3	-6.5	556.8	12.2
586.5	90.4	-0.2	-1	580.7	13.6
863.1	63	-0.5	-1.9	846.5	17.6
501.2	75.4	2.1	11.6	559.3	12
1300.4	60.4	-14.5	-36.6	824.9	17.8
580.7	124.4	-1.6	-8.1	533.4	14.4
714.6	65.2	1	3.9	742.5	15.4
3447.2	46.4	-59.1	-78.5		
1954	53.6	-1	-2.1	1954	53.6
554.9	67	0.6	3.1	572	12
1986.7	44.6	-8.4	-16.8		
945.9	58.6	0.6	2	965.1	19.4
630.7	73.8	0.4	1.5	640.4	13.8
420.7	99.4	5.5	36.1		
1838.4	48	-0.9	-2	1838.4	48
798.7	105.2	0.8	3.1	823.8	21.2
662.7	83.4	2.1	9	722.5	16.4
733.3	64.4	-0.2	-0.8	727.2	15
109.1	387	-3.2	-74	28.4	1.2
663	83.4	-2.3	-10	596.7	13.6
658.5	60	-1	-4.6	628.4	12.8
581.1	74.6	3	15	668.1	14.4
586.5	64.8	2.4	11.7	655.3	13.6
783.7	50.8	-5	-19	635.2	12.6
2363.8	41.4	-7.8	-14.3	2363.8	41.4
810.2	134.8	-2	-7.6	748.2	22.4
1513.1	108.2	-27.9	-60.6		

Sample 3289S Nile Delta beach @ Ras El Barr 150 grain analysed 123 conc

	concentrations			isotopic ratios		
grain	U [ppm]	Pb [ppm]	Th/U	Pb207/Pb206	2σ 76	Pb207/U235
S3289_G001	640.1	51.3	0.156	0.05747	0.00158	0.65942
S3289_G002	43.8	7.9	0.6311	0.07048	0.0039	1.56446
S3289_G003	289.9	59.4	0.4898	0.12789	0.00312	3.44327
S3289_G004	185.9	30.1	1.071	0.06471	0.0019	1.15636
S3289_G005	256.4	31.6	0.702	0.12081	0.00324	1.74097
S3289_G006	157.1	20.6	0.5013	0.06321	0.0024	1.06354
S3289_G007	123.1	15.4	0.7093	0.06205	0.00244	0.94773
S3289_G008	172.5	21.9	0.3764	0.06739	0.00216	1.13816
S3289_G009	857.4	90.3	0.2911	0.0655	0.0016	0.94257
S3289_G010	78.3	8.5	0.4312	0.06032	0.00294	0.85966
S3289_G011	234.3	55.2	1.3323	0.07395	0.00208	1.81587
S3289_G012	322.4	34.3	0.3465	0.06007	0.00174	0.85944
S3289_G013	95.8	12.8	0.3406	0.06478	0.00256	1.1648
S3289_G014	42.2	4.9	0.2332	0.06167	0.0039	0.98924
S3289_G015	176.1	21.1	0.2592	0.06195	0.00208	1.02361
S3289_G016	231.7	18.6	1.1433	0.06447	0.00242	0.58997
S3289_G017	82.4	9.3	0.8099	0.06656	0.00356	0.88868
S3289_G018	587	76.2	0.6236	0.06271	0.00158	1.01061
S3289_G019	1040.2	116.7	0.408	0.06328	0.00146	0.9421
S3289_G020	120	12.9	0.3724	0.062	0.00246	0.89224
S3289_G021	132.3	15.4	0.6582	0.06113	0.0023	0.88149
S3289_G022				-1.43077	13.44876	
S3289_G023	246.7	32.2	0.4615	0.06418	0.00196	1.09185
S3289_G024	241	31.3	1.3561	0.05993	0.00212	0.80998
S3289_G025	60.8	27.3	0.8536	0.12574	0.00388	6.4038
S3289_G026				0.85966	0.1049	
S3289_G027	57.7	6.5	0.7701	0.05767	0.00334	0.7732
S3289_G028	156.5	22.1	0.4625	0.0685	0.00234	1.24409
S3289_G029	224	16	0.8036	0.0537	0.00226	0.45688
S3289_G030	1801.3	261.3	2.073	0.06978	0.0016	0.99202
S3289_G031	246.7	33.4	0.5495	0.06274	0.00188	1.07302
S3289_G032	75.2	10.5	0.3201	0.0649	0.00278	1.22158
S3289_G033	38.6	5.5	0.4784	0.06946	0.00412	1.27571
S3289_G034	93.2	18.5	0.7723	0.07273	0.00254	1.71793
S3289_G035	247.7	101.6	0.8217	0.11457	0.00262	5.39725
S3289_G036	120.5		1.8316	0.1037	0.00364	1.41813
S3289_G037	167.9	22.6	0.4128	0.06382	0.0022	1.13343
S3289_G038	119.5	14.1	1.3019	0.05848	0.0025	0.72911
S3289_G039	387.8	0	0.9408	0.27882	0.52694	0.0013
S3289_G040	108.7	16.9	0.7281	0.06882	0.00248	1.29925
S3289_G041	43.3	6.3	0.393	0.06833	0.00376	1.31191
S3289_G042	174.6	24.9	0.4126	0.06652	0.0021	1.24774
S3289_G043	113.8	17	0.9007	0.06472	0.00256	1.11932
S3289_G044	37.1	4.1	0.8025	0.06041	0.00498	0.7968
S3289_G045	418.1	70.6	1.0919	0.06634	0.0017	1.24088
S3289_G046	100.4	36.9	0.6491	0.118	0.00306	5.24905
S3289_G047	23.2	3.3	0.3871	0.06651	0.00534	1.27296
S3289_G048	33	4.2	0.5659	0.06176	0.00426	0.99202
S3289_G049	23.7	5.4	0.899	0.07233	0.00456	1.89472
S3289_G050	216.3	43.4	0.2993	0.16471	0.00394	4.64469

S3289_G051	178.2	18.3	0.4753	0.05915	0.00216	0.78685
S3289_G052	287.3	32.1	0.5424	0.05969	0.0018	0.85158
S3289_G053	174.1	22.5	1.5219	0.05942	0.0022	0.77289
S3289_G054				0.37459	0.03636	9.28942
S3289_G055				-0.15999	5.1057	-19.60884
S3289_G056	128.7	26.5	1.2122	0.07283	0.00246	1.60919
S3289_G057	625.1	82.6	1.0016	0.09942	0.0024	1.51906
S3289_G058	460.9	58.4	1.0662	0.05946	0.00172	0.83908
S3289_G059	47.9	9.4	1.0363	0.07159	0.00342	1.5781
S3289_G060	133.4	15.7	0.9154	0.05945	0.00236	0.80854
S3289_G061	214.7	21.1	0.1939	0.05684	0.00196	0.78941
S3289_G062	26.3	3	0.1231	0.06242	0.00498	1.01104
S3289_G063	305.9	38.2	2.8292	0.16143	0.00444	1.67399
S3289_G064	71.6	13.4	0.4625	0.07406	0.00282	1.79866
S3289_G065	163.2	21	1.2961	0.0613	0.00232	0.83193
S3289_G066	115.3	17	0.9473	0.06437	0.00242	1.08504
S3289_G067	85.5	10.6	0.5423	0.06456	0.00306	1.01875
S3289_G068	102	11.8	0.5386	0.06072	0.00262	0.89311
S3289_G069	287.3	49.6	1.274	0.0649	0.00186	1.18888
S3289_G070	426.9	229.1	0.4801	0.1778	0.0039	11.69771
S3289_G071	138	15.8	1.0083	0.06026	0.00242	0.77945
S3289_G072	536.6	47.4	0.2185	0.05935	0.00162	0.74912
S3289_G073	31.9	6	1.7298	0.06616	0.00428	1.19987
S3289_G074	47.4	7.7	0.1036	0.07169	0.00334	1.67313
S3289_G075	26.8	2.8	0.3539	0.06254	0.0057	0.88108
S3289_G076	216.8	29.7	0.3652	0.06517	0.00192	1.19201
S3289_G077				0.82107	0.01824	420.51776
S3289_G078	89.6	12.5	0.4478	0.07372	0.0029	1.34488
S3289_G079	56.1	6.8	1.1091	0.05958	0.0035	0.79373
S3289_G080	134.4	15.6	0.5991	0.06228	0.0024	0.90627
S3289_G081	4134.5	159.5	0.1575	0.06653	0.00152	0.37484
S3289_G082	129.8	20.6	0.8139	0.06718	0.00232	1.25775
S3289_G083	69.5	10.3	1.8741	0.05976	0.00312	0.82009
S3289_G084	247.2	31.4	0.409	0.06631	0.00208	1.1127
S3289_G085				0.21178	0.01258	3.52038
S3289_G086	821.3	230.1	0.2422	0.16726	0.00376	6.48633
S3289_G087	22.7	2.3	0.4137	0.06296	0.00584	0.83748
S3289_G088	257.5	44.7	0.9299	0.06817	0.00188	1.35731
S3289_G089	174.1	23.7	0.7922	0.06388	0.00222	1.04074
S3289_G090	403.2	49.5	0.3078	0.07096	0.00184	1.20882
S3289_G091	58.2	6.1	0.5565	0.05767	0.00314	0.77322
S3289_G092	79.3	10.1	0.4379	0.06238	0.00284	1.04492
S3289_G093	41.7	4.4	0.6924	0.05645	0.0044	0.73625
S3289_G094	147.8	18.3	1.2412	0.05818	0.0022	0.78807
S3289_G095	22.1	2.5	0.3997	0.07095	0.0065	1.04722
S3289_G096	686.4	82.6	0.1107	0.06978	0.00172	1.20321
S3289_G097	74.7	9.7	1.1438	0.06212	0.00306	0.88361
S3289_G098	89.1	11.9	0.1818	0.06259	0.00258	1.17704
S3289_G099	152.4	19.2	0.2097	0.06406	0.00222	1.13043
S3289_G100	299.7	44.4	1.4761	0.06145	0.00186	0.92941
S3289_G101	127.7	19.8	0.6456	0.06506	0.0022	1.25197
S3289_G102	52.5	5.5	0.5295	0.05676	0.00344	0.75993
S3289_G103	351.2	158.4	1.7747	0.15178	0.00356	6.57509
S3289_G104	20.1	0.4	0.8268	0.07475	0.02398	0.15699
S3289_G105	781.7	40.7	1.5356	0.05047	0.0016	0.26349

S3289_G106	148.8	18.4	0.9633	0.06025	0.00222	0.85571
S3289_G107	439.8	47.5	0.1734	0.06087	0.00168	0.93222
S3289_G108	245.1	25.3	0.4652	0.05652	0.00198	0.76138
S3289_G109	78.8	7.8	0.4576	0.05867	0.00308	0.7628
S3289_G110	829.1	79.4	0.1529	0.05845	0.0015	0.80075
S3289_G111	192.1	32.1	0.1686	0.0719	0.0021	1.69076
S3289_G112	2748.3	76.6	0.2083	0.1288	0.0031	0.48202
S3289_G113	66.4	9.4	0.4328	0.06569	0.00282	1.21615
S3289_G114	117.9	16.9	0.5996	0.06454	0.0023	1.15929
S3289_G115	277.6	27.8	0.5354	0.05796	0.00184	0.74226
S3289_G116	102	14.5	0.4103	0.06568	0.00258	1.23532
S3289_G117	167.4	3	0.4473	0.04584	0.00462	0.10757
S3289_G118	68.5	8.2	0.7867	0.06018	0.00346	0.85814
S3289_G119	265.7	93.2	0.5548	0.11848	0.00292	5.16602
S3289_G120	59.2	9.4	0.6408	0.06606	0.00316	1.29607
S3289_G121	211.1	36.1	0.2044	0.07121	0.0021	1.71572
S3289_G122	35.5	4.9	0.3402	0.06665	0.00376	1.22902
S3289_G123	95.8	66	1.4292	0.17051	0.00428	11.54803
S3289_G124	258	35.4	0.8265	0.06254	0.00186	1.01468
S3289_G125	44.8	5.2	0.8077	0.05971	0.00394	0.81999
S3289_G126	210.1	22.1	0.4331	0.05963	0.00208	0.82735
S3289_G127	106.6	5.5	0.5225	0.04894	0.00338	0.32429
S3289_G128	83.4	11.3	0.6963	0.06412	0.00296	1.06151
S3289_G129	97.3	44.4	1.1216	0.14256	0.00382	7.14247
S3289_G130	488.2	50.1	0.4425	0.05412	0.00296	0.72911
S3289_G131	200.8	31.9	0.469	0.06866	0.00214	1.4158
S3289_G132	588.6	3.3	0.9268	0.04641	0.00466	0.03067
S3289_G133	72.1	10.4	0.5139	0.0643	0.0029	1.19531
S3289_G134	36	3.9	0.6277	0.05557	0.0044	0.74434
S3289_G135	48.9	5.3	0.6259	0.06024	0.00388	0.81944
S3289_G136	25.2	3.5	0.3685	0.06123	0.00484	1.14704
S3289_G137	83.9	10.3	1.1653	0.06149	0.0029	0.82609
S3289_G138	231.2	23.5	1.0167	0.05705	0.00214	0.65515
S3289_G139	533.5	54.7	0.1895	0.06058	0.0017	0.87771
S3289_G140	124.6	16	0.189	0.06647	0.00242	1.20732
S3289_G141	488.2	78.3	9.0774	0.09942	0.00288	0.73069
S3289_G142	51	7.4	0.5466	0.07207	0.00352	1.36192
S3289_G143	315.7	56.8	0.3306	0.07128	0.00196	1.72301
S3289_G144	80.3	8	0.4034	0.05782	0.0029	0.76265
S3289_G145	54.6	26.3	0.5641	0.14265	0.00422	8.3022
S3289_G146	89.1	16	0.4724	0.07112	0.00272	1.64969
S3289_G147	2630.4	195.9	1.0209	0.09121	0.00228	0.83435
S3289_G148				0.85063	0.02026	
S3289_G149	152.9	28.4	3.3188	0.05763	0.00216	0.76726
S3289_G150	38.6	3.9	0.0779	0.05698	0.00388	0.8357

ordant ages 82.0% concordant

2σ 75	Pb206/U238	2σ 68	ages age 206/238	2σ age 68	age 207/235	2σ age 75
0.01936	0.08324	0.00202	515.4	12	514.3	14.8
0.08514	0.16104	0.00516	962.6	28.6	956.2	39.6
0.09118	0.19533	0.0048	1150.2	25.8	1514.3	27.2
0.03554	0.12964	0.00322	785.8	18.4	780.2	21
0.04922	0.10455	0.00262	641	15.2	1023.8	23.6
0.04104	0.12206	0.00326	742.4	18.8	735.6	24.2
0.0376	0.11081	0.00296	677.5	17.2	676.9	23.4
0.0378	0.12252	0.00312	745.1	18	771.6	22.2
0.02512	0.1044	0.0025	640.1	14.6	674.2	16.8
0.04154	0.1034	0.00298	634.3	17.4	629.9	26.6
0.05402	0.17813	0.00444	1056.8	24.2	1051.2	24.6
0.02616	0.10379	0.00256	636.6	15	629.8	17.8
0.0464	0.13044	0.00354	790.4	20.2	784.2	26.2
0.0611	0.11637	0.00376	709.6	21.8	698.3	35.8
0.0354	0.11987	0.00308	729.8	17.8	715.7	21.8
0.02242	0.06639	0.00174	414.4	10.6	470.8	17.2
0.0465	0.09686	0.00296	596	17.4	645.7	29.4
0.02754	0.11691	0.00282	712.8	16.2	709.2	17.8
0.02418	0.10801	0.00258	661.2	15	674	16.4
0.03568	0.1044	0.00282	640.1	16.4	647.6	23
0.03372	0.10461	0.00276	641.4	16.2	641.8	21.8
0.03492	0.12342	0.00312	750.2	18	749.4	21
0.02932	0.09804	0.00254	602.9	15	602.4	20
0.20832	0.36946	0.01024	2026.9	48.2	2032.8	36.4
		359.49036				
0.04404	0.09726	0.00298	598.3	17.6	581.6	29
0.04372	0.13176	0.00344	797.9	19.6	820.7	24.2
0.01924	0.06172	0.00166	386.1	10	382.1	16
0.02524	0.10313	0.00246	632.7	14.4	699.8	16.8
0.03384	0.12407	0.00312	753.9	17.8	740.2	20.6
0.05226	0.13655	0.00382	825.1	21.6	810.5	28.6
0.0741	0.13324	0.00438	806.3	25	834.9	38.6
0.0616	0.17135	0.00456	1019.5	25	1015.3	28.2
0.13748	0.34175	0.00828	1895.1	39.8	1884.4	28.6
0.05006	0.0992	0.0027	609.7	15.8	896.6	26.4
0.04012	0.12883	0.00336	781.2	19.2	769.4	23.4
0.03114	0.09045	0.00246	558.2	14.6	556	21.6
0.00214	0.00003	0.00004	0.2	0.2	1.3	2.8
0.04772	0.13695	0.00364	827.4	20.6	845.4	25.6
0.07092	0.13929	0.00436	840.6	24.6	851	36.4
0.04092	0.13607	0.00348	822.4	19.8	822.4	23
0.04466	0.12546	0.0034	761.9	19.4	762.6	25.8
0.06382	0.09569	0.00354	589.1	20.8	595	40.6
0.03442	0.13569	0.0033	820.2	18.8	819.3	19.8
0.14796	0.32272	0.0082	1803	40	1860.6	31
0.0996	0.13885	0.00522	838.2	29.6	833.7	50.4
0.0668	0.11652	0.00396	710.5	22.8	699.8	38.8
0.11714	0.19003	0.00662	1121.5	35.8	1079.2	47.8
0.12166	0.20457	0.00506	1199.8	27	1757.3	28.8

0.02938	0.0965	0.00254	593.9	15	589.4	20.2
0.0269	0.10349	0.0026	634.8	15.2	625.5	18.4
0.02918	0.09436	0.00248	581.3	14.6	581.4	20.2
0.77102	0.17991	0.01384				
600.20892	0.88916	8.41218				
0.05602	0.16029	0.00422	958.4	23.4	973.8	26.8
0.04014	0.11084	0.0027	677.6	15.6	938.1	21
0.02576	0.10238	0.00254	628.3	14.8	618.6	17.6
0.07468	0.15991	0.0048	956.3	26.6	961.6	35
0.0323	0.09867	0.00266	606.6	15.6	601.6	21.8
0.02794	0.10076	0.0026	618.9	15.2	590.8	19.2
0.0783	0.11751	0.00436	716.2	25.2	709.4	45
0.04792	0.07523	0.00194	467.6	11.6	998.7	24
0.06956	0.17619	0.00486	1046.1	26.6	1045	30.6
0.03192	0.09846	0.00262	605.4	15.4	614.7	21.4
0.04134	0.12229	0.00328	743.7	18.8	746.1	24.4
0.04782	0.11448	0.00334	698.7	19.4	713.3	28.6
0.03866	0.10671	0.00298	653.6	17.4	648	24.6
0.03598	0.13291	0.00332	804.4	18.8	795.4	21
0.29062	0.4773	0.01148	2515.5	50	2580.5	30.4
0.0315	0.09384	0.00254	578.2	15	585.2	21.6
0.02192	0.09157	0.00226	564.8	13.4	567.7	16
0.07568	0.13157	0.00446	796.8	25.4	800.5	40.4
0.07744	0.16931	0.00504	1008.3	27.8	998.4	35.2
0.07796	0.10221	0.00396	627.3	23.2	641.6	47.2
0.037	0.1327	0.00334	803.3	19	796.9	21.4
11.81596	3.71568	0.103				
0.0534	0.13236	0.00366	801.3	20.8	865.3	28
0.04588	0.09664	0.003	594.7	17.6	593.3	29.8
0.0354	0.10556	0.00284	646.9	16.6	655.1	22.6
0.0096	0.04088	0.00098	258.3	6	323.2	9.2
0.04444	0.13582	0.00358	821	20.4	826.9	24.6
0.04224	0.09956	0.00296	611.8	17.4	608.1	27.4
0.0363	0.12173	0.00312	740.5	18	759.5	21.6
0.19058	0.1206	0.00508				
0.16346	0.28134	0.00678	1598.1	34.2	2044	29
0.07522	0.0965	0.00384	593.9	22.6	617.8	46.8
0.04008	0.14446	0.0036	869.8	20.2	870.7	21.8
0.037	0.1182	0.0031	720.2	17.8	724.3	22.6
0.03394	0.1236	0.00304	751.3	17.4	804.6	19.8
0.04164	0.09728	0.0029	598.4	17	581.6	27.4
0.04728	0.12153	0.00346	739.4	19.8	726.4	27.8
0.056	0.09462	0.0033	582.8	19.4	560.2	36.8
0.0303	0.09828	0.00262	604.3	15.4	590.1	20.8
0.0927	0.10708	0.00436	655.8	25.4	727.5	52
0.03238	0.1251	0.00304	759.9	17.4	802.1	19.2
0.0431	0.1032	0.00302	633.1	17.6	642.9	27.2
0.04896	0.13644	0.00378	824.5	21.4	789.9	27.2
0.04016	0.12803	0.00336	776.6	19.2	768	23.4
0.02966	0.10973	0.00278	671.2	16.2	667.3	19.4
0.0438	0.13961	0.00366	842.5	20.8	824.3	24.2
0.04518	0.09713	0.00304	597.6	17.8	574	30
0.1717	0.31431	0.00768	1761.9	37.6	2056	29.8
0.04872	0.01524	0.00134	97.5	8.6	148.1	45.8
0.00872	0.03788	0.00096	239.7	6	237.5	8.6

0.03202	0.10305	0.00272	632.3	15.8	627.8	21.2
0.02748	0.11111	0.00276	679.2	16	668.8	18.2
0.02746	0.09774	0.00254	601.2	15	574.8	19.2
0.0395	0.09434	0.0028	581.2	16.4	575.6	26.6
0.02242	0.0994	0.00244	610.9	14.4	597.3	16
0.05234	0.17062	0.00434	1015.5	23.8	1005.1	24.8
0.01276	0.02715	0.00066	172.7	4.2	399.5	11.2
0.05246	0.13432	0.0038	812.5	21.6	808	28.6
0.04238	0.13032	0.00346	789.7	19.8	781.6	24.2
0.02458	0.09293	0.00236	572.8	14	563.7	17.6
0.049	0.13646	0.00374	824.6	21.2	816.8	26.8
0.01052	0.01703	0.00062	108.9	4	103.7	10.6
0.04848	0.10347	0.00322	634.7	18.8	629.1	30.6
0.14042	0.31636	0.00784	1771.9	38.4	1847	29.8
0.06166	0.14235	0.00424	857.9	24	844	32.4
0.05368	0.17483	0.00446	1038.7	24.4	1014.4	25
0.06812	0.1338	0.00424	809.5	24.2	813.9	36.2
0.32042	0.4914	0.0125	2576.7	54	2568.5	33.4
0.03178	0.11773	0.00298	717.5	17.2	711.2	20
0.05292	0.09965	0.0033	612.4	19.4	608	33.8
0.02972	0.10068	0.00264	618.4	15.4	612.1	20
0.02182	0.04808	0.00154	302.7	9.4	285.2	19
0.04864	0.12012	0.00348	731.3	20	734.6	28.6
0.20738	0.36355	0.0094	1999	44.4	2129.4	33.2
0.03922	0.09776	0.00298	601.3	17.4	556	26.8
0.04602	0.14963	0.00386	898.9	21.6	895.6	24
0.00298	0.00479	0.00018	30.8	1.2	30.7	3.2
0.05404	0.1349	0.00388	815.8	22	798.4	29.6
0.05744	0.0972	0.00346	598	20.4	564.9	37.6
0.05146	0.09871	0.00324	606.8	19	607.7	33
0.08842	0.13594	0.00502	821.7	28.4	775.8	47.4
0.03876	0.09748	0.00282	599.6	16.6	611.4	25.4
0.02492	0.08332	0.0022	515.9	13	511.6	18.4
0.02626	0.10513	0.00262	644.4	15.2	639.7	17.8
0.045	0.13179	0.00354	798.1	20.2	804	25.2
0.02216	0.05333	0.00136	334.9	8.4	557	16.6
0.06572	0.13712	0.00418	828.4	23.6	872.7	33.8
0.05104	0.17539	0.0044	1041.7	24.2	1017.1	24
0.03788	0.09571	0.0028	589.2	16.4	575.5	25.6
0.26316	0.42233	0.01152	2271	52.2	2264.6	36.4
0.06396	0.16831	0.00464	1002.8	25.6	989.4	29.8
0.02282	0.06638	0.00162	414.3	9.8	616	16.2
43.18768	12.81978	0.34402				
0.02942	0.09661	0.00258	594.5	15.2	578.2	20.2
0.0558	0.10643	0.00354	652	20.6	616.8	35

		discordance		preferred age	
age 207/206	2σ age 76	Δ 68-75 [%]	Δ 68-76 [%]	age	2σ age
509.6	60.4	0.2	1.1	515.4	12
942.4	113.4	0.7	2.1	962.6	28.6
2069.2	43	-24	-44.4		
764.9	61.8	0.7	2.7	785.8	18.4
1968.2	47.8	-37.4	-67.4		
715.3	80.6	0.9	3.8	742.4	18.8
675.8	84	0.1	0.2	677.5	17.2
849.9	66.6	-3.4	-12.3	745.1	18
790.4	51.2	-5.1	-19	640.1	14.6
615.1	105.2	0.7	3.1	634.3	17.4
1040.1	56.8	0.5	1.6	1056.8	24.2
606.1	62.6	1.1	5	636.6	15
767.2	83.2	0.8	3	790.4	20.2
662.7	135.4	1.6	7.1	709.6	21.8
672.4	71.8	2	8.5	729.8	17.8
757.1	79.2	-12	-45.3	414.4	10.6
824	111.6	-7.7	-27.7	596	17.4
698.4	53.6	0.5	2.1	712.8	16.2
717.7	49	-1.9	-7.9	661.2	15
674.1	84.8	-1.1	-5	640.1	16.4
643.8	80.8	-0.1	-0.4	641.4	16.2
747.6	64.6	0.1	0.4	750.2	18
601	76.6	0.1	0.3	602.9	15
2039.2	54.6	-0.3	-0.6	2039.2	54.6
517.2	127.2	2.9	15.7	598.3	17.6
883.7	70.6	-2.8	-9.7	797.9	19.6
358.5	95	1	7.7	386.1	10
921.9	47.2	-9.6	-31.4	632.7	14.4
699.4	63.8	1.9	7.8	753.9	17.8
771.1	90.2	1.8	7	825.1	21.6
912.4	122	-3.4	-11.6	806.3	25
1006.4	70.8	0.4	1.3	1019.5	25
1873.1	41.2	0.6	1.2	1873.1	41.2
1691.4	64.8	-32	-64		
735.7	73	1.5	6.2	781.2	19.2
547.8	93.4	0.4	1.9	558.2	14.6
3356.3	2952.2	-85.3	-100		
893.3	74.4	-2.1	-7.4	827.4	20.6
878.6	113.8	-1.2	-4.3	840.6	24.6
822.8	66	0	0	822.4	19.8
765.2	83.4	-0.1	-0.4	761.9	19.4
618.3	178	-1	-4.7	589.1	20.8
817.1	53.6	0.1	0.4	820.2	18.8
1926.2	46.4	-3.1	-6.4	1926.2	46.4
822.5	167.6	0.5	1.9	838.2	29.6
665.8	147.8	1.5	6.7	710.5	22.8
995.2	128.2	3.9	12.7		
2504.6	40.2	-31.7	-52.1		

572.6	79.4	0.8	3.7	593.9	15
592.4	65.4	1.5	7.2	634.8	15.2
582.5	80.4	0	-0.2	581.3	14.6
1009.2	68.4	-1.6	-5	958.4	23.4
1613.3	45	-27.8	-58		
584	62.8	1.6	7.6	628.3	14.8
974.3	97.4	-0.6	-1.9	956.3	26.6
583.6	86.2	0.8	3.9	606.6	15.6
485.3	76.2	4.7	27.5	618.9	15.2
688.5	170.2	1	4	716.2	25.2
2470.7	46.4	-53.2	-81.1		
1043.1	76.8	0.1	0.3	1046.1	26.6
649.8	81.2	-1.5	-6.8	605.4	15.4
753.8	79.4	-0.3	-1.3	743.7	18.8
760	100	-2	-8.1	698.7	19.4
629.3	93	0.9	3.9	653.6	17.4
771.1	60.4	1.1	4.3	804.4	18.8
2632.5	36.4	-2.5	-4.4	2632.5	36.4
612.9	86.8	-1.2	-5.7	578.2	15
580	59.2	-0.5	-2.6	564.8	13.4
811.4	135.4	-0.5	-1.8	796.8	25.4
977.2	95	1	3.2	1008.3	27.8
692.6	194.4	-2.2	-9.4	627.3	23.2
779.8	62	0.8	3	803.3	19
1033.8	79.4	-7.4	-22.5	801.3	20.8
588.4	127.4	0.2	1.1	594.7	17.6
683.7	82.2	-1.2	-5.4	646.9	16.6
823.1	47.6	-20.1	-68.6		
843.4	71.8	-0.7	-2.7	821	20.4
594.9	113.2	0.6	2.8	611.8	17.4
816.2	65.6	-2.5	-9.3	740.5	18
2530.4	37.8	-21.8	-36.8		
706.9	197.4	-3.9	-16	593.9	22.6
873.7	57.2	-0.1	-0.4	869.8	20.2
737.7	73.6	-0.6	-2.4	720.2	17.8
956.3	53	-6.6	-21.4	751.3	17.4
517.2	119.6	2.9	15.7	598.4	17
687.2	97.2	1.8	7.6	739.4	19.8
470.1	172.6	4	24	582.8	19.4
536.5	82.8	2.4	12.6	604.3	15.4
956	187.4	-9.9	-31.4	655.8	25.4
921.9	50.6	-5.3	-17.6	759.9	17.4
678.2	105.2	-1.5	-6.7	633.1	17.6
694.3	87.8	4.4	18.7	824.5	21.4
743.6	73.2	1.1	4.4	776.6	19.2
655	65	0.6	2.5	671.2	16.2
776.3	71.2	2.2	8.5	842.5	20.8
482.2	133.8	4.1	23.9	597.6	17.8
2366.1	40	-14.3	-25.5		
1061.8	645.4	-34.1	-90.8		
216.7	73.4	0.9	10.6	239.7	6

612.6	79.6	0.7	3.2	632.3	15.8
634.6	59.4	1.6	7	679.2	16
472.9	77.6	4.6	27.1	601.2	15
554.9	114.6	1	4.7	581.2	16.4
546.7	56	2.3	11.7	610.9	14.4
983.1	59.4	1	3.3	1015.5	23.8
2081.7	42.4	-56.8	-91.7		
796.5	90	0.6	2	812.5	21.6
759.4	75.2	1	4	789.7	19.8
528.3	69.6	1.6	8.4	572.8	14
796.2	82.4	1	3.6	824.6	21.2
-10.8	243.4	4.9	-1108.7	108.9	4
610.1	124.2	0.9	4	634.7	18.8
1933.4	44.2	-4.1	-8.4	1933.4	44.2
808.3	100	1.7	6.1	857.9	24
963.4	60.2	2.4	7.8	1038.7	24.4
826.9	117.6	-0.5	-2.1	809.5	24.2
2562.7	42	0.3	0.5	2562.7	42
692.6	63.4	0.9	3.6	717.5	17.2
593.1	143	0.7	3.3	612.4	19.4
590.2	75.6	1	4.8	618.4	15.4
145	162	6.1	108.8		
745.6	97.6	-0.5	-1.9	731.3	20
2258.5	46.2	-6.1	-11.5	2258.5	46.2
376	123	8.1	59.9		
888.5	64.4	0.4	1.2	898.9	21.6
19	241.2	0.4	62.4	30.8	1.2
751.5	95.2	2.2	8.5	815.8	22
435.2	176.4	5.8	37.4		
612.2	139.2	-0.1	-0.9	606.8	19
647.3	169.8	5.9	26.9		
656.4	101.2	-1.9	-8.7	599.6	16.6
493.5	82.6	0.8	4.5	515.9	13
624.4	60.6	0.7	3.2	644.4	15.2
821.2	76	-0.7	-2.8	798.1	20.2
1613.3	54	-39.9	-79.2		
987.9	99.4	-5.1	-16.2	828.4	23.6
965.5	56.2	2.4	7.9	1041.7	24.2
522.9	110	2.4	12.7	589.2	16.4
2259.6	51	0.3	0.5	2259.6	51
960.9	78.2	1.4	4.4	1002.8	25.6
1451	47.6	-32.7	-71.4		
515.7	82.4	2.8	15.3	594.5	15.2
490.8	150.2	5.7	32.9		