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Supplemental Material

Text. Analytical Methods. Regional geological summary. Zircon age compilation. Statistical testing of zircon U-Pb spectra.

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Figure S3. Kernel density estimate (KDE) diagrams showing the age distribution of the major basement tectonic blocks of North America that may be supplying sediment to the Mississippi River. Band width 15 m.y. Data are compiled from the literature and summarized in the online data supplement.

Figure S4. (A) KDE plots comparing three samples that were analyzed first with a moderate number of grains and them with an expanded number in order to understand the impact of large sample size on the result. (B) Multidimensional Scalar Diagram (MDS) comparing the small and large sediment samples with potential source regions. The analysis demonstrates that increasing the sample size has only a moderate impact on the final result.

Figure S5. Figures showing cumulative frequency diagrams for each of the sediment samples considered here with the black line showing the observed spectrum and the colored lines showing the top 1% of models for each sample based on the stated statistical method employed. When the models largely overlap with the observed spectrum the preferred model can be considered statistically robust.

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Climate and Anthropogenic Impacts on North American Erosion and Sediment Transport since the Last Glacial Maximum: Evidence from the Zircon Detrital Record of the Lower Mississippi Valley

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1. ANALYTICAL METHODS

1.1 Optically Stimulated Luminescence

The point bar sediments were dated using optically stimulated luminescence (OSL) due to the lack of material for radiocarbon dating and because of the proven success of OSL dating to similar fluvial deposits in the lower Mississippi River (Chamberlain and Wallinga, 2019; Holbrook et al., 2006; Rittenour et al., 2007; Shen et al., 2012). OSL provides an age estimate of the last exposure of mineral grains to sunlight or heat, which resets the luminescence signal (Huntley et al., 1985). Following burial, exposure to ionizing radiation from the surrounding sediments and cosmic rays leads to the accumulation of trapped charge (free electrons) in defects in the crystal-lattice structure. These trapped charges produce luminescence (photons of light) when stimulated by controlled light in the laboratory. The intensity of the luminescence

signal is related to the radioactivity of the depositional environment and duration of burial (i.e. the age of last exposure to light or heat) (Rhodes, 2011).

OSL dating can be challenging in fluvial environments. Specifically, river systems can have turbid water conditions, rapid transport times, and even sediment buffering from the floodplains which can be associated with partial bleaching (incomplete resetting) of the sediments (Rittenour, 2008; Wallinga, 2002). Deposits fluvial these settings, however, can be accurately dated by selecting depositional facies which are most likely to have been reset by sunlight exposure (Brown, 2020; Fuchs and Owen, 2008; Summa-Nelson and Rittenour, 2012) or through use of age models (Galbraith and Roberts, 2012) and small aliquots of sediment (Duller, 2008; Olley et al., 1998).

Seven samples for OSL dating were collected from the abandoned point bar complex at False River, Louisiana using a Geoprobe push-driven coring rig with opaque plastic core liners. Samples were processed at the Luminescence Laboratory at Utah State University (USU) for OSL analysis. All samples were opened and processed under dim, amber safelight conditions (~ 590 nm). Sample processing for quartz OSL dating followed standard procedures involving wet sieving to 75–125 μm , 10% HCl and 5% H_2O_2 treatments to remove carbonate and organic material, heavy mineral separation at 2.72 g/cm^3 , and acid treatments with 48% HF and 38% HCl and to isolate the quartz component of a narrow grain-size range,. The purity of the quartz samples was checked by measurement with infrared stimulation to detect the presence of feldspar. Luminescence measurements were performed on Risø TL/OSL Model DA-20 readers equipped with blue-green light emitting diodes (LED) (470 ± 30 nm) and detection through 7.5-mm UV filters (U-340) (Bøtter-Jensen et al., 2003). Stimulation was conducted at 125 °C following 240 °C preheats (10 s) for regenerative and natural doses.

Samples were analyzed following the single-aliquot regenerative-dose (SAR) procedure (Murray and Wintle, 2003) on 1-mm aliquots of 75–125 μm quartz sand (~ 70 grains per disk). The SAR sequence had five regenerative doses and included a repeated dose and zero-dose step (regenerative points at ~ 5 , 10 and 15 Gy, 10 Gy test dose). Data quality criteria include the rejection of aliquots with IR signal response, recycling ratio of the repeat point >1.1 and <0.9 , and recuperation of the zero-dose step >1 Gy. The equivalent dose (D_E) was calculated using the Minimum Age Model (MAM, (Galbraith and Roberts, 2012) due to skew in the D_E data and expected partial bleaching in the sediments (Fig. S8). The OSL age is reported at 1σ standard error and is calculated by dividing the D_E (in grays, Gy) by the environmental dose rate (Gy/kyr) that the sample has been exposed to during burial (Table 2 and S4).

Samples for dose rate determination were collected from sediments above and below each OSL sample interval of the cores. The sediments were homogenized and representative samples were analyzed for radioisotope concentration using ICP-MS and ICP-AES techniques (Table S4). These concentration values were converted to dose rate following the conversion factors of Guérin et al. (2011) and beta attenuation values of Brennan (2003). Sediments from within the OSL samples were dried to determine *in-situ* water content. Contribution of cosmic radiation to the dose rate was calculated using sample depth, elevation and latitude/longitude following Prescott and Hutton (1994). Total dose rates were calculated based on water content, radioisotope concentration, and cosmic contribution (Adamiec and Aitken, 1998; Aitken and Xie, 1990; Aitken, 1998).

1.2 Grain Size

A total of twenty-five samples from both the False River point bar and the modern river analyzed following the procedure of (Hülse and Bentley Sr, 2012). About 2 g of sample were placed in a 50 ml plastic centrifuge tube with 5.75 ml of NaPO_3 solution. Each tube was capped and vortexed to deflocculate clay-sized sediment and separate organic particles. The sample was poured through an 850- μm sieve to help remove large particles of organic matter. The glass tube was placed into a centrifuge to settle the sediment at the bottom of the vial. The vials were then run at ~ 25 RPM for 60 minutes and the supernatant was then removed. About 2 ml of NaPO_3 was then added to the centrifuged sample, as well as 5 ml of H_2O_2 . Small amounts of acetone were sprayed in the vials to stabilize the reaction, following which the samples were placed in a hot bath set at 70°C over night. Once removed from the hot bath the supernatant was removed from the vials and the samples were transferred into plastic tubes with caps to be vortexed for analysis. The samples were then analyzed using a Beckman-Coulter (LS 13-320SW Laser Diffraction Particle Size Analyzer Single Wavelength) at Louisiana State University (LSU). Results are shown in Table 1 and S1.

1.3 Geochemical Analysis

X-Ray Fluorescence (XRF) analysis was completed at LSU. Loss on Ignition was determined by weighing out 2.0000 ± 0.02 g of sample powder, igniting in a furnace at 950°C for two hours, and then re-weighing the sample powder. Glass fusion disks were then created by mixing 0.600 ± 0.006 g of the ignited sample powder with 6.000 ± 0.06 g of a 49.5% lithium metaborate + 49.5% lithium tetraborate + 0.5% lithium iodide flux in a platinum crucible and fusing the mixture at 1065°C using a Claisse LeNeo Fusion Fluxer. The resulting glass disks

were then loaded sequentially into the 10-position carousel of the PANalytical Epsilon3^{XLE} energy-dispersive XRF spectrometer at the LSU Shared Instrumentation Facility. Each sample was run in triplicate under a series of varying conditions, which are ideal for different groups of elements of interest. The current for each condition is automatically set by the instrument to maximize the intensity of the elements of interest while reducing artifacts.

Quantitation of the analyses was performed based on a set of standards from the Geophysical Survey of Japan (JA-3 Andesite, JB-2 Basalt, JG-2 Granite, Jlk-1 Lake Sediment, JLS-1 Limestone, JP-1 Peridotite, JR-1 Rhyolite) and the United States Geological Survey (AGV-1 Andesite, BIR-1 Iceland Basalt, SCo-1 Cody Shale, W-2 Diabase, G-2 Granite, GSP-2 Granodiorite, SGR-1 Green River Shale, QLO-1 Quartz Latite, RGM-1 Rhyolite, SDC-1 Mica Schist, STM-1 Syenite). The calibration curves were derived from the statistical means of ten repeat analyses of each standard. Three standards, USGS MAG-1 (Marine Sediment), GSJ JSd-1 (Stream Sediment), and GSJ JSI-1 (Slate) were analyzed in triplicate as unknowns at the beginning and end of each analytical session to check the accuracy of the calibration and to monitor for instrumental drift.

1.4 Zircon U-Pb Dating

Samples for DZ analysis were processed at GeoSep Services Inc in Moscow, Idaho by sieving, washing with water to remove lighter particles, separation in Lithium Metatungstate to remove particles with a specific gravity less than 2.95 g/cm³, removal of magnetic grains with a FrantzTM magnetic separator, separation in Di-iodomethane to remove particles with a specific gravity less than 3.33 g/cm³ (GeoSepServices). Zircon separates were sprinkled in the center of

circular epoxy silicon molds that were placed into a vacuum chamber and degassed to release air from bubbles. The molds cured for 48 hours and were then polished.

A total of seven mounts were analyzed at the London Geochronology Centre (LGC) and two at Washington State University. At LGC U-Pb dating samples were analyzed by laser ablation (LA) ICP-MS using a New Wave 193 nm Excimer laser ablation system coupled to an Agilent 7900 quadrupole-based ICP-MS. The laser was set up to produce an energy density of ca 2.5 J/cm² at a repetition rate of 10 Hz. The time-resolved mass spectrometer data were processed using GLITTER 4.5 data reduction software. Data were filtered to exclude mixed ratios, non-zircons based on zirconium concentrations (>10 counts per second) and a -5/+15% discordance threshold was applied. Repeated measurements of external zircon standard PLESOVIC (TIMS reference age 337.13±0.37 Ma; (Sláma et al., 2008)) and NIST 612 silicate glass (Pearce et al., 1997) were used to correct for instrumental mass bias and depth-dependent inter-element fractionation of Pb, Th and U. 91500 (Wiedenbeck et al., 2004) and Temora (Black et al., 2003) zircon were used as secondary age standards. The ²⁰⁶Pb/²³⁸U ratio was used to determine ages where <1000 Ma and the ²⁰⁷Pb/²⁰⁶Pb ratio for older grains. IsoplotR software was used for data plotting (Vermeesch, 2018).

At the GeoAnalytical Laboratory at Washington State University isotopic analyses were performed with a New Wave UP-213 LA system in conjunction with a Agilent 7700x quadrupole LA-ICP-MS. For all analyses the beam diameter was 30 µm and the frequency was set at 5 Hz, yielding ablation pits ~12–15 µm deep. He and Ar gas were used to deliver the ablated material into the plasma source. Each analysis of 32 cycles took approximately 30 seconds to complete and consisted of a 6-second integration on peaks with the laser shutter

closed (for background measurements) followed by a 24-second integration with the shutter open and the laser ablating zircon material. Several zircon U-Pb age standards were used during analysis for calibration purposes. These included the 1099 0.6 Ma FC zircon (FC-1 of Paces and Miller, 1993) as the primary age standard. The secondary age standard was the 61.2 0.1 Ma Tardree Rhyolite zircon (David Chew, pers. comm.). Third-level age standards included the Fish Canyon Tuff with an age of 28.20 ± 0.1 Ma (Lanphere and Baadsgaard, 2001), the Mount Dromedary Syenite with an age of 99.1 ± 0.1 Ma (Renne et al., 1998), and the Temora2 diorite with an age of 416.8 ± 0.3 Ma (Black et al., 2004). At the beginning of the LA-ICP-MS session, zircon standards (TR and FC1) were analyzed until fractionation was stable and the variance in the measured $^{206}\text{Pb}/^{238}\text{U}$ and $^{207}\text{Pb}/^{206}\text{Pb}$ ratios was at or near 1%. $^{207}\text{Pb}/^{235}\text{U}_c$ ($^{235}\text{U}_c = 137.88^{238}\text{U}$), $^{206}\text{Pb}/^{238}\text{U}$, and $^{207}\text{Pb}/^{206}\text{Pb}$ ages were calculated for each data scan and checked for concordance; concordance here was defined as overlap of all three ages at the 1σ level (the use of 2σ level was found to skew the results to include scans with significant common Pb). If the number of concordant data scans for a spot was greater than zero, then either the $^{206}\text{Pb}/^{238}\text{U}$ (for ages <1.0 Ga) or $^{207}\text{Pb}/^{206}\text{Pb}$ (for ages >1.0 Ga) age was chosen as the preferred age. Common Pb was subtracted out using the Stacey (1975) common Pb model for Earth. Ages and common Pb ratio were determined iteratively using a pre-set, session-wide minimum common Pb age value. Results are provided in Table S1. Data for this paper are also available from Mendeley Data at <https://data.mendeley.com/datasets/trtnw8vx95/draft?a=4923e382-b53a-4f11-a36b-14e61ca09ac1>, and from the Geochron database at the University of Arizona (<http://geochron.org/>).

It is important to consider the different potential crystal domains analyzed in various DZ studies when comparing with published data. Studies targeting rims (for younger zircon growth

events) or cores (for inherited zircon ages) can produce different DZ U-Pb age distributions for the same sample and grains dated here were imaged in advance of analysis, with rim preferentially targeted.

2. REGIONAL GEOLOGICAL SUMMARY

DZ U-Pb dating only functions as an effective provenance proxy if the various source terrains of the river have contrasting DZ age spectra, which are a reflection of geological history of the crustal block. Here we briefly summarize the major tectonic units lying within the modern Mississippi catchment and note their defining characteristics that might be identified in the sediments sampled in the lower reaches.

The Superior Province (>2.5 Ga) is the largest Archean craton in North America. This stable crustal block is exposed across much of central Canada, as well as the northern border of the continental United States, excluding Alaska. This craton underwent a series of tectono-magmatic events which included growth, deformation, and accretion of both oceanic and continental crust (Percival et al., 2012). The Superior Province formed following collision of major tectonic blocks, specifically the Slave-Rae-Hearne cratons (Hoffman, 1989).

The Trans-Hudson Province (2.3–1.8 Ga) spans approximately 500 km wide and is bound by the Hearne-Wyoming and Superior cratons. These three cratons eventually formed the core of the North American continent, otherwise known as Laurentia (Hoffman, 1989). The Hearne-Wyoming and Superior cratons sutured together to form a network of Paleoproterozoic orogenic belts, which include margins of three supercontinents: Laurasia, Pangaea, and Kenorland (Stauffer, 2006).

The Yavapai/Mazatzal Province (1.8–1.6 Ga) represents two cycles of crustal development during the Early Proterozoic and these terrains underlie the southwestern and midcontinental regions of North America. The Yavapai crustal development cycle (1.79–1.69 Ga)(Holland et al., 2015) consolidated rocks during an episode of deformation, metamorphism, and plutonism, and spans from Arizona through Colorado into the northeast US (Fig. 3). The Mazatzal crustal development cycle (1.71–1.62 Ga)(Holland et al., 2020) includes volcanic rocks, arenites, and turbiditic sandstones, which experienced folding and thrusting, followed by plutonism (Hoffman, 1989). The Mazatzal Province stretches from northern Mexico into Canada.

The Granite-Rhyolite Province (1.48–1.34 Ga) affects basement terrains across the Midwest region, as well as extending east into New York state (Bickford and Van Schmus, 1985; Muehlberger et al., 1967). Felsic magmatic rocks are present throughout the midcontinental United States, but in the southwest region, this magmatism intruded the Yavapai/Mazatzal Province. The early magmatism represents anorogenic or A-type granites, which were emplaced during three separate magmatic events (Anderson, 1983). The tectonic setting of the magmatism is unclear in terms of its geochemistry (Barnes et al., 2002).

The Grenville Province (1.25–1.00 Ga) extends from northern parts of Mexico, into the northern Midwest and central Canada (Dalziel, 1991). Its tectonic history included early magmatism, metamorphism, and arc accretion against Laurentia (Karlstrom et al., 1999). Overall, this terrain is the product of multiple collisional events, which resulted in the formation of Rodinia (Dalziel, 1991; Moores, 1991).

The Peri-Gondwana Province (650–500 Ma), whose ages reflect the Pan-African Orogeny includes parts of the Appalachian Mountains, which were constructed from a series of

collisional events that accreted oceanic arcs and Gondwana-derived blocks to Laurentia. Also, the Peri-Gondwana Province includes the Suwannee Block, which accounts for the accreted basement Gondwanan terrain in Florida and Tennessee (Mueller et al., 1994).

Zircon ages in the Appalachian Mountains often reflect the imprint of the Taconic Orogeny (500–380 Ma) that affected eastern North America during the Ordovician-Devonian. Events that occurred in the Northern Appalachians include disconformities of carbonates, deformation of volcanic rocks, gravity slides from uplift, and widespread deformation. The southern portion of the Appalachians were also affected greatly by the Taconic Orogeny, but with greater influence from the later Alleghenian Orogeny (300–250 Ma)(Rodgers, 1971).

The Cordilleran Province (<250 Ma) stretches from southern California through the northwestern United States, through western Canada, southeast Alaska, and terminates at the Arctic coast. This terrain was altered through many active margin processes throughout the mid-Mesozoic through Eocene and was subsequently modified during the Cenozoic Basin and Range extension (Constenius, 1996; DeCelles, 2004). The Cordillera (with a few notable exceptions, e.g., the Cretaceous Boulder Batholith (Hamilton and Myers, 1974)) largely lie outside the catchment of the Mississippi, but earlier work indicates that common Cordilleran-aged zircons are found within the Sevier (Rocky Mountain) foreland basin from which they have been reworked following uplift related to the Laramide Orogeny (Balgord et al., 2021; Laskowski et al., 2013).

3. ZIRCON AGE COMPILATION

In order to determine the possible source of sediment to the lower reaches we have compiled existing bedrock zircon ages that can be compared to determine possible links.

Yavapai-Mazatal data are from Finzel (2014), Dickinson and Gehrels (2009), Van Schmus et al. (2007), Gehrels and Pecha (2014) and Gehrels et al. (2011); Peri-Gondwana data are from Weislogel et al. (2015), Macdonald et al. (2014) and Fyffe et al. (2009); Grenville data are from Spencer et al. (2014), Fisher et al. (2010), Macdonald et al. (2014) and Howard et al. (2015); Appalachian data are from Merschat et al. (2010), Becker et al. (2005) and Park et al. (2010). Trans-Hudson data are from Sun et al. (1996), Orrell et al. (1999), Skipton et al. (2016), Henrique-Pinto et al. (2017). Rocky Mountain foreland basin data are from Laskowski et al. (2013), Finzel (2017) and Balgord et al. (2021). Cordillera data are from Wright and Fahan (1988), Hurlow and Nelson (1993), Sauer et al. (2017), and DeGraaff-Surpless et al. (2019; 2003). Superior Province data are from Moser and Heaman (1997), Heaman (1997), Davis et al. (2005), Frieman et al. (2017) and Cleven et al. (2020). Granite-Rhyolite data are from Thomas et al. (2012), Freiburg et al. (2020), Van Schmus et al. (2007), Bickford et al. (2015), Dewane and Van Schmus (2007) and Barnes et al. (2002).

4. STATISTICAL TESTING OF ZIRCON U-PB SPECTRA

In addition to the MDS plot presented in the main text we can further objectively compare our sediments with modern tributaries and potential source terrains using a statistical test that compares the DZ age spectra using a Kuiper test (Kuiper, 1960) and the *DZStats* program of Saylor and Sundell (2016). We use the results of this test to generate a dissimilarity matrix in which similarities and differences are highlighted graphically and represented by warm and cool colors respectively (Fig.S7A). It is apparent that sediments in the modern lower reaches, those in the False River Point Bar and the LGM sediments are generally quite similar to one another, with a few notable exceptions.

When we compare these sediment samples with their major tributaries, we see that there is a general similarity in DZ U-Pb age distributions with the Red, Arkansas, Missouri and Upper Mississippi, but less so with the Ohio River (Fig. S7A). It is noteworthy that different sediments have different degrees of similarity with the various major tributaries, suggesting variable fluxes from each of these over relatively short time periods (annual or even shorter). Compared to the major source terrains we note that the Rocky Mountain foreland basin is uniformly the most similar to any of the recent sediments, as well as several of the western tributaries. It is apparent that the Appalachians, Superior Province, Trans-Hudson, and Cordilleran source terrains are the least similar to the river sediments. There is some association between the Mississippi sediments and the Grenville, Yavapai/Mazatal and Peri-Gondwana sources.

We constructed a separate colored dissimilarity matrix diagram with only the sediments in order to highlight differences between them that are minimized when we compare with the various source terrains and the tributaries (Fig. S7B). Sample LA1701 is somewhat different from many of the other sediments, while sediment W11-2 from the point bar stands out as being the most anomalous of any of the Holocene sediments. This shows that the river has not been entirely stable over historical times and even varies between years in the more recent past.

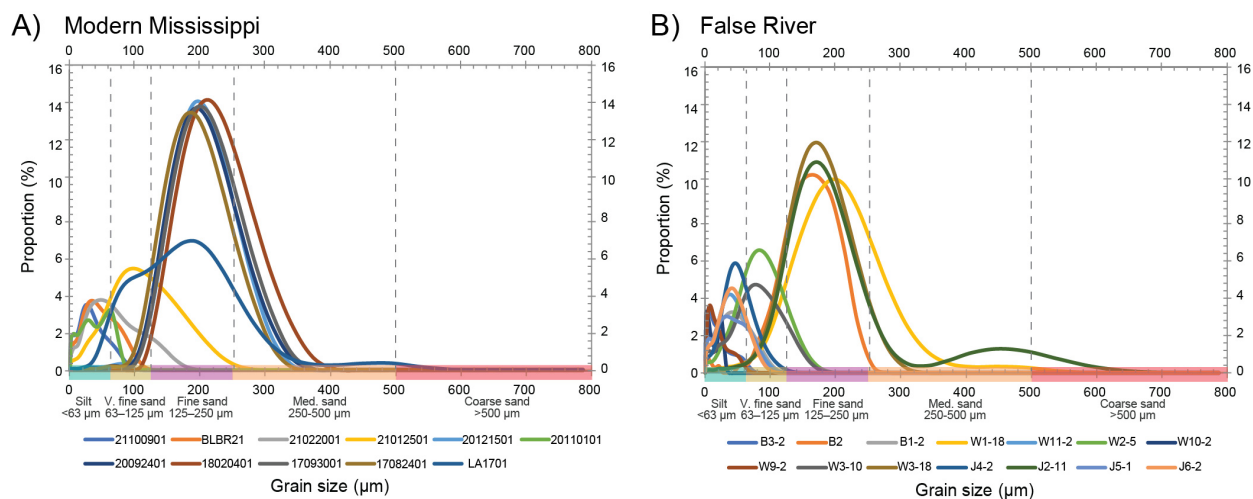


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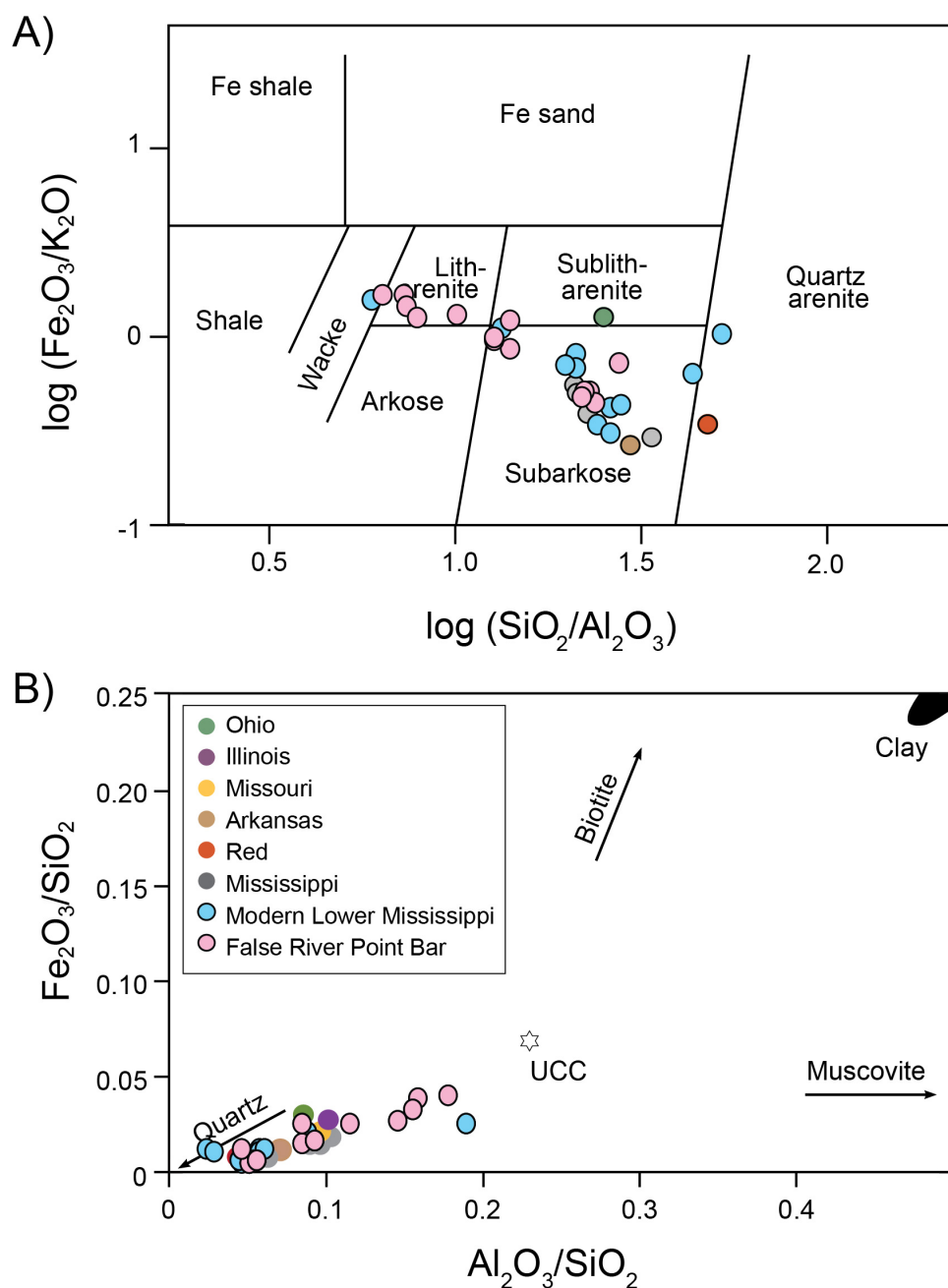


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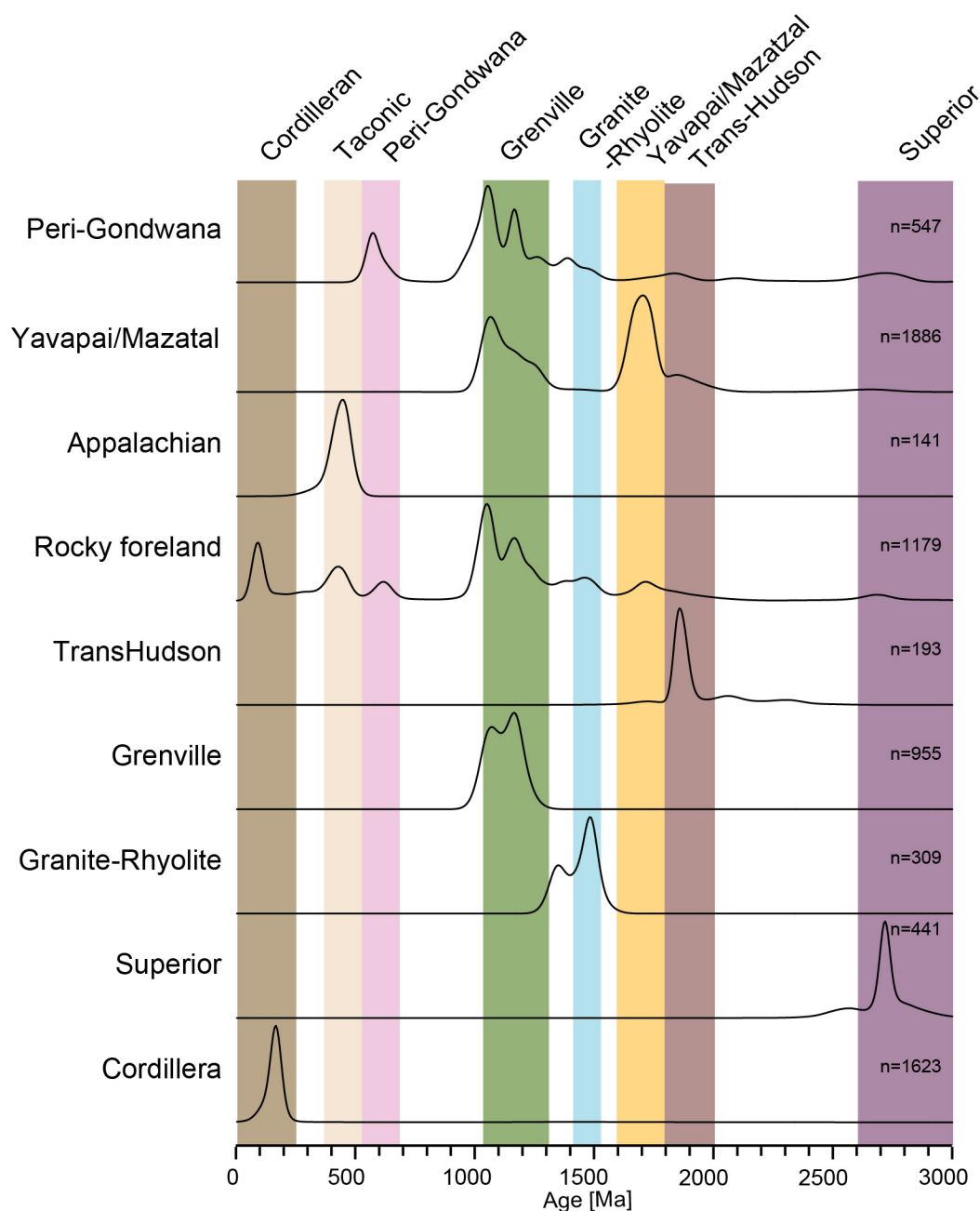


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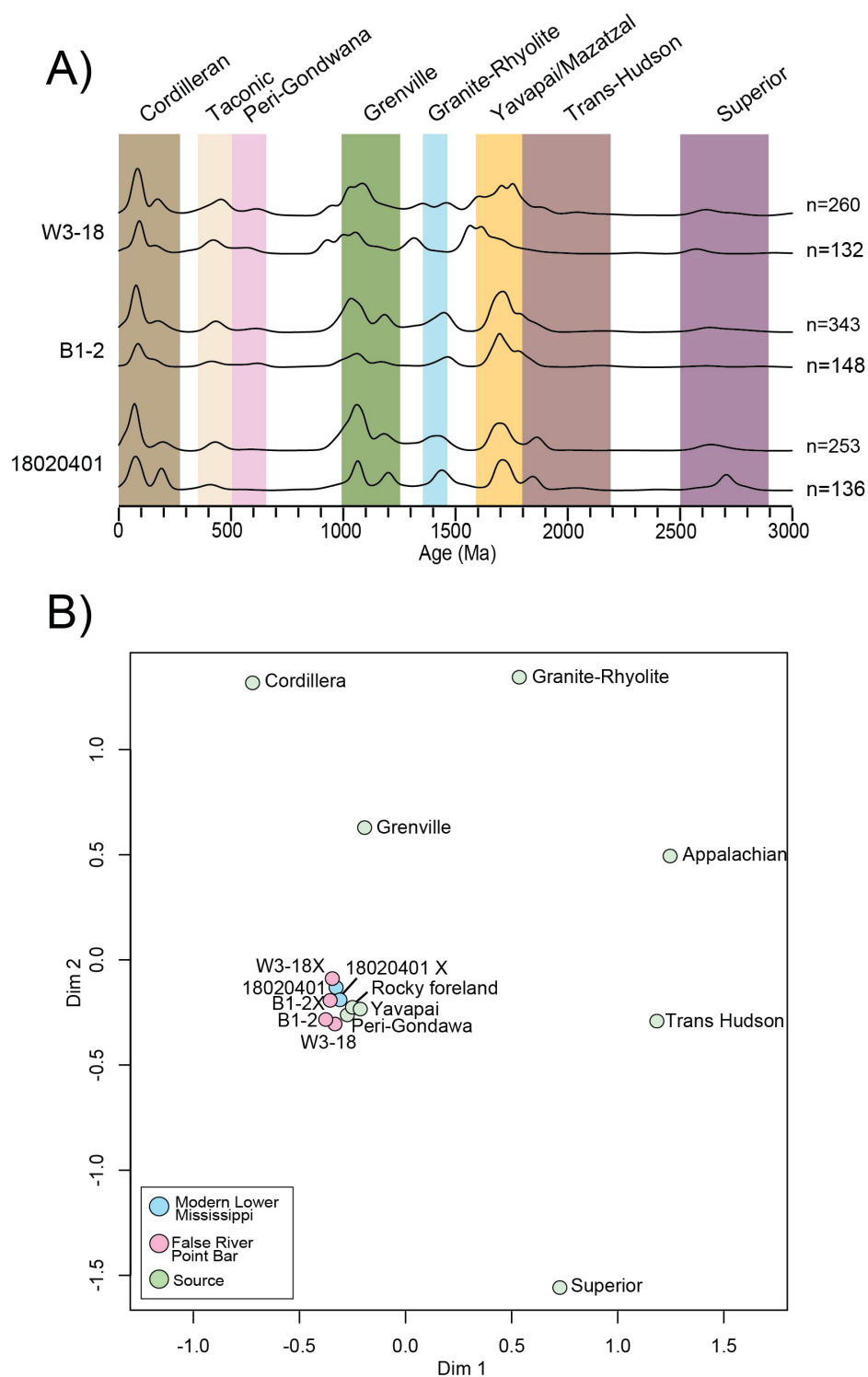
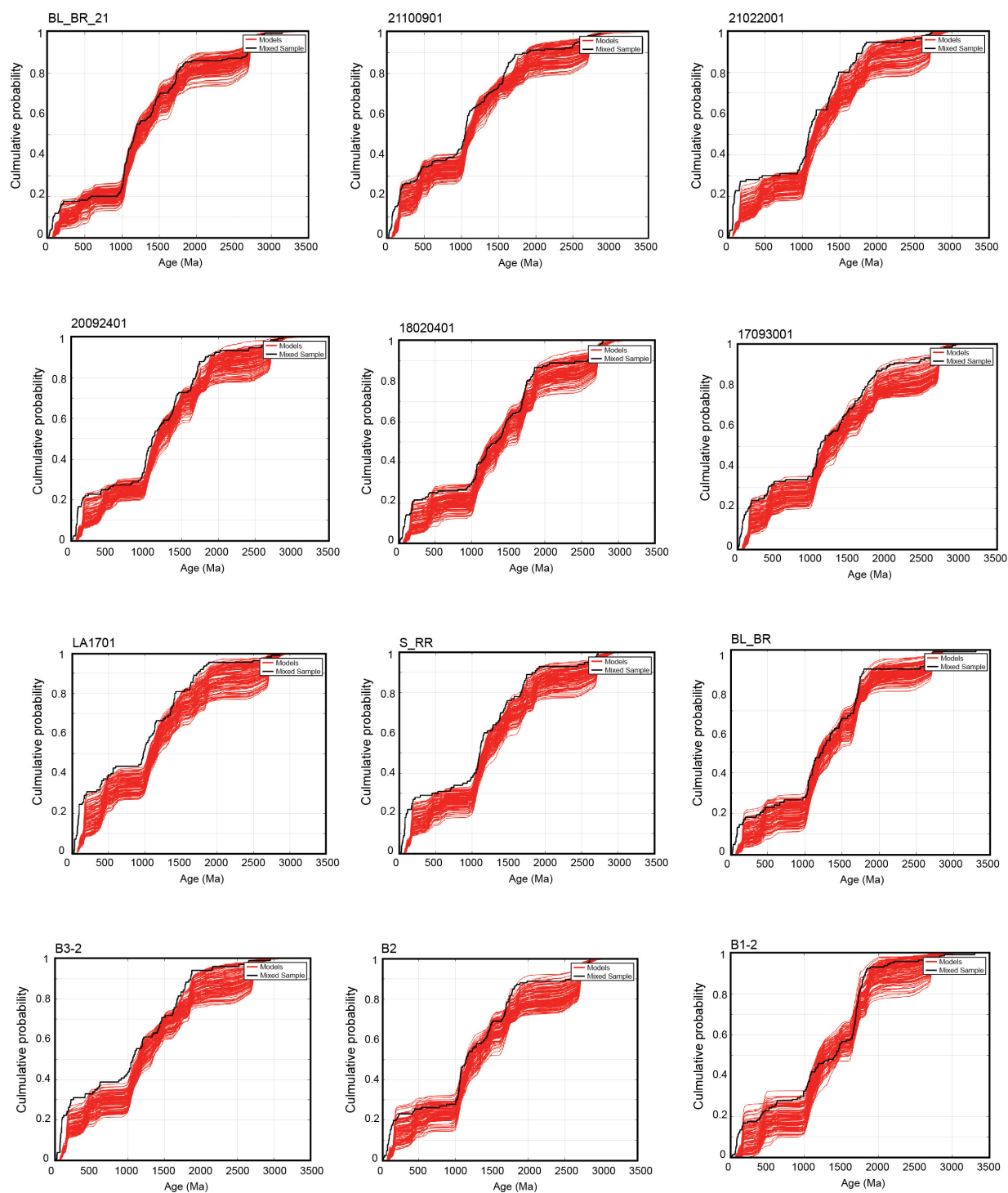


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Basement end members, Kuiper V Statistics



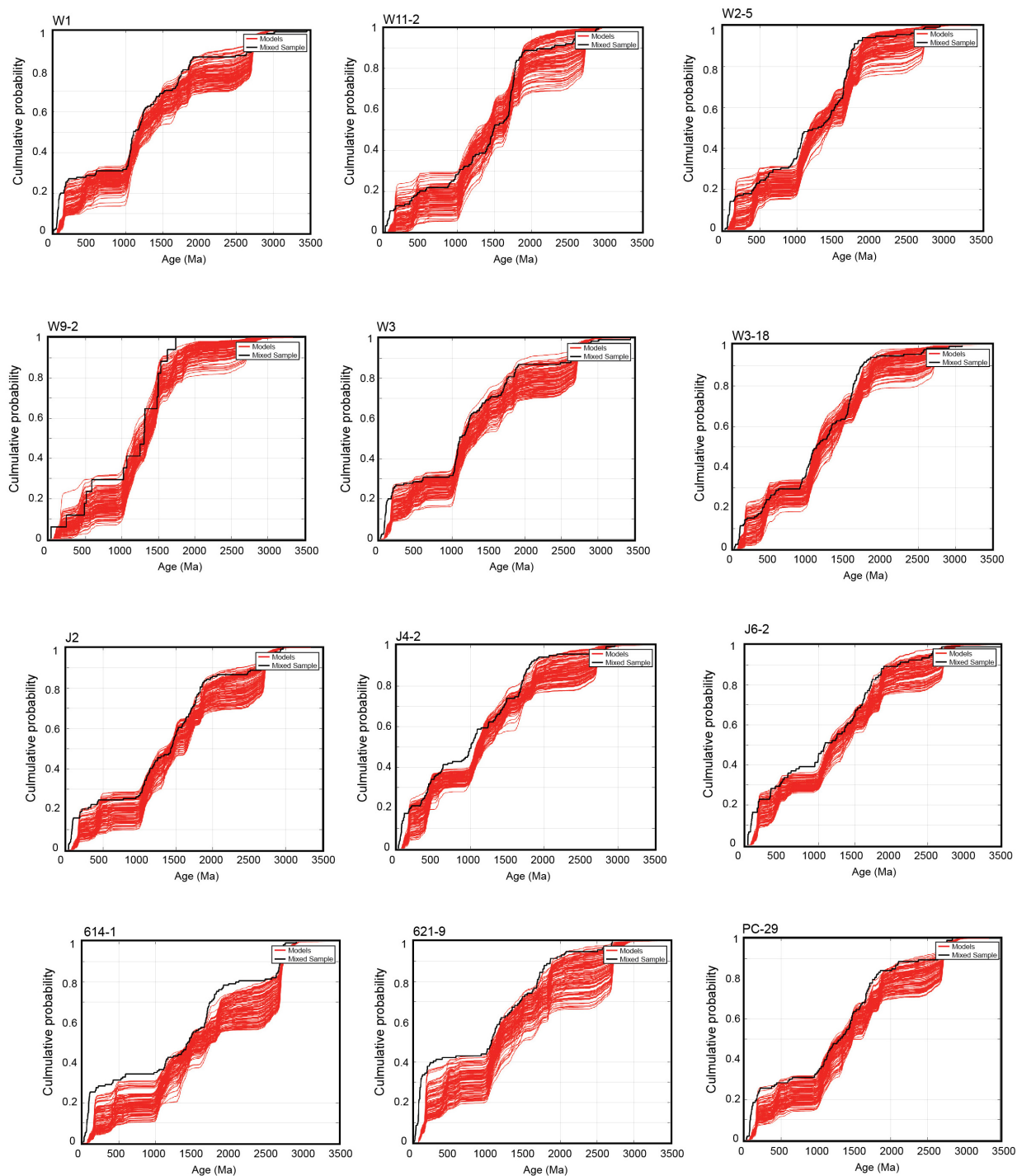


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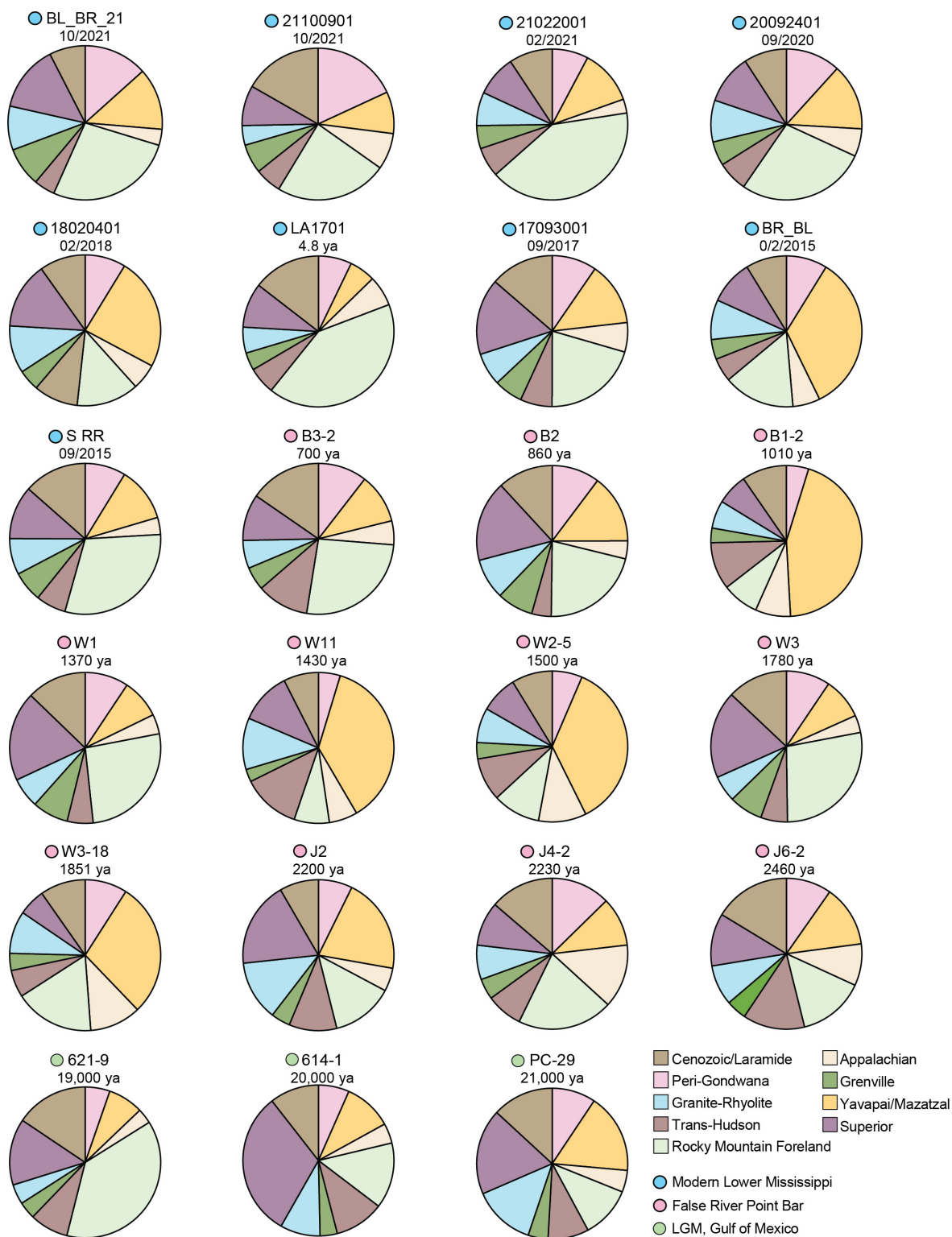


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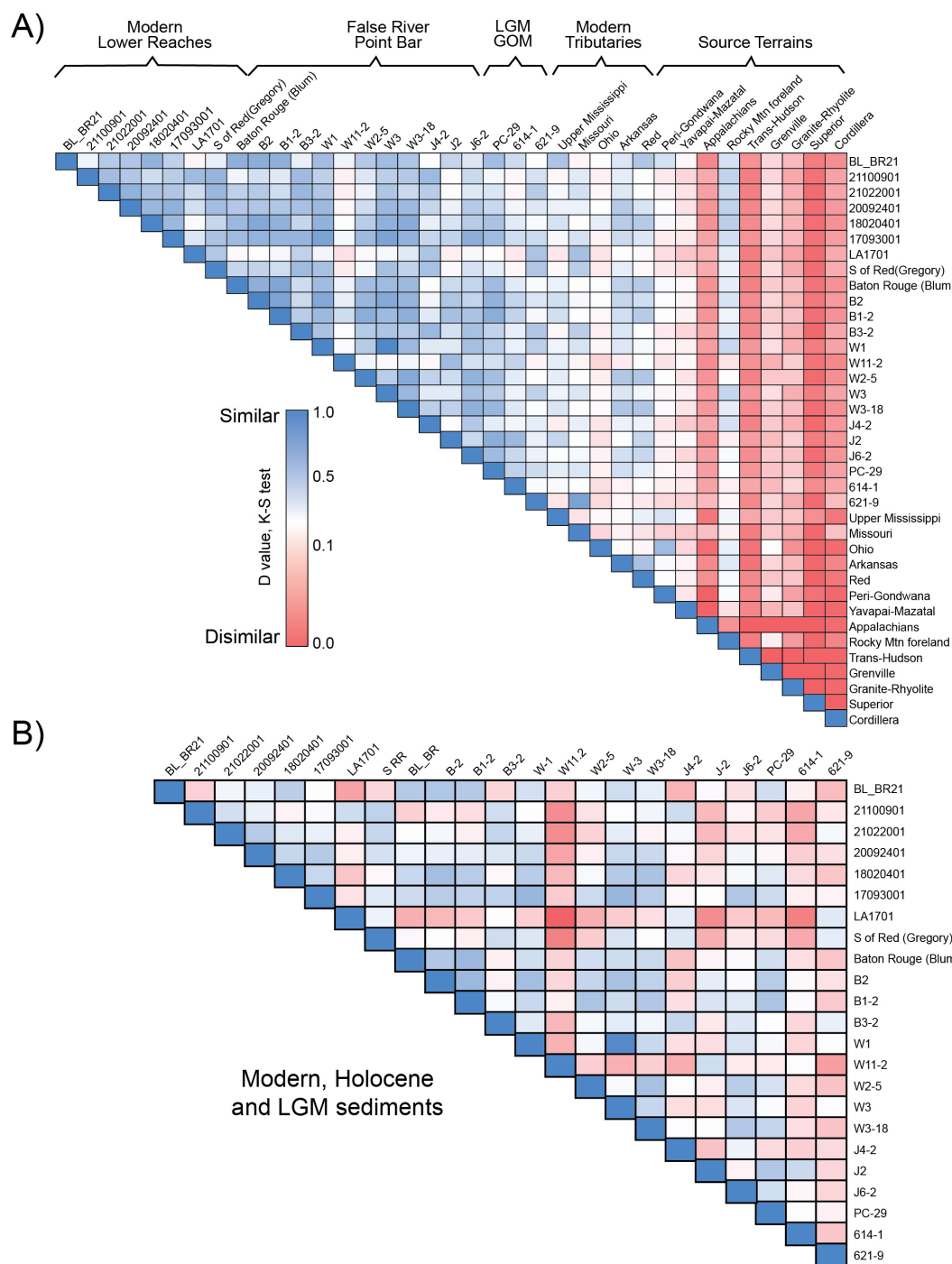


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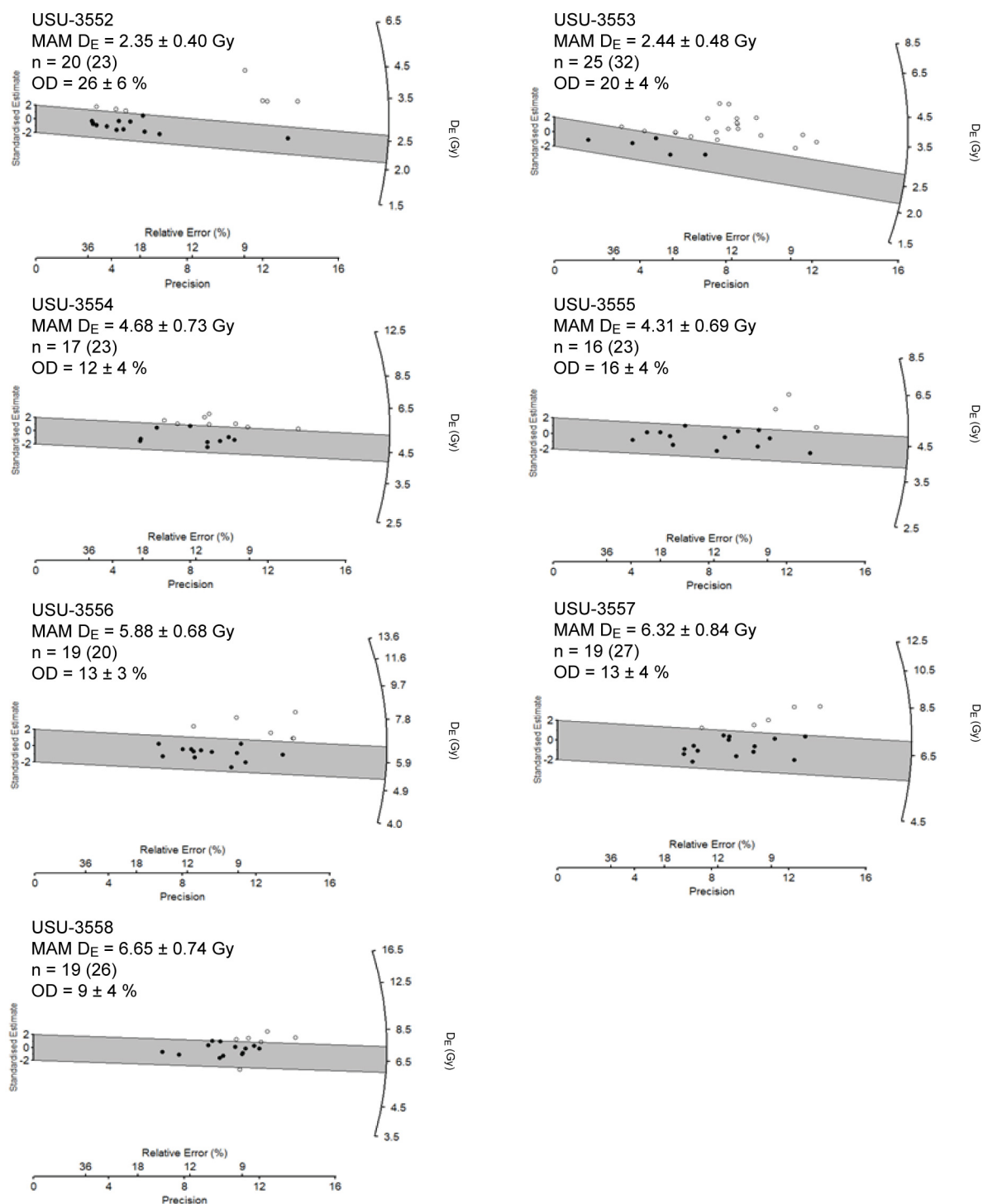


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Table Captions

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Table S1

Size (microns)	21100901	BLBR21	21022001	21012501	20121501	20110101	20092401	18020401	17093001	17082401	LA1701	B3-2
0.375124	0.0400	0.0452	0.0316	0.0185	0.0036	0.0522	0.0000	0.0000	0.0000	0.0000	0.0046	0.0240
0.411798	0.0710	0.0801	0.0560	0.0329	0.0070	0.0926	0.0000	0.0000	0.0000	0.0000	0.0088	0.0426
0.452057	0.1094	0.1209	0.0844	0.0495	0.0121	0.1422	0.0000	0.0000	0.0000	0.0000	0.0151	0.0667
0.496252	0.1694	0.1806	0.1256	0.0736	0.0173	0.2180	0.0003	0.0000	0.0003	0.0003	0.0215	0.1058
0.544768	0.2381	0.2421	0.1675	0.0981	0.0228	0.3024	0.0040	0.0000	0.0037	0.0036	0.0280	0.1541
0.598027	0.3173	0.3073	0.2114	0.1237	0.0286	0.3972	0.0122	0.0000	0.0113	0.0111	0.0348	0.2131
0.656493	0.4087	0.3777	0.2587	0.1512	0.0346	0.5042	0.0203	0.0000	0.0188	0.0184	0.0417	0.2845
0.720675	0.5149	0.4563	0.3112	0.1818	0.0409	0.6264	0.0275	0.0000	0.0255	0.0249	0.0487	0.3704
0.791132	0.6345	0.5406	0.3674	0.2144	0.0471	0.7613	0.0338	0.0000	0.0315	0.0306	0.0555	0.4713
0.868477	0.7647	0.6279	0.4256	0.2479	0.0533	0.9045	0.0391	0.0000	0.0365	0.0353	0.0620	0.5867
0.953383	0.9021	0.7162	0.4845	0.2817	0.0590	1.0514	0.0432	0.0000	0.0405	0.0389	0.0679	0.7156
1.04659	1.0420	0.8028	0.5430	0.3148	0.0641	1.1961	0.0459	0.0000	0.0433	0.0412	0.0729	0.8560
1.14891	1.1798	0.8860	0.6001	0.3468	0.0683	1.3336	0.0473	0.0000	0.0449	0.0422	0.0767	1.0052
1.26123	1.3097	0.9620	0.6534	0.3760	0.0713	1.4571	0.0476	0.0000	0.0455	0.0422	0.0793	1.1599
1.38454	1.4269	1.0283	0.7016	0.4014	0.0731	1.5615	0.0467	0.0000	0.0450	0.0411	0.0804	1.3171
1.5199	1.5272	1.0829	0.7438	0.4224	0.0737	1.6436	0.0450	0.0000	0.0437	0.0391	0.0802	1.4744
1.66849	1.6088	1.1261	0.7804	0.4390	0.0732	1.7028	0.0427	0.0000	0.0418	0.0365	0.0787	1.6305
1.83161	1.6715	1.1585	0.8119	0.4513	0.0717	1.7403	0.0399	0.0000	0.0394	0.0334	0.0762	1.7848
2.01068	1.7162	1.1814	0.8392	0.4597	0.0695	1.7593	0.0369	0.0000	0.0368	0.0301	0.0731	1.9380
2.20725	1.7455	1.1970	0.8636	0.4648	0.0670	1.7648	0.0341	0.0000	0.0341	0.0268	0.0699	2.0907
2.42304	1.7629	1.2080	0.8868	0.4676	0.0646	1.7630	0.0315	0.0000	0.0316	0.0238	0.0669	2.2439
2.65993	1.7730	1.2179	0.9108	0.4694	0.0626	1.7611	0.0293	0.0000	0.0295	0.0212	0.0646	2.3983
2.91998	1.7799	1.2293	0.9367	0.4713	0.0614	1.7640	0.0278	0.0000	0.0277	0.0190	0.0634	2.5541
3.20545	1.7869	1.2442	0.9654	0.4741	0.0610	1.7749	0.0269	0.0000	0.0265	0.0175	0.0632	2.7097
3.51883	1.7952	1.2629	0.9963	0.4781	0.0615	1.7940	0.0267	0.0000	0.0258	0.0166	0.0641	2.8622
3.86284	1.8050	1.2852	1.0289	0.4836	0.0629	1.8199	0.0270	0.0000	0.0256	0.0162	0.0658	3.0070
4.24049	1.8150	1.3099	1.0615	0.4905	0.0650	1.8492	0.0278	0.0000	0.0257	0.0163	0.0679	3.1383
4.65506	1.8239	1.3355	1.0926	0.4987	0.0675	1.8769	0.0290	0.0000	0.0261	0.0168	0.0700	3.2499
5.11017	1.8297	1.3605	1.1205	0.5075	0.0703	1.8975	0.0304	0.0000	0.0267	0.0175	0.0718	3.3364
5.60976	1.8313	1.3838	1.1440	0.5166	0.0729	1.9074	0.0318	0.0000	0.0272	0.0183	0.0729	3.3944
6.1582	1.8293	1.4055	1.1629	0.5258	0.0754	1.9072	0.0333	0.0000	0.0278	0.0191	0.0733	3.4217
6.76025	1.8258	1.4265	1.1777	0.5352	0.0777	1.9003	0.0346	0.0000	0.0282	0.0198	0.0731	3.4183
7.42117	1.8241	1.4488	1.1896	0.5457	0.0796	1.8900	0.0357	0.0000	0.0284	0.0204	0.0723	3.3845
8.14669	1.8270	1.4744	1.2000	0.5571	0.0811	1.8763	0.0366	0.0000	0.0283	0.0207	0.0709	3.3201
8.94315	1.8366	1.5058	1.2112	0.5703	0.0825	1.8581	0.0373	0.0000	0.0280	0.0207	0.0693	3.2244
9.81748	1.8561	1.5457	1.2263	0.5853	0.0838	1.8371	0.0378	0.0000	0.0275	0.0204	0.0677	3.0988
10.7773	1.8931	1.5993	1.2515	0.6050	0.0854	1.8231	0.0384	0.0000	0.0268	0.0201	0.0666	2.9516
11.8309	1.9603	1.6755	1.2950	0.6317	0.0879	1.8312	0.0393	0.0000	0.0264	0.0199	0.0667	2.7990

Table S1

Size (microns)	21100901	BLBR21	21022001	21012501	20121501	20110101	20092401	18020401	17093001	17082401	LA1701	B3-2
12.9876	2.0722	1.7854	1.3677	0.6693	0.0920	1.8702	0.0409	0.0000	0.0266	0.0202	0.0692	2.6629
14.2573	2.2375	1.9384	1.4789	0.7201	0.0985	1.9406	0.0437	0.0000	0.0277	0.0217	0.0748	2.5595
15.6512	2.4530	2.1357	1.6339	0.7856	0.1076	2.0300	0.0481	0.0000	0.0303	0.0246	0.0841	2.4897
17.1813	2.7004	2.3687	1.8314	0.8676	0.1192	2.1281	0.0542	0.0000	0.0344	0.0294	0.0975	2.4345
18.861	2.9511	2.6196	2.0619	0.9652	0.1322	2.2317	0.0618	0.0000	0.0401	0.0359	0.1147	2.3607
20.705	3.1730	2.8683	2.3127	1.0785	0.1446	2.3414	0.0700	0.0000	0.0465	0.0431	0.1346	2.2389
22.7292	3.3383	3.0981	2.5682	1.2033	0.1546	2.4570	0.0777	0.0000	0.0529	0.0497	0.1563	2.0578
24.9513	3.4266	3.2978	2.8150	1.3347	0.1607	2.5616	0.0836	0.0000	0.0580	0.0541	0.1805	1.8313
27.3906	3.4248	3.4587	3.0420	1.4672	0.1643	2.6221	0.0869	0.0000	0.0613	0.0554	0.2145	1.5921
30.0685	3.3276	3.5714	3.2398	1.5975	0.1674	2.6082	0.0876	0.0000	0.0623	0.0537	0.2705	1.3735
33.0081	3.1413	3.6239	3.4028	1.7289	0.1703	2.5100	0.0849	0.0000	0.0608	0.0500	0.3639	1.2003
36.2352	2.8846	3.6059	3.5281	1.8705	0.1715	2.3713	0.0794	0.0000	0.0574	0.0472	0.5109	1.0806
39.7777	2.5921	3.5160	3.6165	2.0397	0.1687	2.2723	0.0735	0.0000	0.0542	0.0491	0.7292	1.0071
43.6665	2.3017	3.3668	3.6697	2.2574	0.1640	2.2865	0.0729	0.0000	0.0566	0.0615	1.0384	0.9631
47.9356	2.0424	3.1872	3.6864	2.5435	0.1633	2.4557	0.0849	0.0000	0.0713	0.0887	1.4482	0.9232
52.622	1.8251	3.0083	3.6590	2.9099	0.1716	2.7472	0.1130	0.0000	0.1016	0.1287	1.9452	0.8589
57.7666	1.6324	2.8479	3.5754	3.3520	0.1951	3.0347	0.1530	0.0000	0.1434	0.1687	2.5013	0.7491
63.4141	1.4289	2.6987	3.4222	3.8450	0.2376	3.1412	0.1888	0.0000	0.1802	0.1895	3.0829	0.5090
69.6138	1.1808	2.5183	3.1932	4.3424	0.2891	2.4273	0.1966	0.0000	0.1861	0.1815	3.6447	0.2440
76.4196	0.8711	2.2458	2.9064	4.7851	0.3263	1.2852	0.1679	0.0000	0.1458	0.1706	4.1303	0.0545
83.8907	0.5017	1.8409	2.6003	5.1151	0.3411	0.3041	0.1459	0.0000	0.0956	0.2330	4.4949	0.0053
92.0923	0.1988	1.3132	2.3261	5.2924	0.3846	0.0314	0.2255	0.0000	0.1207	0.5094	4.7341	0.0000
101.096	0.0389	0.7218	2.1169	5.3046	0.5958	0.0000	0.5850	0.0164	0.3734	1.2189	4.8926	0.0000
110.979	0.0031	0.2705	1.9489	5.1664	1.2193	0.0000	1.4908	0.3046	1.1292	2.5614	5.0454	0.0000
121.829	0.0000	0.0505	1.7585	4.9044	2.5485	0.0000	3.1274	1.3850	2.5937	4.5895	5.2624	0.0000
133.74	0.0000	0.0038	1.4672	4.5397	4.7334	0.0000	5.4811	3.3304	4.7990	7.1401	5.5773	0.0000
146.815	0.0000	0.0000	1.0483	4.0763	7.5991	0.0000	8.2774	5.9702	7.5385	9.8192	5.9745	0.0000
161.168	0.0000	0.0000	0.5658	3.5050	10.6168	0.0000	10.9926	8.9670	10.3527	12.0710	6.3921	0.0000
176.925	0.0000	0.0000	0.2006	2.8292	13.0345	0.0000	12.9990	11.7219	12.6280	13.3654	6.7084	0.0000
194.222	0.0000	0.0000	0.0354	2.0816	14.1107	0.0000	13.7568	13.6168	13.7889	13.3284	6.7262	0.0000
213.21	0.0000	0.0000	0.0023	1.3313	13.4612	0.0000	13.0192	14.1807	13.4844	11.9294	6.2481	0.0000
234.054	0.0000	0.0000	0.0000	0.6610	11.1849	0.0000	10.9379	13.2487	11.7512	9.4493	5.2338	0.0000
256.936	0.0000	0.0000	0.0000	0.2250	7.9167	0.0000	8.0075	11.0422	8.9864	6.4384	3.8675	0.0000
282.056	0.0000	0.0000	0.0000	0.0388	4.5410	0.0000	4.9389	8.0691	5.8462	3.5815	2.4557	0.0000
309.631	0.0000	0.0000	0.0000	0.0026	1.7440	0.0000	2.3461	5.0026	3.0257	1.2482	1.2960	0.0000
339.902	0.0000	0.0000	0.0000	0.0000	0.2976	0.0000	0.6128	2.4331	0.8893	0.1518	0.5828	0.0000
373.132	0.0000	0.0000	0.0000	0.0000	0.0108	0.0000	0.0392	0.6662	0.0636	0.0022	0.2927	0.0000
409.611	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0449	0.0000	0.0000	0.2600	0.0000

Table S1

Size (microns)	21100901	BLBR21	21022001	21012501	20121501	20110101	20092401	18020401	17093001	17082401	LA1701	B3-2
449.657	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3433	0.0000
493.617	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3508	0.0000
541.876	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1510	0.0000
594.852	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0126	0.0000
653.008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
716.849	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
786.932	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
863.866	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
948.322	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1041.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1142.81	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1254.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1377.19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1511.83	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1659.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1821.88	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Clay	28.1	20.6	14.8	8.0	1.3	29.9	0.7	0.0	0.7	0.6	1.5	32.1
Silt	67.7	67.8	61.6	34.0	3.5	62.9	1.7	0.0	1.3	1.2	10.8	67.1
Sand	4.2	11.7	23.6	58.0	95.2	7.2	97.5	100.0	98.0	98.2	87.8	0.8

Table S1

Size (microns)	B2	B1-2	W1-18	W11-2	W2-5	W10-2	W9-2	W3-10	W3-18	J4-2	J2-11	J5-1	J6-2
0.375124	0.0072	0.0320	0.0035	0.0449	0.0263	0.0821	0.0320	0.0356	0.0034	0.0349	0.0037	0.0588	0.0458
0.411798	0.0145	0.0567	0.0070	0.0795	0.0465	0.1457	0.0568	0.0632	0.0067	0.0619	0.0074	0.1042	0.0812
0.452057	0.0272	0.0859	0.0129	0.1202	0.0702	0.2248	0.0871	0.0968	0.0119	0.0926	0.0135	0.1579	0.1221
0.496252	0.0433	0.1295	0.0198	0.1802	0.1048	0.3485	0.1339	0.1481	0.0174	0.1359	0.0207	0.2375	0.1813
0.544768	0.0642	0.1759	0.0282	0.2426	0.1401	0.4910	0.1869	0.2046	0.0237	0.1775	0.0293	0.3212	0.2411
0.598027	0.0911	0.2268	0.0384	0.3092	0.1771	0.6554	0.2479	0.2676	0.0307	0.2193	0.0396	0.4109	0.3033
0.656493	0.1248	0.2838	0.0503	0.3818	0.2168	0.8441	0.3188	0.3382	0.0384	0.2626	0.0516	0.5089	0.3698
0.720675	0.1656	0.3491	0.0638	0.4630	0.2606	1.0614	0.4018	0.4184	0.0468	0.3095	0.0651	0.6185	0.4432
0.791132	0.2135	0.4217	0.0787	0.5505	0.3071	1.3042	0.4966	0.5063	0.0556	0.3580	0.0798	0.7367	0.5212
0.868477	0.2674	0.5005	0.0944	0.6416	0.3543	1.5668	0.6022	0.5988	0.0646	0.4064	0.0953	0.8591	0.6012
0.953383	0.3255	0.5844	0.1102	0.7340	0.4009	1.8402	0.7176	0.6927	0.0734	0.4542	0.1107	0.9822	0.6815
1.04659	0.3851	0.6721	0.1252	0.8248	0.4452	2.1126	0.8411	0.7840	0.0815	0.5006	0.1251	1.1016	0.7600
1.14891	0.4425	0.7623	0.1387	0.9120	0.4861	2.3725	0.9708	0.8692	0.0885	0.5454	0.1378	1.2141	0.8356
1.26123	0.4935	0.8524	0.1498	0.9917	0.5212	2.6091	1.1037	0.9442	0.0940	0.5863	0.1479	1.3143	0.9047
1.38454	0.5346	0.9403	0.1581	1.0611	0.5492	2.8141	1.2376	1.0058	0.0977	0.6224	0.1550	1.3984	0.9654
1.5199	0.5628	1.0243	0.1632	1.1182	0.5690	2.9794	1.3708	1.0517	0.0996	0.6530	0.1587	1.4639	1.0162
1.66849	0.5767	1.1041	0.1652	1.1633	0.5809	3.1008	1.5032	1.0819	0.0997	0.6788	0.1593	1.5114	1.0577
1.83161	0.5771	1.1795	0.1646	1.1970	0.5853	3.1770	1.6351	1.0976	0.0982	0.6996	0.1570	1.5426	1.0905
2.01068	0.5672	1.2508	0.1620	1.2207	0.5832	3.2163	1.7679	1.1014	0.0956	0.7158	0.1527	1.5604	1.1158
2.20725	0.5531	1.3189	0.1586	1.2370	0.5762	3.2276	1.9033	1.0968	0.0923	0.7282	0.1474	1.5689	1.1358
2.42304	0.5421	1.3848	0.1552	1.2487	0.5660	3.2220	2.0431	1.0884	0.0889	0.7381	0.1422	1.5734	1.1527
2.65993	0.5420	1.4498	0.1529	1.2594	0.5552	3.2050	2.1891	1.0808	0.0860	0.7470	0.1381	1.5795	1.1697
2.91998	0.5581	1.5149	0.1524	1.2719	0.5455	3.1827	2.3419	1.0778	0.0839	0.7558	0.1359	1.5916	1.1889
3.20545	0.5920	1.5804	0.1540	1.2880	0.5383	3.1616	2.5011	1.0814	0.0829	0.7653	0.1360	1.6119	1.2120
3.51883	0.6394	1.6454	0.1576	1.3079	0.5340	3.1441	2.6642	1.0917	0.0831	0.7759	0.1383	1.6401	1.2389
3.86284	0.6914	1.7087	0.1625	1.3308	0.5330	3.1281	2.8274	1.1074	0.0844	0.7882	0.1422	1.6739	1.2693
4.24049	0.7358	1.7678	0.1680	1.3550	0.5345	3.0938	2.9849	1.1254	0.0864	0.8020	0.1471	1.7096	1.3015
4.65506	0.7614	1.8208	0.1730	1.3784	0.5382	3.0289	3.1307	1.1422	0.0887	0.8167	0.1519	1.7430	1.3338
5.11017	0.7616	1.8659	0.1768	1.3990	0.5427	2.9241	3.2588	1.1539	0.0910	0.8319	0.1560	1.7693	1.3644
5.60976	0.7374	1.9021	0.1790	1.4152	0.5471	2.7921	3.3645	1.1579	0.0929	0.8476	0.1587	1.7855	1.3923
6.1582	0.6969	1.9291	0.1795	1.4270	0.5511	2.6453	3.4447	1.1542	0.0943	0.8643	0.1600	1.7911	1.4169
6.76025	0.6506	1.9474	0.1784	1.4354	0.5548	2.4855	3.4971	1.1441	0.0951	0.8823	0.1600	1.7883	1.4386
7.42117	0.6074	1.9583	0.1761	1.4425	0.5593	2.3112	3.5197	1.1300	0.0952	0.9022	0.1588	1.7805	1.4586
8.14669	0.5692	1.9629	0.1729	1.4506	0.5647	2.1142	3.5093	1.1123	0.0946	0.9250	0.1566	1.7694	1.4786
8.94315	0.5316	1.9627	0.1688	1.4619	0.5715	1.9449	3.4628	1.0917	0.0936	0.9533	0.1534	1.7557	1.5010
9.81748	0.4867	1.9592	0.1645	1.4791	0.5795	1.8123	3.3781	1.0691	0.0924	0.9904	0.1497	1.7412	1.5282
10.7773	0.4318	1.9564	0.1608	1.5080	0.5925	1.7326	3.2581	1.0510	0.0916	1.0404	0.1462	1.7338	1.5647
11.8309	0.3731	1.9631	0.1591	1.5586	0.6136	1.6506	3.1142	1.0459	0.0923	1.1078	0.1445	1.7479	1.6182

Table S1

Size (microns)	B2	B1-2	W1-18	W11-2	W2-5	W10-2	W9-2	W3-10	W3-18	J4-2	J2-11	J5-1	J6-2
12.9876	0.3213	1.9926	0.1610	1.6440	0.6478	1.4785	2.9636	1.0641	0.0955	1.1998	0.1461	1.8001	1.7010
14.2573	0.2905	2.0567	0.1680	1.7750	0.6981	1.2893	2.8249	1.1101	0.1022	1.3261	0.1531	1.8993	1.8244
15.6512	0.2833	2.1586	0.1804	1.9546	0.7656	1.1459	2.7045	1.1807	0.1128	1.4966	0.1658	2.0408	1.9935
17.1813	0.2959	2.2887	0.1972	2.1756	0.8517	1.2317	2.5933	1.2660	0.1268	1.7170	0.1835	2.2061	2.2028
18.861	0.3339	2.4264	0.2162	2.4245	0.9547	1.5852	2.4692	1.3500	0.1427	1.9872	0.2035	2.3720	2.4390
20.705	0.3655	2.5520	0.2336	2.6892	1.0754	2.1509	2.3062	1.4217	0.1576	2.3044	0.2200	2.5221	2.6901
22.7292	0.3009	2.6564	0.2445	2.9623	1.2120	2.7243	2.0965	1.4759	0.1688	2.6660	0.2263	2.6508	2.9509
24.9513	0.1172	2.7457	0.2485	3.2402	1.3649	2.9069	1.8520	1.5179	0.1752	3.0740	0.2197	2.7610	3.2257
27.3906	0.0096	2.8339	0.2540	3.5149	1.5357	2.2566	1.6060	1.5616	0.1807	3.5305	0.2097	2.8527	3.5174
30.0685	0.0000	2.9309	0.2702	3.7674	1.7279	1.1700	1.3969	1.6226	0.1910	4.0288	0.2098	2.9178	3.8165
33.0081	0.0000	3.0338	0.2945	3.9684	1.9503	0.2788	1.2445	1.7193	0.2076	4.5465	0.2238	2.9443	4.0975
36.2352	0.0000	3.1258	0.3149	4.0852	2.2155	0.0295	1.1518	1.8689	0.2276	5.0393	0.2450	2.9235	4.3180
39.7777	0.0000	3.1822	0.3262	4.0926	2.5413	0.0000	1.0987	2.0878	0.2473	5.4450	0.2661	2.8629	4.4327
43.6665	0.0143	3.1820	0.3416	3.9815	2.9466	0.0000	1.0443	2.3904	0.2692	5.6941	0.2916	2.7848	4.4062
47.9356	0.1743	3.1172	0.3775	3.7615	3.4449	0.0000	0.9520	2.7795	0.3018	5.7259	0.3275	2.7095	4.2185
52.622	0.4138	2.9891	0.4315	3.4530	4.0345	0.0000	0.7901	3.2386	0.3522	5.5074	0.3667	2.6424	3.8734
57.7666	0.4223	2.8052	0.4927	3.0796	4.6878	0.0000	0.5125	3.7250	0.4299	5.0451	0.4117	2.5580	3.3919
63.4141	0.3976	2.5680	0.5649	2.6598	5.3437	0.0000	0.2327	4.1676	0.5512	4.3872	0.4940	2.3995	2.8004
69.6138	0.6285	2.2640	0.6684	2.1985	5.9121	0.0000	0.0506	4.4854	0.7348	3.6115	0.6507	2.1128	2.1447
76.4196	1.1884	1.8816	0.8360	1.7048	6.2977	0.0000	0.0047	4.6207	1.0082	2.8071	0.9032	1.6753	1.4793
83.8907	1.8678	1.4235	1.1161	1.1998	6.4208	0.0000	0.0000	4.5515	1.4296	2.0507	1.2798	1.1215	0.8630
92.0923	2.5765	0.9221	1.5727	0.7225	6.2384	0.0000	0.0000	4.3076	2.1029	1.3950	1.8622	0.5666	0.3839
101.096	3.5367	0.4570	2.2695	0.3346	5.7438	0.0000	0.0000	3.9329	3.1591	0.8688	2.7880	0.1867	0.1103
110.979	4.9796	0.1497	3.2400	0.1029	4.9508	0.0000	0.0000	3.4313	4.6911	0.4785	4.1714	0.0308	0.0161
121.829	6.8534	0.0248	4.4557	0.0162	3.9206	0.0000	0.0000	2.8080	6.6506	0.2119	5.9814	0.0018	0.0007
133.74	8.6978	0.0015	5.8192	0.0009	2.7703	0.0000	0.0000	2.0645	8.7919	0.0668	7.9716	0.0000	0.0000
146.815	9.9286	0.0000	7.2024	0.0000	1.6663	0.0000	0.0000	1.2408	10.6899	0.0111	9.7276	0.0000	0.0000
161.168	10.3462	0.0000	8.4921	0.0000	0.7732	0.0000	0.0000	0.5453	11.8617	0.0007	10.8170	0.0000	0.0000
176.925	10.1387	0.0000	9.5502	0.0000	0.2437	0.0000	0.0000	0.1389	11.9601	0.0000	10.9329	0.0000	0.0000
194.222	9.1311	0.0000	10.1105	0.0000	0.0396	0.0000	0.0000	0.0172	10.8371	0.0000	9.9468	0.0000	0.0000
213.21	6.4762	0.0000	9.8328	0.0000	0.0024	0.0000	0.0000	0.0004	8.6647	0.0000	7.9798	0.0000	0.0000
234.054	2.5948	0.0000	8.5847	0.0000	0.0000	0.0000	0.0000	0.0000	5.9089	0.0000	5.4771	0.0000	0.0000
256.936	0.3622	0.0000	6.6103	0.0000	0.0000	0.0000	0.0000	0.0000	3.1829	0.0000	3.0699	0.0000	0.0000
282.056	0.0078	0.0000	4.3890	0.0000	0.0000	0.0000	0.0000	0.0000	1.1969	0.0000	1.3090	0.0000	0.0000
309.631	0.0000	0.0000	2.4419	0.0000	0.0000	0.0000	0.0000	0.0000	0.2396	0.0000	0.4831	0.0000	0.0000
339.902	0.0000	0.0000	1.1282	0.0000	0.0000	0.0000	0.0000	0.0000	0.0125	0.0000	0.3632	0.0000	0.0000
373.132	0.0000	0.0000	0.4850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6442	0.0000	0.0000
409.611	0.0000	0.0000	0.3061	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0546	0.0000	0.0000

Table S1

Size (microns)	B2	B1-2	W1-18	W11-2	W2-5	W10-2	W9-2	W3-10	W3-18	J4-2	J2-11	J5-1	J6-2
449.657	0.0000	0.0000	0.3242	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.2520	0.0000	0.0000
493.617	0.0000	0.0000	0.2685	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1153	0.0000	0.0000
541.876	0.0000	0.0000	0.0893	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7170	0.0000	0.0000
594.852	0.0000	0.0000	0.0059	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.3175	0.0000	0.0000
653.008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0816	0.0000	0.0000
716.849	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0057	0.0000	0.0000
786.932	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
863.866	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
948.322	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1041.03	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1142.81	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1254.54	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1377.19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1511.83	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1659.63	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1821.88	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Clay	9.6	21.2	2.8	21.2	10.3	53.2	30.2	18.9	1.7	12.8	2.7	27.3	19.7
Silt	10.7	69.1	6.8	69.9	39.4	46.8	69.5	44.8	4.6	71.3	5.9	64.6	72.5
Sand	79.7	9.7	90.4	8.9	50.3	0.0	0.3	36.3	93.7	15.9	91.4	8.1	7.8

Table S2

				RATIOS						AGES									
U		Th	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/	206/		207/			%disc	%disc	Best Age	
Grain	[ppm]	[ppm]								235	± 2s	238	± 2s	206	± 2s				
Sample 18020401																			
G120	1008	671	0.67	0.0262	0.00124	0.00383	0.0001	0.04972	0.0024	26	2.4	25	0.8	182	214.7	6.5	86.5	24.6	0.8
G99	961	1017	1.06	0.0272	0.00157	0.00402	0.0001	0.04923	0.0029	27	3.1	26	0.9	159	262.8	5.4	83.7	25.9	0.9
G30	735	184	0.25	0.0306	0.00212	0.00484	0.0001	0.04598	0.0032	31	4.2	31	1.1	0	313.8	-1.6	-31000.0	31.1	1.1
G32	1270	703	0.55	0.0506	0.00204	0.00807	0.0001	0.04558	0.0018	50	4.0	52	1.6	0	138.9	-3.3	-51700.0	51.8	1.6
G70	231	91	0.39	0.0657	0.00739	0.00947	0.0003	0.05047	0.0058	65	14.1	61	3.2	217	489.8	6.4	72.0	60.7	3.2
G44	1554	744	0.48	0.0647	0.00199	0.00968	0.0001	0.04861	0.0015	64	3.8	62	1.8	129	139.7	2.6	51.9	62.1	1.8
G26	1378	318	0.23	0.0651	0.00217	0.00979	0.0001	0.04839	0.0016	64	4.1	63	1.8	118	151.8	2.1	46.9	62.8	1.8
G48	547	299	0.55	0.0589	0.00370	0.00998	0.0002	0.04291	0.0027	58	7.1	64	2.1	0	0.0	-9.2	-63900.0	64.0	2.1
G114	784	150	0.19	0.0694	0.00249	0.01029	0.0002	0.04898	0.0018	68	4.7	66	1.9	147	163.1	3.2	55.1	66.0	1.9
G97	663	474	0.72	0.0678	0.00304	0.01054	0.0002	0.04674	0.0021	67	5.8	68	2.1	36	209.4	-1.5	-88.8	67.6	2.1
G2	468	259	0.55	0.0756	0.00559	0.01132	0.0002	0.04857	0.0037	74	10.6	73	2.9	127	335.5	1.9	42.8	72.6	2.9
G133	432	255	0.59	0.0876	0.00366	0.01344	0.0002	0.04738	0.0020	85	6.8	86	2.6	68	194.4	-0.9	-27.4	86.1	2.6
G118	784	240	0.31	0.0930	0.00288	0.01388	0.0002	0.04869	0.0015	90	5.3	89	2.5	133	140.2	1.6	33.3	88.8	2.5
G95	238	101	0.42	0.0919	0.00610	0.01433	0.0003	0.04661	0.0031	89	11.3	92	3.4	29	307.5	-2.7	-215.1	91.7	3.4
G74	627	244	0.39	0.0974	0.00420	0.01440	0.0002	0.04915	0.0021	94	7.8	92	2.9	155	196.3	2.4	40.6	92.2	2.9
G124	654	330	0.50	0.0949	0.00317	0.01442	0.0002	0.04782	0.0016	92	5.9	92	2.6	89	154.8	-0.3	-3.2	92.3	2.6
G21	464	204	0.44	0.1022	0.00437	0.01536	0.0002	0.04837	0.0021	99	8.1	98	3.0	118	195.9	0.6	16.5	98.2	3.0
G149	819	165	0.20	0.1066	0.00320	0.01589	0.0002	0.04876	0.0014	103	5.9	102	2.9	136	135.9	1.3	25.4	101.6	2.9
G91	253	119	0.47	0.1149	0.00656	0.01677	0.0003	0.04981	0.0029	110	11.9	107	3.7	186	258.2	3.0	42.5	107.2	3.7
G126	605	387	0.64	0.1732	0.00465	0.02515	0.0004	0.05006	0.0013	162	8.0	160	4.4	198	119.0	1.3	19.0	160.1	4.4
G89	156	57	0.36	0.1907	0.01067	0.02824	0.0005	0.04910	0.0028	177	18.2	180	6.2	152	254.7	-1.3	-17.8	179.5	6.2
G147	503	499	0.99	0.1984	0.00542	0.02859	0.0004	0.05044	0.0013	184	9.2	182	5.0	215	121.0	1.2	15.6	181.7	5.0
G128	440	213	0.48	0.2092	0.00598	0.02973	0.0004	0.05115	0.0014	193	10.0	189	5.2	247	126.3	2.1	23.6	188.9	5.2
G63	449	168	0.37	0.2151	0.00718	0.03001	0.0004	0.05211	0.0017	198	12.0	191	5.5	290	147.3	3.8	34.3	190.6	5.5
G151	506	201	0.40	0.2071	0.00587	0.03010	0.0004	0.05002	0.0014	191	9.9	191	5.3	196	126.4	-0.1	2.3	191.2	5.3
G9	375	163	0.43	0.2057	0.00705	0.03020	0.0004	0.04952	0.0017	190	11.9	192	5.5	173	154.7	-0.9	-11.1	191.8	5.5
G19	399	278	0.70	0.2133	0.00675	0.03082	0.0004	0.05030	0.0016	196	11.3	196	5.6	209	141.5	0.3	6.3	195.7	5.6
G40	480	202	0.42	0.2109	0.00680	0.03142	0.0005	0.04880	0.0016	194	11.4	199	5.7	138	146.2	-2.6	-44.4	199.4	5.7
G38	422	210	0.50	0.2371	0.00772	0.03436	0.0005	0.05017	0.0016	216	12.7	218	6.2	203	146.1	-0.8	-7.4	217.8	6.2
G125	350	306	0.88	0.3940	0.00984	0.05312	0.0007	0.05391	0.0013	337	14.3	334	9.0	367	106.8	1.1	9.1	333.7	9.0
G94	482	312	0.65	0.4692	0.01112	0.05947	0.0008	0.05735	0.0013	391	15.4	372	9.9	505	99.3	4.9	26.2	372.4	9.9
G127	262	186	0.71	0.4957	0.01251	0.06552	0.0009	0.05499	0.0013	409	17.0	409	11.0	412	105.8	-0.1	0.7	409.1	11.0
G79	431	587	1.36	0.5161	0.01367	0.06576	0.0009	0.05705	0.0015	423	18.3	411	11.2	493	112.7	2.9	16.7	410.5	11.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G55	1159	577	0.50	0.5517	0.01015	0.06848	0.0009	0.05857	0.0010	446	13.3	427	11.0	551	72.4	4.5	22.5	427.0	11.0
G28	427	302	0.71	0.6972	0.01527	0.08788	0.0012	0.05767	0.0012	537	18.3	543	14.2	517	90.2	-1.1	-5.0	543.0	14.2
G49	117	121	1.04	1.3153	0.03469	0.13504	0.0019	0.07080	0.0018	852	30.4	817	22.0	952	103.4	4.4	14.2	816.6	22.0
G113	41	20	0.50	1.5351	0.05578	0.15498	0.0025	0.07200	0.0026	945	44.7	929	27.5	986	144.0	1.7	5.8	928.8	27.5
G143	866	91	0.11	1.6126	0.02662	0.15858	0.0021	0.07392	0.0011	975	20.7	949	23.1	1039	58.4	2.8	8.7	948.9	23.1
G52	105	30	0.28	1.6149	0.04129	0.16312	0.0023	0.07196	0.0018	976	32.1	974	25.8	985	99.4	0.2	1.1	974.1	25.8
G45	46	44	0.95	1.7326	0.06267	0.16804	0.0027	0.07495	0.0027	1021	46.6	1001	29.6	1067	142.2	1.9	6.2	1001.3	29.6
G116	138	54	0.39	1.6913	0.03612	0.16818	0.0023	0.07310	0.0015	1005	27.3	1002	25.4	1017	80.1	0.3	1.4	1002.1	25.4
G106	486	370	0.76	1.8639	0.03279	0.17311	0.0023	0.07827	0.0012	1068	23.2	1029	25.2	1154	62.4	3.8	10.8	1029.2	25.2
G61	404	177	0.44	1.7665	0.03221	0.17366	0.0023	0.07394	0.0012	1033	23.6	1032	25.5	1040	66.3	0.1	0.7	1032.3	25.5
G86	231	128	0.55	1.8374	0.03703	0.17708	0.0024	0.07543	0.0014	1059	26.5	1051	26.3	1080	74.6	0.8	2.7	1051.0	26.3
G109	619	45	0.07	1.8326	0.03099	0.17744	0.0023	0.07507	0.0011	1057	22.2	1053	25.6	1071	59.9	0.4	1.6	1053.0	25.6
G83	204	54	0.27	1.8597	0.03903	0.17893	0.0025	0.07555	0.0015	1067	27.7	1061	26.8	1083	78.3	0.5	2.0	1061.1	26.8
G132	254	113	0.44	1.8694	0.03436	0.17948	0.0024	0.07571	0.0013	1070	24.3	1064	26.1	1088	66.6	0.6	2.2	1064.1	26.1
G73	154	132	0.86	1.8989	0.04359	0.17956	0.0025	0.07688	0.0017	1081	30.5	1065	27.4	1118	86.4	1.5	4.8	1064.6	27.4
G88	722	658	0.91	1.9365	0.03258	0.17983	0.0024	0.07828	0.0012	1094	22.5	1066	25.9	1154	58.8	2.6	7.6	1066.0	25.9
G121	59	36	0.61	1.9059	0.04986	0.18060	0.0026	0.07671	0.0020	1083	34.8	1070	28.4	1114	100.2	1.2	3.9	1070.3	28.4
G130	88	62	0.71	1.8933	0.04703	0.18089	0.0026	0.07608	0.0018	1079	33.0	1072	28.0	1097	94.9	0.6	2.3	1071.8	28.0
G7	126	50	0.40	1.9204	0.04194	0.18139	0.0025	0.07696	0.0016	1088	29.2	1075	27.4	1120	81.5	1.3	4.1	1074.6	27.4
G141	428	107	0.25	1.9647	0.03419	0.18154	0.0024	0.07867	0.0012	1104	23.4	1075	26.2	1164	61.5	2.6	7.6	1075.4	26.2
G75	651	125	0.19	1.9534	0.03286	0.18499	0.0024	0.07676	0.0012	1100	22.6	1094	26.6	1115	59.1	0.5	1.9	1094.2	26.6
G80	151	103	0.68	2.0084	0.04551	0.18854	0.0026	0.07743	0.0017	1118	30.7	1114	28.5	1132	85.0	0.4	1.7	1132.4	85.0
G11	232	101	0.44	2.0877	0.03874	0.19497	0.0026	0.07784	0.0013	1145	25.5	1148	28.3	1143	66.7	-0.3	-0.5	1142.8	66.7
G62	266	134	0.50	2.0801	0.03954	0.19179	0.0026	0.07884	0.0014	1142	26.1	1131	27.9	1168	68.6	1.0	3.2	1168.1	68.6
G42	371	117	0.32	2.1661	0.03793	0.19841	0.0026	0.07936	0.0013	1170	24.3	1167	28.4	1181	61.7	0.3	1.2	1181.2	61.7
G142	99	91	0.92	2.0644	0.04676	0.18783	0.0026	0.07989	0.0017	1137	31.0	1110	28.3	1194	84.3	2.5	7.1	1194.3	84.3
G43	51	18	0.35	2.1840	0.06765	0.19812	0.0030	0.08014	0.0025	1176	43.1	1165	32.6	1200	118.7	0.9	2.9	1200.3	118.7
G35	94	35	0.38	2.2914	0.07082	0.20772	0.0032	0.08019	0.0025	1210	43.7	1217	34.0	1202	118.5	-0.6	-1.3	1201.6	118.5
G66	110	56	0.51	2.3444	0.05593	0.21229	0.0030	0.08028	0.0018	1226	34.0	1241	31.9	1204	89.2	-1.2	-3.1	1203.8	89.2
G4	37	19	0.51	2.1589	0.06941	0.19484	0.0030	0.08055	0.0026	1168	44.6	1148	32.6	1210	123.3	1.8	5.2	1210.4	123.3
G29	266	117	0.44	2.2502	0.04119	0.20301	0.0027	0.08058	0.0013	1197	25.7	1192	29.2	1211	65.0	0.5	1.6	1211.1	65.0
G136	127	55	0.44	2.2828	0.04652	0.20229	0.0028	0.08203	0.0016	1207	28.8	1188	29.5	1246	73.6	1.6	4.7	1246.2	73.6
G57	392	157	0.40	2.3404	0.04236	0.20581	0.0028	0.08266	0.0014	1225	25.8	1207	29.4	1261	63.5	1.5	4.3	1261.3	63.5
G41	91	49	0.54	2.4647	0.06015	0.21523	0.0031	0.08325	0.0020	1262	35.3	1257	32.6	1275	90.9	0.4	1.4	1274.8	90.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G123	55	52	0.95	2.6028	0.06362	0.22099	0.0032	0.08561	0.0020	1301	35.9	1287	33.3	1329	90.4	1.1	3.2	1329.4	90.4
G122	300	224	0.75	2.7014	0.04987	0.22746	0.0031	0.08633	0.0015	1329	27.4	1321	32.0	1346	64.6	0.6	1.8	1345.6	64.6
G117	643	206	0.32	2.8563	0.05073	0.23770	0.0032	0.08735	0.0014	1371	26.7	1375	33.0	1368	60.9	-0.3	-0.5	1368.3	60.9
G107	595	259	0.43	2.7162	0.04471	0.22383	0.0030	0.08821	0.0013	1333	24.4	1302	31.0	1387	55.2	2.4	6.1	1387.0	55.2
G105	2470	269	0.11	2.7379	0.04199	0.22322	0.0029	0.08916	0.0012	1339	22.8	1299	30.6	1408	49.8	3.1	7.7	1407.5	49.8
G27	75	44	0.59	2.8876	0.07008	0.23450	0.0034	0.08951	0.0021	1379	36.6	1358	35.2	1415	88.3	1.5	4.0	1415.1	88.3
G129	67	22	0.33	2.9865	0.06626	0.24202	0.0034	0.08970	0.0019	1404	33.8	1397	35.1	1419	79.8	0.5	1.5	1419.1	79.8
G34	201	108	0.54	3.0428	0.05762	0.24563	0.0033	0.09005	0.0016	1418	28.9	1416	34.5	1427	65.8	0.2	0.7	1426.5	65.8
G46	217	129	0.59	3.1117	0.05786	0.25023	0.0034	0.09040	0.0015	1436	28.6	1440	34.9	1434	64.3	-0.3	-0.4	1433.9	64.3
G76	392	225	0.57	3.0980	0.05243	0.24888	0.0033	0.09048	0.0014	1432	26.0	1433	34.1	1436	57.0	0.0	0.2	1435.7	57.0
G6	179	108	0.60	3.2067	0.05763	0.25653	0.0035	0.09087	0.0015	1459	27.8	1472	35.4	1444	61.5	-0.9	-2.0	1443.8	61.5
G60	469	479	1.02	3.1532	0.05214	0.25091	0.0033	0.09135	0.0013	1446	25.5	1443	34.2	1454	55.1	0.2	0.7	1453.9	55.1
G98	184	114	0.62	3.1937	0.05842	0.25336	0.0034	0.09163	0.0015	1456	28.3	1456	35.0	1460	63.1	0.0	0.3	1459.6	63.1
G16	452	176	0.39	3.1540	0.05093	0.24950	0.0033	0.09189	0.0013	1446	24.9	1436	34.0	1465	53.4	0.7	2.0	1465.1	53.4
G20	350	83	0.24	3.3055	0.05416	0.26037	0.0034	0.09229	0.0013	1482	25.5	1492	35.2	1473	54.4	-0.6	-1.2	1473.3	54.4
G13	234	134	0.57	3.3697	0.05869	0.26402	0.0035	0.09278	0.0015	1497	27.3	1510	36.0	1483	59.0	-0.9	-1.8	1483.3	59.0
G39	258	185	0.72	3.3127	0.05811	0.25682	0.0034	0.09377	0.0015	1484	27.4	1474	35.2	1503	59.2	0.7	2.0	1503.4	59.2
G1	175	97	0.55	3.4549	0.06032	0.26452	0.0035	0.09495	0.0015	1517	27.5	1513	36.1	1527	58.6	0.3	0.9	1527.0	58.6
G146	127	74	0.58	3.4885	0.06540	0.26517	0.0036	0.09563	0.0017	1525	29.6	1516	36.4	1540	64.2	0.6	1.6	1540.4	64.2
G150	254	140	0.55	3.7177	0.06431	0.27988	0.0037	0.09655	0.0015	1575	27.7	1591	37.4	1559	57.8	-1.0	-2.1	1558.5	57.8
G110	966	348	0.36	3.7592	0.06066	0.27541	0.0036	0.09922	0.0014	1584	25.9	1568	36.6	1610	52.3	1.0	2.6	1609.5	52.3
G139	159	123	0.77	3.9347	0.07004	0.28266	0.0038	0.10119	0.0016	1621	28.8	1605	38.0	1646	59.3	1.0	2.5	1646.0	59.3
G148	217	94	0.43	4.1572	0.07183	0.29469	0.0039	0.10254	0.0016	1666	28.3	1665	38.9	1671	56.9	0.0	0.3	1670.7	56.9
G31	255	213	0.83	4.0799	0.06907	0.28802	0.0038	0.10298	0.0016	1650	27.6	1632	38.4	1678	55.2	1.1	2.8	1678.4	55.2
G33	238	113	0.48	4.2209	0.07233	0.29738	0.0040	0.10318	0.0016	1678	28.1	1678	39.5	1682	56.1	0.0	0.2	1682.1	56.1
G104	136	112	0.82	4.3071	0.08021	0.30315	0.0041	0.10328	0.0018	1695	30.7	1707	40.6	1684	62.5	-0.7	-1.4	1683.8	62.5
G53	235	171	0.73	4.0843	0.07010	0.28654	0.0038	0.10362	0.0016	1651	28.0	1624	38.4	1690	56.2	1.7	3.9	1689.9	56.2
G72	618	151	0.24	4.4473	0.07171	0.31182	0.0041	0.10368	0.0015	1721	26.7	1750	40.4	1691	51.6	-1.6	-3.5	1691.0	51.6
G101	372	114	0.31	4.2245	0.06910	0.29580	0.0039	0.10382	0.0015	1679	26.9	1670	38.8	1693	52.7	0.5	1.4	1693.4	52.7
G131	90	104	1.16	4.0663	0.07933	0.28350	0.0039	0.10426	0.0019	1648	31.8	1609	38.9	1701	66.2	2.4	5.4	1701.3	66.2
G71	296	122	0.41	4.3435	0.07339	0.30213	0.0040	0.10450	0.0016	1702	27.9	1702	39.8	1706	54.9	0.0	0.2	1705.6	54.9
G119	357	133	0.37	4.2390	0.06866	0.29410	0.0039	0.10477	0.0015	1682	26.6	1662	38.5	1710	51.9	1.2	2.8	1710.3	51.9
G81	610	214	0.35	4.3993	0.06937	0.30417	0.0040	0.10514	0.0014	1712	26.1	1712	39.5	1717	49.9	0.0	0.3	1716.7	49.9
G85	62	60	0.96	4.2620	0.11259	0.29424	0.0044	0.10529	0.0027	1686	43.5	1663	44.2	1719	93.6	1.4	3.3	1719.4	93.6

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G65	111	31	0.28	4.5871	0.09101	0.31531	0.0044	0.10575	0.0020	1747	33.1	1767	42.7	1727	67.2	-1.1	-2.3	1727.4	67.2
G78	241	237	0.98	4.3968	0.07619	0.30208	0.0040	0.10580	0.0017	1712	28.7	1702	40.0	1728	56.7	0.6	1.5	1728.3	56.7
G67	187	199	1.07	4.5073	0.08122	0.30882	0.0042	0.10610	0.0017	1732	29.9	1735	41.1	1733	59.6	-0.1	-0.1	1733.4	59.6
G15	196	98	0.50	4.4607	0.07584	0.30493	0.0041	0.10634	0.0016	1724	28.2	1716	40.3	1738	55.1	0.5	1.3	1737.6	55.1
G14	190	119	0.62	4.6590	0.07975	0.31787	0.0043	0.10655	0.0016	1760	28.6	1779	41.6	1741	55.3	-1.1	-2.2	1741.3	55.3
G56	153	89	0.58	4.4083	0.08023	0.29976	0.0041	0.10690	0.0018	1714	30.1	1690	40.3	1747	60.1	1.4	3.3	1747.3	60.1
G10	421	209	0.50	4.6474	0.07296	0.31497	0.0042	0.10726	0.0015	1758	26.2	1765	40.7	1753	49.1	-0.4	-0.7	1753.4	49.1
G68	336	201	0.60	4.2797	0.07190	0.28968	0.0039	0.10740	0.0016	1690	27.7	1640	38.5	1756	54.1	3.0	6.6	1755.7	54.1
G154	354	145	0.41	4.7640	0.08252	0.31634	0.0042	0.10947	0.0017	1779	29.1	1772	41.2	1791	56.3	0.4	1.0	1790.5	56.3
G145	303	70	0.23	4.8796	0.08010	0.32099	0.0042	0.11050	0.0016	1799	27.7	1795	41.2	1808	52.2	0.2	0.7	1807.6	52.2
G111	113	73	0.64	4.6657	0.08972	0.30613	0.0042	0.11079	0.0020	1761	32.2	1722	41.4	1812	64.1	2.3	5.0	1812.3	64.1
G58	22	32	1.46	5.0177	0.16403	0.32583	0.0055	0.11194	0.0037	1822	55.4	1818	53.1	1831	116.3	0.2	0.7	1831.2	116.3
G93	141	180	1.28	5.0526	0.09138	0.32581	0.0044	0.11273	0.0019	1828	30.7	1818	42.8	1844	59.1	0.6	1.4	1843.8	59.1
G90	150	180	1.20	5.0682	0.09108	0.32578	0.0044	0.11309	0.0019	1831	30.5	1818	42.8	1850	58.6	0.7	1.7	1849.6	58.6
G36	65	30	0.47	5.2210	0.11403	0.33445	0.0048	0.11348	0.0024	1856	37.2	1860	46.2	1856	74.3	-0.2	-0.2	1855.9	74.3
G137	250	120	0.48	5.2150	0.08610	0.33388	0.0044	0.11354	0.0017	1855	28.1	1857	42.6	1857	52.4	-0.1	0.0	1856.8	52.4
G92	276	114	0.41	5.2696	0.08725	0.33669	0.0045	0.11377	0.0017	1864	28.3	1871	43.1	1861	52.5	-0.4	-0.5	1860.5	52.5
G23	305	194	0.64	5.9515	0.09478	0.35732	0.0047	0.12108	0.0017	1969	27.7	1970	44.9	1972	49.0	0.0	0.1	1972.2	49.0
G24	40	32	0.80	6.4431	0.14584	0.37318	0.0055	0.12551	0.0027	2038	39.8	2044	51.4	2036	76.0	-0.3	-0.4	2036.0	76.0
G102	218	207	0.95	5.8832	0.10693	0.33543	0.0046	0.12749	0.0021	1959	31.5	1865	44.0	2064	58.1	5.1	9.6	2063.7	58.1
G82	109	35	0.32	9.3244	0.16144	0.43566	0.0059	0.15558	0.0024	2370	31.8	2331	53.1	2408	52.6	1.7	3.2	2408.2	52.6
G87	147	73	0.50	11.4985	0.18755	0.48526	0.0065	0.17225	0.0025	2565	30.5	2550	56.3	2580	47.7	0.6	1.1	2579.6	47.7
G64	28	35	1.25	11.8602	0.26827	0.49650	0.0076	0.17365	0.0038	2593	42.4	2599	65.4	2593	71.9	-0.2	-0.2	2593.1	71.9
G37	405	210	0.52	12.5648	0.19111	0.50695	0.0067	0.18017	0.0023	2648	28.6	2644	57.0	2655	42.7	0.2	0.4	2654.5	42.7
G134	234	116	0.49	12.3157	0.19464	0.49534	0.0065	0.18073	0.0025	2629	29.7	2594	56.1	2660	45.2	1.3	2.5	2659.6	45.2
G108	273	140	0.52	13.2886	0.20839	0.52463	0.0069	0.18412	0.0025	2700	29.6	2719	58.5	2690	44.6	-0.7	-1.1	2690.3	44.6
G84	42	48	1.13	13.0798	0.25222	0.51445	0.0074	0.18482	0.0033	2685	36.4	2676	62.6	2697	58.8	0.4	0.8	2696.6	58.8
G50	145	150	1.04	13.0062	0.20669	0.50991	0.0068	0.18542	0.0026	2680	30.0	2656	58.1	2702	45.4	0.9	1.7	2701.9	45.4
G77	96	100	1.05	13.0045	0.22374	0.50805	0.0070	0.18607	0.0029	2680	32.4	2648	59.4	2708	50.7	1.2	2.2	2707.7	50.7
G59	477	93	0.19	13.3814	0.20268	0.52101	0.0068	0.18670	0.0024	2707	28.6	2704	57.9	2713	42.3	0.1	0.4	2713.3	42.3
G135	124	82	0.66	13.2493	0.21587	0.51585	0.0069	0.18670	0.0027	2698	30.8	2682	58.3	2713	47.0	0.6	1.2	2713.3	47.0
G152	147	61	0.41	13.7664	0.23056	0.52918	0.0071	0.18910	0.0028	2734	31.7	2738	59.7	2734	48.7	-0.2	-0.1	2734.3	48.7
G96	122	115	0.94	13.8275	0.22779	0.52476	0.0071	0.19154	0.0028	2738	31.2	2719	59.7	2755	47.6	0.7	1.3	2755.4	47.6
G8	309	35	0.11	14.8300	0.22575	0.55302	0.0073	0.19494	0.0025	2804	29.0	2838	60.6	2784	42.2	-1.2	-1.9	2784.3	42.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G153	85	29	0.35	14.7124	0.26345	0.54590	0.0075	0.19590	0.0032	2797	34.0	2808	62.7	2792	53.0	-0.4	-0.6	2792.3	53.0
Sample 17113001																			
GG1	234	256	1.09	0.2014	0.00704	0.02963	0.0004	0.04942	0.0017	186	11.9	188	5.4	168	158.2	-1.0	-12.2	188.2	5.4
GG2	144	67	0.47	4.2954	0.07583	0.30338	0.0040	0.10292	0.0017	1693	29.1	1708	40.0	1677	58.5	-0.9	-1.8	1677.4	58.5
GG4	195	127	0.65	0.0744	0.00453	0.01106	0.0002	0.04891	0.0030	73	8.6	71	2.5	143	277.3	2.8	50.5	70.9	2.5
GG5	150	257	1.72	1.0241	0.03118	0.10927	0.0016	0.06813	0.0021	716	31.3	669	18.8	873	122.3	7.1	23.4	668.5	18.8
GG6	1027	353	0.34	13.6659	0.21376	0.51505	0.0067	0.19287	0.0026	2727	29.6	2678	57.1	2767	44.1	1.8	3.2	2766.8	44.1
GG7	1335	401	0.30	0.0544	0.00162	0.00829	0.0001	0.04766	0.0014	54	3.1	53	1.5	81	137.9	1.1	34.6	53.2	1.5
GG8	49	24	0.50	2.8907	0.06860	0.23743	0.0034	0.08850	0.0020	1380	35.8	1373	35.1	1393	86.4	0.5	1.4	1393.3	86.4
GG9	705	641	0.91	2.8380	0.04625	0.23145	0.0030	0.08913	0.0013	1366	24.5	1342	31.7	1407	54.4	1.8	4.6	1406.9	54.4
GG10	197	97	0.49	0.1704	0.00711	0.02443	0.0004	0.05070	0.0021	160	12.3	156	4.8	227	187.6	2.7	31.5	155.6	4.8
GG11	145	93	0.64	5.0530	0.08847	0.32419	0.0043	0.11329	0.0018	1828	29.7	1810	42.0	1853	56.7	1.0	2.3	1852.9	56.7
GG13	616	404	0.66	0.2081	0.00520	0.02869	0.0004	0.05273	0.0013	192	8.7	182	4.9	317	107.6	5.3	42.5	182.4	4.9
GG14	430	70	0.16	0.0811	0.00333	0.01289	0.0002	0.04571	0.0019	79	6.2	83	2.5	0	155.9	-4.2	-82500.0	82.6	2.5
GG15	65	41	0.62	2.6913	0.06122	0.22379	0.0031	0.08742	0.0019	1326	33.7	1302	33.0	1370	82.9	1.9	4.9	1369.5	82.9
GG16	163	264	1.61	0.1850	0.00817	0.02569	0.0004	0.05235	0.0023	172	14.0	164	5.1	301	196.3	5.4	45.6	163.5	5.1
GG17	76	58	0.77	1.8797	0.04544	0.18186	0.0026	0.07513	0.0018	1074	32.0	1077	27.8	1072	92.4	-0.3	-0.5	1077.1	27.8
GG18	188	251	1.34	5.2566	0.09009	0.33908	0.0045	0.11269	0.0017	1862	29.2	1882	43.2	1843	55.2	-1.1	-2.1	1843.2	55.2
GG19	419	173	0.41	4.4265	0.07290	0.30309	0.0040	0.10616	0.0016	1717	27.3	1707	39.3	1734	53.0	0.6	1.6	1734.4	53.0
GG20	428	147	0.34	4.5930	0.07533	0.30623	0.0040	0.10902	0.0016	1748	27.4	1722	39.6	1783	52.4	1.5	3.4	1783.1	52.4
GG21	266	84	0.32	3.1429	0.05444	0.25281	0.0033	0.09037	0.0014	1443	26.7	1453	34.4	1433	58.9	-0.7	-1.4	1433.2	58.9
GG22	2137	2590	1.21	0.1676	0.00323	0.02437	0.0003	0.04999	0.0009	157	5.6	155	4.1	195	81.7	1.4	20.3	155.2	4.1
GG23	289	80	0.28	4.3888	0.07401	0.30111	0.0040	0.10594	0.0016	1710	27.9	1697	39.3	1731	54.7	0.8	2.0	1730.8	54.7
GG24	86	53	0.62	2.1806	0.04820	0.19635	0.0027	0.08072	0.0017	1175	30.8	1156	29.2	1215	81.8	1.7	4.9	1214.7	81.8
GG25	159	65	0.41	2.1782	0.04223	0.19940	0.0027	0.07940	0.0014	1174	27.0	1172	28.8	1182	70.3	0.2	0.8	1182.1	70.3
GG26	77	28	0.36	2.0205	0.04670	0.19159	0.0027	0.07665	0.0017	1122	31.4	1130	28.8	1112	87.3	-0.7	-1.6	1112.2	87.3
GG27	120	106	0.88	4.1414	0.07631	0.29014	0.0039	0.10375	0.0018	1663	30.1	1642	38.9	1692	61.7	1.2	3.0	1692.3	61.7
GG28	675	100	0.15	16.9573	0.26985	0.57089	0.0074	0.21590	0.0030	2932	30.5	2912	61.1	2950	44.5	0.7	1.3	2950.4	44.5
GG29	216	147	0.68	2.9063	0.05235	0.23785	0.0032	0.08882	0.0015	1384	27.2	1376	32.9	1400	62.1	0.6	1.8	1400.2	62.1
GG30	363	119	0.33	2.9016	0.04959	0.23797	0.0031	0.08863	0.0014	1382	25.8	1376	32.6	1396	58.0	0.5	1.4	1396.1	58.0
GG31	44	36	0.82	1.9001	0.05414	0.17821	0.0026	0.07750	0.0022	1081	37.9	1057	28.6	1134	109.6	2.3	6.8	1057.2	28.6
GG32	639	90	0.14	3.9868	0.06560	0.28028	0.0037	0.10339	0.0015	1632	26.7	1593	36.9	1686	53.2	2.4	5.5	1685.9	53.2
GG33	210	128	0.61	0.9020	0.02006	0.10616	0.0014	0.06176	0.0013	653	21.4	650	16.8	666	89.3	0.4	2.3	650.4	16.8

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
GG34	618	337	0.55	12.2984	0.19743	0.49150	0.0064	0.18188	0.0026	2627	30.1	2577	55.4	2670	46.2	1.9	3.5	2670.1	46.2
GG35	188	138	0.73	13.7682	0.22695	0.52630	0.0069	0.19015	0.0028	2734	31.2	2726	58.6	2744	47.6	0.3	0.6	2743.5	47.6
GG36	112	59	0.53	3.1280	0.06193	0.24952	0.0034	0.09112	0.0017	1440	30.5	1436	34.9	1449	69.5	0.3	0.9	1449.0	69.5
GG37	190	145	0.76	1.6993	0.03356	0.16925	0.0023	0.07298	0.0013	1008	25.3	1008	25.0	1013	73.7	0.0	0.5	1008.0	25.0
GG38	150	70	0.46	1.7552	0.03669	0.17354	0.0024	0.07352	0.0015	1029	27.0	1032	25.8	1028	78.7	-0.2	-0.3	1031.6	25.8
GG40	181	275	1.52	13.5102	0.22375	0.52651	0.0069	0.18651	0.0027	2716	31.3	2727	58.6	2712	48.1	-0.4	-0.6	2711.7	48.1
GG41	541	88	0.16	4.2869	0.07350	0.29139	0.0038	0.10693	0.0017	1691	28.2	1649	38.4	1748	55.7	2.6	5.7	1747.8	55.7
GG44	141	166	1.18	13.5023	0.22709	0.52671	0.0070	0.18633	0.0028	2715	31.8	2728	58.9	2710	49.1	-0.4	-0.6	2710.1	49.1
GG45	58	28	0.48	1.8589	0.04951	0.17984	0.0026	0.07513	0.0020	1067	35.2	1066	28.3	1072	102.9	0.0	0.6	1066.1	28.3
GG46	338	308	0.91	0.0602	0.00319	0.00942	0.0002	0.04643	0.0025	59	6.1	60	2.0	20	247.5	-1.8	-200.5	60.4	2.0
GG47	335	98	0.29	1.8936	0.03464	0.18077	0.0024	0.07614	0.0013	1079	24.3	1071	26.1	1099	66.2	0.7	2.5	1071.2	26.1
GG48	357	165	0.46	3.1596	0.05443	0.25142	0.0033	0.09134	0.0014	1447	26.6	1446	34.1	1454	58.3	0.1	0.5	1453.7	58.3
GG49	263	207	0.79	4.5481	0.07825	0.30466	0.0040	0.10851	0.0017	1740	28.6	1714	39.7	1775	56.0	1.5	3.4	1774.5	56.0
GG50	150	150	1.00	3.4380	0.07056	0.25583	0.0035	0.09768	0.0019	1513	32.3	1469	36.0	1580	71.5	3.0	7.1	1580.3	71.5
GG51	91	31	0.34	12.8433	0.22281	0.49734	0.0067	0.18771	0.0029	2668	32.7	2602	57.3	2722	51.2	2.5	4.4	2722.2	51.2
GG54	470	260	0.55	4.6673	0.07841	0.30997	0.0041	0.10944	0.0016	1761	28.1	1741	40.0	1790	54.1	1.2	2.8	1790.1	54.1
GG55	100	71	0.71	1.9005	0.04337	0.18290	0.0025	0.07553	0.0017	1081	30.4	1083	27.5	1083	86.4	-0.1	0.0	1082.8	27.5
GG56	289	155	0.54	1.7122	0.03235	0.17037	0.0023	0.07305	0.0013	1013	24.2	1014	25.0	1015	69.8	-0.1	0.1	1014.2	25.0
GG58	255	168	0.66	0.6524	0.01700	0.07602	0.0011	0.06238	0.0016	510	20.9	472	12.8	687	106.5	8.0	31.3	472.3	12.8
GG59	241	181	0.75	3.3476	0.05970	0.26248	0.0035	0.09270	0.0015	1492	27.9	1503	35.5	1482	61.0	-0.7	-1.4	1481.7	61.0
GG60	261	241	0.92	0.0519	0.00327	0.00782	0.0001	0.04826	0.0031	51	6.3	50	1.8	112	287.7	2.4	55.1	50.2	1.8
GG61	238	121	0.51	4.3019	0.07552	0.30116	0.0040	0.10383	0.0017	1694	28.9	1697	39.4	1694	58.0	-0.2	-0.2	1693.7	58.0
GG62	431	248	0.58	0.1008	0.00371	0.01489	0.0002	0.04918	0.0018	98	6.8	95	2.8	157	167.5	2.3	39.1	95.3	2.8
GG63	330	403	1.22	11.4291	0.19019	0.48487	0.0064	0.17133	0.0025	2559	31.1	2548	55.2	2571	49.0	0.4	0.9	2570.7	49.0
GG64	157	170	1.08	13.7043	0.23216	0.53110	0.0070	0.18756	0.0028	2730	32.1	2746	59.1	2721	49.6	-0.6	-0.9	2720.9	49.6
GG66	3873	2538	0.66	0.0327	0.00087	0.00504	0.0001	0.04714	0.0012	33	1.7	32	0.9	56	122.7	0.9	42.2	32.4	0.9
GG67	133	76	0.57	2.6510	0.05343	0.22655	0.0031	0.08505	0.0016	1315	29.7	1316	32.2	1317	72.5	-0.1	0.0	1316.7	72.5
GG68	68	70	1.02	1.8597	0.04808	0.17705	0.0025	0.07635	0.0019	1067	34.1	1051	27.6	1104	99.1	1.5	4.8	1050.9	27.6
GG69	569	151	0.27	1.8250	0.03208	0.17846	0.0024	0.07433	0.0012	1055	23.1	1059	25.7	1051	63.4	-0.4	-0.8	1058.6	25.7
GG70	677	484	0.71	2.5365	0.04356	0.21378	0.0028	0.08624	0.0013	1283	25.0	1249	29.8	1344	59.0	2.7	7.0	1343.6	59.0
GG71	314	202	0.64	4.7334	0.08168	0.31926	0.0042	0.10776	0.0017	1773	28.9	1786	41.0	1762	56.2	-0.7	-1.4	1761.9	56.2
GG72	118	63	0.54	2.6950	0.05558	0.23061	0.0031	0.08495	0.0017	1327	30.5	1338	32.8	1314	74.6	-0.8	-1.8	1314.2	74.6
GG73	177	95	0.53	1.8236	0.03733	0.17927	0.0024	0.07394	0.0014	1054	26.8	1063	26.4	1040	76.7	-0.8	-2.2	1063.0	26.4
GG74	261	99	0.38	2.1083	0.03998	0.19568	0.0026	0.07831	0.0014	1152	26.1	1152	28.1	1155	68.7	-0.1	0.2	1154.8	68.7

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
GG75	121	88	0.73	2.1484	0.04603	0.19700	0.0027	0.07927	0.0016	1165	29.7	1159	28.9	1179	79.3	0.5	1.7	1178.9	79.3
GG76	503	304	0.60	10.8759	0.18207	0.45625	0.0060	0.17327	0.0026	2513	31.1	2423	52.9	2590	49.4	3.7	6.4	2589.5	49.4
GG77	675	307	0.46	4.2644	0.07245	0.29717	0.0039	0.10431	0.0016	1687	27.9	1677	38.7	1702	55.5	0.6	1.5	1702.1	55.5
GG78	156	116	0.74	1.9365	0.04071	0.18585	0.0025	0.07574	0.0015	1094	28.2	1099	27.4	1088	78.6	-0.5	-1.0	1098.9	27.4
GG80	414	408	0.98	5.4702	0.09384	0.34189	0.0045	0.11630	0.0018	1896	29.5	1896	43.1	1900	54.9	0.0	0.2	1900.1	54.9
GG81	133	64	0.48	1.5819	0.03594	0.15476	0.0021	0.07430	0.0016	963	28.3	928	23.8	1050	86.5	3.8	11.6	927.6	23.8
GG82	58	36	0.62	1.8465	0.05060	0.17970	0.0026	0.07469	0.0020	1062	36.1	1065	28.3	1060	106.3	-0.3	-0.5	1065.3	28.3
GG83	837	881	1.05	0.0781	0.00256	0.01113	0.0002	0.05100	0.0017	76	4.8	71	2.1	241	146.4	7.0	70.3	71.4	2.1
GG84	82	37	0.45	0.2440	0.01317	0.03401	0.0006	0.05213	0.0029	222	21.5	216	7.4	291	240.2	2.8	26.0	215.6	7.4
GG85	250	6	0.02	3.1172	0.05754	0.24576	0.0033	0.09219	0.0016	1437	28.4	1417	33.8	1471	63.9	1.4	3.7	1471.2	63.9
GG86	366	203	0.56	3.2015	0.05732	0.25512	0.0034	0.09121	0.0015	1458	27.7	1465	34.6	1451	61.4	-0.5	-1.0	1450.9	61.4
GG87	362	302	0.83	12.8736	0.21850	0.52456	0.0069	0.17838	0.0027	2670	32.0	2719	58.2	2638	50.1	-1.8	-3.1	2637.9	50.1
GG88	249	79	0.32	2.2096	0.04502	0.20094	0.0027	0.07993	0.0015	1184	28.5	1180	29.1	1195	74.6	0.3	1.2	1195.2	74.6
GG89	185	258	1.39	13.3685	0.23105	0.52853	0.0070	0.18385	0.0029	2706	32.7	2735	58.9	2688	51.1	-1.1	-1.8	2687.9	51.1
GG90	1250	560	0.45	0.0433	0.00153	0.00674	0.0001	0.04669	0.0016	43	3.0	43	1.3	33	164.1	-0.7	-29.6	43.3	1.3
GG91	667	294	0.44	0.0263	0.00154	0.00389	0.0001	0.04911	0.0029	26	3.0	25	0.9	153	266.2	5.2	83.7	25.0	0.9
GG92	28	10	0.37	1.7851	0.06971	0.17258	0.0028	0.07518	0.0030	1040	50.8	1026	31.2	1073	154.0	1.3	4.4	1026.3	31.2
GG93	193	179	0.93	7.0237	0.12504	0.38202	0.0051	0.13364	0.0022	2114	31.6	2086	47.2	2146	56.1	1.4	2.8	2146.3	56.1
GG94	526	357	0.68	0.1049	0.00366	0.01548	0.0002	0.04924	0.0017	101	6.7	99	2.9	159	158.4	2.3	37.9	99.0	2.9
GG95	129	85	0.65	1.8985	0.04172	0.18435	0.0025	0.07485	0.0016	1081	29.2	1091	27.4	1065	83.0	-0.9	-2.5	1090.7	27.4
GG96	214	125	0.58	2.1165	0.04204	0.19428	0.0026	0.07919	0.0015	1154	27.4	1145	28.1	1177	72.5	0.8	2.7	1176.8	72.5
GG97	195	67	0.35	2.0414	0.04111	0.19415	0.0026	0.07642	0.0014	1129	27.4	1144	28.1	1106	74.5	-1.3	-3.4	1106.2	74.5
GG98	579	244	0.42	2.9429	0.05201	0.23790	0.0031	0.08992	0.0014	1393	26.8	1376	32.6	1424	60.6	1.3	3.4	1423.6	60.6
GG99	126	112	0.88	2.4568	0.05563	0.21383	0.0030	0.08351	0.0018	1259	32.7	1249	31.4	1281	83.6	0.8	2.5	1281.0	83.6
GG100	132	55	0.42	0.2440	0.01096	0.03538	0.0006	0.05013	0.0023	222	17.9	224	7.0	201	203.2	-1.1	-11.5	224.1	7.0
GG105	977	183	0.19	1.7199	0.03055	0.16071	0.0021	0.07779	0.0013	1016	22.8	961	23.4	1141	63.5	5.8	15.8	960.7	23.4
GG106	140	103	0.73	10.4641	0.18763	0.46196	0.0062	0.16464	0.0027	2477	33.2	2448	54.2	2504	54.6	1.2	2.2	2503.9	54.6
GG107	126	123	0.98	1.9527	0.04310	0.18850	0.0026	0.07529	0.0016	1099	29.6	1113	27.9	1076	83.3	-1.2	-3.4	1076.4	83.3
GG108	190	163	0.86	0.1800	0.00778	0.02574	0.0004	0.05084	0.0022	168	13.4	164	5.1	234	194.2	2.6	29.9	163.8	5.1
GG109	172	86	0.50	2.0567	0.04254	0.19181	0.0026	0.07794	0.0015	1135	28.3	1131	28.0	1145	76.5	0.3	1.2	1145.3	76.5
GG110	110	44	0.40	2.0564	0.04635	0.19243	0.0026	0.07768	0.0017	1134	30.8	1135	28.6	1139	84.6	0.0	0.4	1138.6	84.6
GG111	180	92	0.51	2.4462	0.04900	0.21429	0.0029	0.08297	0.0016	1256	28.9	1252	30.6	1269	72.2	0.4	1.3	1268.6	72.2
GG112	195	160	0.82	4.2003	0.07880	0.29608	0.0039	0.10312	0.0018	1674	30.8	1672	39.2	1681	63.3	0.1	0.5	1680.9	63.3
GG113	144	98	0.68	1.9072	0.04124	0.18266	0.0025	0.07589	0.0016	1084	28.8	1082	27.1	1092	81.2	0.2	1.0	1081.5	27.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
GG115	365	88	0.24	3.5670	0.06455	0.27032	0.0036	0.09591	0.0016	1542	28.7	1542	36.2	1546	61.5	0.0	0.2	1546.0	61.5
GG116	355	177	0.50	6.1831	0.10940	0.36319	0.0048	0.12374	0.0020	2002	30.9	1997	45.2	2011	56.5	0.2	0.7	2010.9	56.5
GG117	121	51	0.42	2.6703	0.05620	0.22546	0.0031	0.08608	0.0017	1320	31.1	1311	32.2	1340	76.1	0.7	2.2	1340.0	76.1
GG118	251	98	0.39	1.7809	0.03557	0.17605	0.0024	0.07353	0.0014	1039	26.0	1045	25.8	1029	74.6	-0.7	-1.6	1045.4	25.8
GG119	485	227	0.47	4.2518	0.07559	0.29843	0.0039	0.10356	0.0017	1684	29.2	1684	38.9	1689	59.1	0.0	0.3	1688.8	59.1
GG120	232	154	0.66	4.3146	0.07949	0.29957	0.0040	0.10468	0.0018	1696	30.4	1689	39.4	1709	61.6	0.4	1.1	1708.8	61.6
GG122	535	295	0.55	0.4214	0.00934	0.05695	0.0008	0.05378	0.0011	357	13.3	357	9.3	362	93.9	0.0	1.3	357.1	9.3
GG123	246	77	0.31	0.1864	0.00717	0.02613	0.0004	0.05184	0.0020	174	12.3	166	5.0	278	171.3	4.3	40.3	166.3	5.0
GG124	114	68	0.60	5.2185	0.10264	0.33205	0.0045	0.11423	0.0021	1856	33.5	1848	43.4	1868	65.6	0.4	1.0	1867.8	65.6
GG125	108	90	0.83	3.1522	0.06646	0.24900	0.0034	0.09201	0.0018	1446	32.5	1433	35.0	1468	75.2	0.9	2.3	1467.6	75.2
GG126	203	117	0.58	4.5135	0.08441	0.30478	0.0041	0.10764	0.0019	1734	31.1	1715	40.0	1760	62.4	1.1	2.5	1759.8	62.4
GG127	375	251	0.67	4.4774	0.08157	0.30053	0.0040	0.10829	0.0018	1727	30.2	1694	39.4	1771	60.4	1.9	4.3	1770.7	60.4
GG128	238	93	0.39	3.1379	0.06008	0.24986	0.0033	0.09128	0.0016	1442	29.5	1438	34.3	1452	66.8	0.3	1.0	1452.3	66.8
GG129	144	53	0.37	0.1226	0.00709	0.01735	0.0003	0.05136	0.0030	117	12.8	111	3.9	257	258.2	5.9	56.9	110.9	3.9
GG130	387	89	0.23	1.8328	0.03509	0.17769	0.0024	0.07497	0.0013	1057	25.2	1054	25.8	1068	70.5	0.3	1.2	1054.3	25.8
GG131	67	49	0.73	4.1465	0.09039	0.29511	0.0041	0.10213	0.0021	1664	35.7	1667	40.6	1663	76.0	-0.2	-0.2	1663.1	76.0
GG132	741	340	0.46	0.1908	0.00486	0.02764	0.0004	0.05017	0.0012	177	8.3	176	4.7	203	112.6	0.9	13.2	175.8	4.7
GG133	95	56	0.59	3.1245	0.06787	0.24866	0.0034	0.09133	0.0019	1439	33.4	1432	35.2	1453	78.0	0.5	1.5	1453.3	78.0
GG134	189	79	0.42	2.1650	0.04477	0.19722	0.0027	0.07979	0.0016	1170	28.7	1160	28.6	1192	76.0	0.8	2.6	1191.8	76.0
GG135	1070	409	0.38	13.2411	0.23386	0.52623	0.0069	0.18289	0.0029	2697	33.3	2726	58.4	2679	52.6	-1.0	-1.7	2679.2	52.6
GG137	672	368	0.55	1.7136	0.03185	0.16800	0.0022	0.07414	0.0013	1014	23.8	1001	24.4	1045	68.2	1.2	4.2	1001.1	24.4
GG138	359	575	1.60	0.2401	0.00724	0.03377	0.0005	0.05168	0.0015	219	11.9	214	6.0	271	133.4	2.1	21.1	214.1	6.0
GG139	159	117	0.74	13.1453	0.23877	0.51721	0.0069	0.18473	0.0031	2690	34.3	2687	58.3	2696	54.5	0.1	0.3	2695.8	54.5
GG140	1695	830	0.49	0.0271	0.00100	0.00389	0.0001	0.05058	0.0019	27	2.0	25	0.7	222	167.0	8.4	88.7	25.0	0.7
GG142	807	259	0.32	4.3616	0.07845	0.29685	0.0039	0.10679	0.0018	1705	29.7	1676	38.8	1745	59.4	1.8	4.0	1745.4	59.4
GG144	62	44	0.71	1.9260	0.05329	0.18255	0.0026	0.07669	0.0021	1090	37.0	1081	28.8	1113	106.7	0.9	2.9	1080.9	28.8
GG146	53	54	1.01	3.8378	0.08908	0.27926	0.0039	0.09989	0.0022	1601	37.4	1588	39.5	1622	82.1	0.8	2.1	1622.0	82.1
GG147	241	166	0.69	4.4663	0.08425	0.30353	0.0040	0.10695	0.0019	1725	31.3	1709	39.9	1748	63.1	0.9	2.2	1748.1	63.1
GG148	331	205	0.62	0.1982	0.00647	0.02898	0.0004	0.04970	0.0016	184	11.0	184	5.2	181	147.4	-0.3	-1.7	184.2	5.2
GG149	451	182	0.40	2.0872	0.04003	0.19592	0.0026	0.07743	0.0014	1145	26.3	1153	28.0	1132	70.0	-0.8	-1.9	1132.4	70.0
GG150	475	236	0.50	0.0760	0.00316	0.01180	0.0002	0.04680	0.0020	74	6.0	76	2.3	39	193.9	-1.6	-95.3	75.6	2.3
GG151	1485	698	0.47	0.0953	0.00244	0.01329	0.0002	0.05213	0.0013	92	4.5	85	2.3	291	111.7	8.6	70.8	85.1	2.3
GG153	132	100	0.76	4.2405	0.08508	0.29937	0.0040	0.10296	0.0019	1682	33.0	1688	40.0	1678	68.8	-0.4	-0.6	1678.1	68.8
GG154	73	72	0.99	1.6965	0.06691	0.16920	0.0028	0.07288	0.0029	1007	50.4	1008	30.6	1011	157.0	0.0	0.3	1007.7	30.6

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
GG156	26	15	0.58	2.9671	0.09239	0.24483	0.0038	0.08809	0.0027	1399	47.3	1412	38.9	1384	116.5	-0.9	-2.0	1384.4	116.5
GG157	66	52	0.78	1.7912	0.04842	0.17739	0.0025	0.07340	0.0019	1042	35.2	1053	27.8	1025	105.4	-1.0	-2.7	1052.7	27.8
GG158	197	73	0.37	5.2371	0.09964	0.32727	0.0044	0.11631	0.0021	1859	32.4	1825	42.3	1900	62.8	1.8	4.0	1900.3	62.8
GG159	90	30	0.34	0.1604	0.01029	0.02363	0.0004	0.04931	0.0032	151	18.0	151	5.5	163	290.5	0.3	7.5	150.6	5.5
GG160	307	99	0.32	1.8726	0.03749	0.18075	0.0024	0.07530	0.0014	1072	26.5	1071	26.3	1077	74.4	0.0	0.5	1071.1	26.3
GG161	144	113	0.78	4.9634	0.09735	0.32341	0.0043	0.11155	0.0020	1813	33.2	1806	42.2	1825	65.8	0.4	1.0	1824.8	65.8
GG162	103	43	0.41	13.4444	0.25394	0.52558	0.0070	0.18593	0.0033	2711	35.7	2723	59.5	2707	57.2	-0.4	-0.6	2706.5	57.2
Sample J2																			
G27	607	243	0.40	0.0268	0.00164	0.00416	0.0001	0.04685	0.0029	27	3.2	27	0.9	42	282.1	0.4	35.4	26.8	0.9
G120	305	224	0.73	0.0333	0.00328	0.00481	0.0001	0.05027	0.0050	33	6.4	31	1.5	208	435.1	7.4	85.1	30.9	1.5
G142	557	450	0.81	0.0323	0.00191	0.00481	0.0001	0.04881	0.0029	32	3.7	31	1.1	139	268.1	4.2	77.6	31.0	1.1
G150	310	216	0.70	0.0366	0.00334	0.00516	0.0001	0.05161	0.0048	37	6.5	33	1.5	268	397.6	9.9	87.6	33.2	1.5
G64	367	276	0.75	0.0487	0.00366	0.00703	0.0002	0.05035	0.0038	48	7.1	45	1.9	211	335.6	6.9	78.6	45.2	1.9
G18	604	489	0.81	0.0582	0.00217	0.00911	0.0001	0.04639	0.0017	57	4.2	59	1.7	18	173.2	-1.9	-223.2	58.5	1.7
G108	1489	554	0.37	0.0630	0.00221	0.00931	0.0001	0.04922	0.0017	62	4.2	60	1.8	158	158.3	4.0	62.3	59.7	1.8
G25	764	350	0.46	0.0664	0.00223	0.01026	0.0002	0.04700	0.0016	65	4.2	66	1.9	49	154.9	-0.9	-34.3	65.8	1.9
G128	852	758	0.89	0.0669	0.00237	0.01032	0.0002	0.04708	0.0017	66	4.5	66	2.0	53	163.9	-0.8	-24.9	66.2	2.0
G33	270	106	0.39	0.0697	0.00387	0.01046	0.0002	0.04845	0.0027	68	7.4	67	2.3	121	253.6	1.9	44.6	67.1	2.3
G95	896	519	0.58	0.0745	0.00244	0.01134	0.0002	0.04776	0.0015	73	4.6	73	2.1	87	150.9	0.3	16.1	72.7	2.1
G106	395	178	0.45	0.0766	0.00425	0.01140	0.0002	0.04887	0.0027	75	8.0	73	2.6	142	252.5	2.6	48.3	73.1	2.6
G19	155	77	0.49	0.0770	0.00521	0.01179	0.0002	0.04745	0.0033	75	9.8	76	2.7	71	311.4	-0.3	-5.7	75.5	2.7
G54	233	129	0.56	0.0819	0.00595	0.01198	0.0002	0.04970	0.0037	80	11.2	77	3.1	181	326.8	4.0	57.6	76.8	3.1
G145	295	210	0.71	0.0801	0.00447	0.01234	0.0002	0.04718	0.0027	78	8.4	79	2.7	58	258.3	-1.1	-37.1	79.1	2.7
G136	386	203	0.53	0.0820	0.00402	0.01236	0.0002	0.04820	0.0024	80	7.5	79	2.6	109	224.4	1.0	27.3	79.2	2.6
G111	200	68	0.34	0.0845	0.00486	0.01287	0.0002	0.04771	0.0028	82	9.1	82	2.9	84	266.1	-0.1	2.0	82.4	2.9
G32	117	121	1.03	0.0889	0.00660	0.01349	0.0003	0.04787	0.0036	86	12.3	86	3.4	92	339.9	0.0	5.9	86.4	3.4
G38	1648	166	0.10	0.0963	0.00261	0.01349	0.0002	0.05187	0.0014	93	4.8	86	2.4	280	118.0	8.0	69.1	86.4	2.4
G71	1382	663	0.48	0.0910	0.00230	0.01393	0.0002	0.04747	0.0012	88	4.3	89	2.5	72	114.3	-0.9	-23.9	89.2	2.5
G30	276	134	0.49	0.0924	0.00434	0.01441	0.0002	0.04662	0.0022	90	8.1	92	2.9	30	218.1	-2.6	-208.4	92.2	2.9
G89	371	309	0.83	0.2106	0.00638	0.02870	0.0004	0.05333	0.0016	194	10.7	182	5.3	343	131.4	6.4	46.8	182.4	5.3
G8	299	128	0.43	0.2034	0.00707	0.02872	0.0004	0.05147	0.0018	188	11.9	183	5.4	262	154.5	3.0	30.3	182.5	5.4
G141	712	407	0.57	0.2008	0.00511	0.02919	0.0004	0.05001	0.0012	186	8.6	186	5.2	195	111.0	0.2	5.0	185.5	5.2
G90	532	377	0.71	0.1981	0.00540	0.02986	0.0004	0.04824	0.0013	184	9.2	190	5.3	111	122.1	-3.2	-71.0	189.6	5.3

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc	%disc (7/6)	Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s			[Ma]	± 2s
G114	345	46	0.13	0.2293	0.00702	0.03267	0.0005	0.05102	0.0015	210	11.6	207	6.0	242	135.0	1.2	14.2	207.2	6.0
G110	1367	515	0.38	0.2367	0.00481	0.03345	0.0005	0.05143	0.0010	216	7.9	212	5.7	260	84.4	1.7	18.5	212.1	5.7
G93	1078	654	0.61	0.3661	0.00793	0.04751	0.0007	0.05600	0.0011	317	11.8	299	8.1	452	88.1	5.8	33.8	299.2	8.1
G43	873	749	0.86	0.3869	0.00712	0.05295	0.0007	0.05311	0.0009	332	10.4	333	8.7	334	74.0	-0.2	0.3	332.6	8.7
G52	1400	15	0.01	0.3912	0.00683	0.05373	0.0007	0.05292	0.0008	335	10.0	337	8.8	326	69.1	-0.7	-3.7	337.4	8.8
G15	283	174	0.61	0.5403	0.01139	0.06787	0.0009	0.05786	0.0011	439	15.0	423	11.2	524	85.7	3.6	19.2	423.3	11.2
G67	188	145	0.77	0.5283	0.01504	0.06857	0.0010	0.05600	0.0016	431	20.0	428	12.0	452	120.7	0.7	5.5	427.5	12.0
G2	809	42	0.05	0.5413	0.00897	0.07034	0.0009	0.05594	0.0008	439	11.8	438	11.3	450	62.9	0.3	2.5	438.2	11.3
G101	874	535	0.61	1.1974	0.02305	0.12865	0.0018	0.06765	0.0012	799	21.3	780	20.1	858	71.6	2.5	9.1	780.2	20.1
G13	1048	139	0.13	1.5820	0.02388	0.15908	0.0021	0.07228	0.0009	963	18.8	952	23.4	994	51.0	1.2	4.3	951.6	23.4
G75	157	54	0.34	1.6162	0.03276	0.16520	0.0023	0.07111	0.0013	977	25.4	986	25.3	961	75.5	-0.9	-2.6	985.6	25.3
G99	211	89	0.42	1.6632	0.03346	0.16894	0.0023	0.07156	0.0013	995	25.5	1006	25.8	974	74.4	-1.2	-3.4	1006.3	25.8
G31	74	38	0.52	1.7131	0.04850	0.17059	0.0025	0.07299	0.0020	1014	36.3	1015	28.0	1014	110.3	-0.2	-0.2	1015.4	28.0
G82	151	47	0.31	1.7399	0.03546	0.17397	0.0024	0.07270	0.0014	1023	26.3	1034	26.5	1006	75.4	-1.0	-2.8	1034.0	26.5
G12	313	134	0.43	1.7799	0.02925	0.17493	0.0023	0.07395	0.0011	1038	21.4	1039	25.6	1040	57.2	-0.1	0.1	1039.2	25.6
G112	63	52	0.82	1.8961	0.05219	0.18621	0.0028	0.07402	0.0020	1080	36.6	1101	30.1	1042	106.0	-1.9	-5.7	1041.9	106.0
G29	344	174	0.51	1.7770	0.02970	0.17614	0.0024	0.07333	0.0011	1037	21.7	1046	25.9	1023	58.6	-0.8	-2.2	1045.9	25.9
G5	736	63	0.09	1.8276	0.02764	0.17777	0.0024	0.07472	0.0010	1055	19.9	1055	25.7	1061	50.7	0.1	0.6	1054.8	25.7
G137	360	133	0.37	1.8048	0.03749	0.18042	0.0025	0.07271	0.0014	1047	27.1	1069	27.5	1006	76.6	-2.1	-6.3	1069.3	27.5
G41	211	198	0.94	1.8902	0.03872	0.18047	0.0025	0.07613	0.0015	1078	27.2	1070	27.3	1098	75.2	0.8	2.6	1069.6	27.3
G127	126	65	0.51	1.9133	0.04255	0.18117	0.0026	0.07677	0.0016	1086	29.7	1073	28.0	1115	82.0	1.2	3.8	1073.3	28.0
G6	678	270	0.40	1.9247	0.02919	0.18469	0.0024	0.07574	0.0010	1090	20.3	1093	26.6	1088	50.7	-0.3	-0.4	1092.5	26.6
G7	460	287	0.62	1.9596	0.03052	0.18723	0.0025	0.07607	0.0010	1102	20.9	1106	27.0	1097	52.6	-0.4	-0.9	1096.9	52.6
G81	130	91	0.70	1.9426	0.04012	0.18593	0.0026	0.07594	0.0015	1096	27.7	1099	28.1	1094	75.7	-0.3	-0.5	1099.3	28.1
G116	218	98	0.45	1.9721	0.03882	0.18692	0.0026	0.07669	0.0014	1106	26.5	1105	28.1	1113	70.7	0.1	0.8	1113.2	70.7
G60	300	116	0.39	2.0428	0.03564	0.19235	0.0026	0.07719	0.0012	1130	23.8	1134	28.1	1126	60.9	-0.4	-0.7	1126.2	60.9
G94	145	57	0.40	2.0992	0.04309	0.19667	0.0027	0.07758	0.0015	1149	28.2	1157	29.5	1136	74.5	-0.8	-1.9	1136.3	74.5
G107	249	110	0.44	2.1192	0.04049	0.19791	0.0027	0.07784	0.0013	1155	26.4	1164	29.3	1143	67.9	-0.8	-1.9	1142.7	67.9
G34	132	71	0.54	2.1087	0.04072	0.19674	0.0027	0.07790	0.0014	1152	26.6	1158	29.1	1144	69.5	-0.5	-1.2	1144.4	69.5
G57	97	46	0.47	2.3280	0.04760	0.21334	0.0030	0.07932	0.0015	1221	29.0	1247	31.5	1180	74.0	-2.1	-5.6	1180.0	74.0
G86	36	15	0.42	2.2224	0.06800	0.20279	0.0031	0.07966	0.0024	1188	42.9	1190	33.6	1189	116.8	-0.2	-0.1	1188.6	116.8
G24	348	124	0.36	2.2592	0.03649	0.20490	0.0027	0.08014	0.0011	1200	22.7	1202	29.3	1201	54.5	-0.2	-0.1	1200.5	54.5
G144	286	132	0.46	2.2965	0.04476	0.20792	0.0029	0.08028	0.0014	1211	27.6	1218	30.7	1204	68.5	-0.5	-1.1	1204.0	68.5
G125	51	31	0.60	2.3879	0.06081	0.21489	0.0032	0.08077	0.0020	1239	36.4	1255	33.4	1216	94.7	-1.3	-3.2	1216.0	94.7

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G138	699	363	0.52	2.4798	0.04479	0.21936	0.0030	0.08217	0.0013	1266	26.1	1279	31.6	1250	61.3	-1.0	-2.3	1249.7	61.3
G122	105	88	0.84	2.2595	0.04998	0.19974	0.0028	0.08223	0.0017	1200	31.1	1174	30.4	1251	79.8	2.2	6.2	1251.0	79.8
G48	438	199	0.45	2.7555	0.04637	0.23817	0.0032	0.08409	0.0012	1344	25.1	1377	33.4	1295	56.7	-2.4	-6.4	1294.6	56.7
G23	99	64	0.64	2.8442	0.05354	0.24048	0.0033	0.08597	0.0015	1367	28.3	1389	34.3	1337	65.7	-1.6	-3.9	1337.4	65.7
G44	74	40	0.54	2.9462	0.06073	0.24063	0.0034	0.08899	0.0017	1394	31.3	1390	35.0	1404	72.5	0.3	1.0	1404.0	72.5
G119	91	45	0.50	3.0215	0.06442	0.24450	0.0035	0.08983	0.0018	1413	32.5	1410	35.8	1422	74.8	0.2	0.8	1421.9	74.8
G87	285	278	0.97	3.0338	0.05182	0.24515	0.0033	0.08995	0.0013	1416	26.1	1413	34.4	1425	56.4	0.2	0.8	1424.5	56.4
G83	125	89	0.71	2.9431	0.05778	0.23756	0.0033	0.09005	0.0016	1393	29.8	1374	34.4	1427	67.9	1.4	3.7	1426.6	67.9
G40	364	244	0.67	3.2633	0.05172	0.26218	0.0035	0.09047	0.0012	1472	24.6	1501	35.8	1435	51.2	-1.9	-4.6	1435.3	51.2
G68	199	89	0.45	3.2268	0.05665	0.25762	0.0035	0.09104	0.0014	1464	27.2	1478	35.9	1447	58.7	-1.0	-2.1	1447.4	58.7
G11	348	234	0.67	3.3420	0.05139	0.26554	0.0035	0.09148	0.0012	1491	24.0	1518	35.9	1456	49.1	-1.8	-4.2	1456.4	49.1
G109	122	104	0.85	3.3604	0.06703	0.26648	0.0037	0.09167	0.0017	1495	31.2	1523	37.9	1460	68.9	-1.8	-4.3	1460.4	68.9
G134	224	85	0.38	3.3355	0.06326	0.26408	0.0036	0.09181	0.0016	1489	29.6	1511	37.2	1463	64.2	-1.4	-3.2	1463.4	64.2
G50	211	279	1.32	3.3741	0.05737	0.26639	0.0036	0.09206	0.0014	1498	26.6	1523	36.7	1469	56.4	-1.6	-3.7	1468.6	56.4
G135	88	63	0.71	3.5906	0.08125	0.28253	0.0041	0.09238	0.0020	1548	35.9	1604	40.8	1475	79.9	-3.5	-8.7	1475.1	79.9
G3	155	161	1.04	3.4457	0.05604	0.27035	0.0036	0.09263	0.0013	1515	25.6	1543	36.7	1480	53.3	-1.8	-4.2	1480.3	53.3
G28	479	145	0.30	3.4510	0.05289	0.26899	0.0036	0.09325	0.0012	1516	24.1	1536	36.3	1493	48.4	-1.3	-2.9	1493.0	48.4
G63	157	111	0.71	3.4536	0.06151	0.26773	0.0037	0.09376	0.0015	1517	28.0	1529	37.2	1503	59.4	-0.8	-1.7	1503.4	59.4
G117	319	109	0.34	3.4611	0.06173	0.26816	0.0037	0.09382	0.0015	1518	28.1	1532	37.2	1505	58.9	-0.9	-1.8	1504.5	58.9
G97	303	154	0.51	3.4372	0.05938	0.26543	0.0036	0.09413	0.0014	1513	27.2	1518	36.7	1511	56.6	-0.3	-0.5	1510.7	56.6
G98	145	181	1.25	3.3573	0.06439	0.25711	0.0036	0.09492	0.0017	1495	30.0	1475	36.5	1526	64.9	1.3	3.4	1526.4	64.9
G37	521	86	0.17	3.6755	0.05666	0.28039	0.0037	0.09528	0.0012	1566	24.6	1593	37.6	1534	48.5	-1.7	-3.9	1533.5	48.5
G115	153	56	0.37	3.5284	0.06687	0.26247	0.0036	0.09772	0.0017	1534	30.0	1503	37.1	1581	63.2	2.1	5.0	1581.0	63.2
G92	596	401	0.67	4.0077	0.06586	0.29692	0.0040	0.09811	0.0014	1636	26.7	1676	39.8	1589	52.2	-2.4	-5.5	1588.5	52.2
G79	168	167	0.99	3.5606	0.06326	0.26254	0.0036	0.09858	0.0016	1541	28.2	1503	36.6	1597	58.4	2.5	5.9	1597.4	58.4
G1	107	95	0.89	4.0736	0.06736	0.29757	0.0040	0.09950	0.0014	1649	27.0	1679	39.7	1615	53.5	-1.8	-4.0	1614.7	53.5
G129	152	57	0.38	4.1340	0.07991	0.29936	0.0042	0.10038	0.0018	1661	31.6	1688	41.3	1631	64.3	-1.6	-3.5	1631.2	64.3
G133	90	80	0.89	4.0039	0.08360	0.28922	0.0041	0.10063	0.0019	1635	33.9	1638	40.9	1636	70.8	-0.2	-0.1	1635.8	70.8
G140	210	162	0.77	4.1098	0.07751	0.29594	0.0041	0.10095	0.0017	1656	30.8	1671	40.6	1642	62.0	-0.9	-1.8	1641.6	62.0
G61	154	96	0.62	4.3608	0.07547	0.30865	0.0042	0.10270	0.0016	1705	28.6	1734	41.4	1673	56.0	-1.7	-3.6	1673.4	56.0
G4	336	203	0.60	4.2578	0.06425	0.30109	0.0040	0.10278	0.0013	1685	24.8	1697	39.5	1675	46.5	-0.7	-1.3	1674.9	46.5
G96	114	80	0.70	4.4520	0.08320	0.31205	0.0043	0.10370	0.0018	1722	31.0	1751	42.4	1692	61.5	-1.6	-3.5	1691.5	61.5
G121	356	206	0.58	4.4002	0.07760	0.30747	0.0042	0.10403	0.0016	1712	29.2	1728	41.3	1697	56.5	-0.9	-1.8	1697.2	56.5
G123	178	110	0.62	4.4072	0.08177	0.30656	0.0042	0.10450	0.0017	1714	30.7	1724	41.7	1706	60.4	-0.6	-1.1	1705.6	60.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G35	160	79	0.49	4.5521	0.07559	0.31586	0.0043	0.10475	0.0015	1741	27.6	1770	41.8	1710	52.9	-1.6	-3.5	1710.0	52.9
G10	229	189	0.83	4.6452	0.07201	0.31880	0.0043	0.10590	0.0014	1757	25.9	1784	41.5	1730	48.0	-1.5	-3.1	1730.1	48.0
G146	41	38	0.92	4.5330	0.12366	0.30845	0.0048	0.10683	0.0028	1737	45.4	1733	47.1	1746	95.5	0.2	0.7	1746.0	95.5
G131	334	154	0.46	4.9596	0.08810	0.33405	0.0046	0.10792	0.0017	1813	30.0	1858	44.1	1765	56.3	-2.4	-5.3	1764.6	56.3
G47	221	68	0.31	4.9817	0.07992	0.33482	0.0045	0.10815	0.0015	1816	27.1	1862	43.4	1768	49.9	-2.4	-5.3	1768.3	49.9
G84	372	153	0.41	4.6911	0.07791	0.31495	0.0043	0.10827	0.0016	1766	27.8	1765	41.7	1770	52.1	0.0	0.3	1770.4	52.1
G42	487	193	0.40	4.9770	0.07669	0.33290	0.0044	0.10867	0.0014	1815	26.1	1852	42.9	1777	47.1	-2.0	-4.2	1777.1	47.1
G62	278	169	0.61	4.8139	0.07804	0.32161	0.0043	0.10880	0.0015	1787	27.3	1798	42.2	1779	50.5	-0.6	-1.0	1779.4	50.5
G16	284	158	0.56	5.0039	0.07632	0.33340	0.0044	0.10909	0.0014	1820	25.8	1855	42.8	1784	46.6	-1.9	-4.0	1784.2	46.6
G139	242	127	0.52	4.9455	0.09117	0.32830	0.0045	0.10950	0.0018	1810	31.1	1830	43.8	1791	59.1	-1.1	-2.2	1791.1	59.1
G103	719	187	0.26	4.8021	0.07975	0.31545	0.0043	0.11066	0.0016	1785	27.9	1768	41.7	1810	51.4	1.0	2.4	1810.2	51.4
G100	85	62	0.73	5.2265	0.10230	0.33972	0.0048	0.11183	0.0020	1857	33.4	1885	45.9	1829	64.2	-1.5	-3.1	1829.3	64.2
G126	181	268	1.48	5.3068	0.09747	0.34464	0.0048	0.11193	0.0018	1870	31.4	1909	45.5	1831	58.7	-2.0	-4.3	1830.9	58.7
G22	165	176	1.06	5.1717	0.08259	0.33554	0.0045	0.11203	0.0015	1848	27.2	1865	43.4	1833	49.4	-0.9	-1.8	1832.5	49.4
G118	114	159	1.40	5.1192	0.09692	0.33184	0.0046	0.11214	0.0019	1839	32.2	1847	44.6	1834	61.2	-0.4	-0.7	1834.3	61.2
G69	272	170	0.62	5.4131	0.08772	0.34611	0.0047	0.11368	0.0016	1887	27.8	1916	44.6	1859	49.8	-1.5	-3.1	1859.1	49.8
G20	358	120	0.34	5.3651	0.08086	0.34260	0.0046	0.11382	0.0014	1879	25.8	1899	43.7	1861	45.2	-1.0	-2.0	1861.3	45.2
G88	144	43	0.30	5.5598	0.09887	0.35385	0.0049	0.11421	0.0018	1910	30.6	1953	46.3	1867	56.5	-2.2	-4.6	1867.4	56.5
G14	271	344	1.27	5.5249	0.08419	0.34790	0.0046	0.11543	0.0015	1905	26.2	1925	44.2	1887	45.9	-1.0	-2.0	1886.6	45.9
G147	115	96	0.84	5.7095	0.11272	0.35353	0.0050	0.11740	0.0021	1933	34.1	1951	47.2	1917	63.6	-1.0	-1.8	1917.0	63.6
G132	252	125	0.50	6.0343	0.10817	0.36241	0.0050	0.12103	0.0019	1981	31.2	1994	47.0	1972	55.7	-0.6	-1.1	1971.5	55.7
G70	237	157	0.66	6.1053	0.09954	0.36130	0.0049	0.12283	0.0017	1991	28.4	1988	46.2	1998	49.4	0.1	0.5	1997.7	49.4
G26	152	81	0.54	7.0513	0.11158	0.40199	0.0054	0.12750	0.0017	2118	28.1	2178	49.6	2064	47.4	-2.8	-5.5	2063.7	47.4
G17	132	48	0.36	10.7264	0.16683	0.48099	0.0065	0.16209	0.0022	2500	28.9	2532	56.3	2478	44.4	-1.3	-2.2	2477.6	44.4
G73	200	123	0.61	10.2275	0.16875	0.45580	0.0062	0.16310	0.0023	2456	30.5	2421	55.0	2488	47.8	1.4	2.7	2488.1	47.8
G78	66	42	0.64	10.7944	0.19730	0.47341	0.0067	0.16574	0.0027	2506	34.0	2499	58.3	2515	54.9	0.3	0.7	2515.1	54.9
G102	71	42	0.59	12.1737	0.21800	0.48751	0.0068	0.18152	0.0029	2618	33.6	2560	58.9	2667	52.3	2.3	4.0	2666.8	52.3
G39	162	110	0.68	12.9951	0.20318	0.51875	0.0070	0.18208	0.0024	2679	29.5	2694	59.4	2672	43.7	-0.5	-0.8	2671.9	43.7
G74	121	12	0.10	13.2995	0.22166	0.52783	0.0072	0.18315	0.0027	2701	31.5	2732	61.0	2682	47.6	-1.1	-1.9	2681.6	47.6
G53	176	68	0.39	13.4252	0.20928	0.52755	0.0071	0.18497	0.0024	2710	29.5	2731	59.9	2698	43.2	-0.8	-1.2	2698.0	43.2
G113	619	144	0.23	13.4303	0.22252	0.52727	0.0071	0.18515	0.0026	2710	31.3	2730	60.1	2700	46.5	-0.7	-1.1	2699.6	46.5
G130	74	55	0.74	13.5866	0.24740	0.53192	0.0074	0.18567	0.0030	2721	34.4	2750	62.3	2704	52.9	-1.0	-1.7	2704.2	52.9
G36	80	44	0.55	13.8997	0.24188	0.53503	0.0075	0.18883	0.0029	2743	33.0	2763	63.0	2732	50.7	-0.7	-1.1	2732.0	50.7
G148	137	87	0.64	14.2217	0.26216	0.54343	0.0075	0.19023	0.0031	2765	35.0	2798	63.0	2744	53.3	-1.2	-2.0	2744.2	53.3

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G59	156	238	1.53	12.6603	0.21208	0.47783	0.0066	0.19259	0.0028	2655	31.5	2518	57.4	2764	47.8	5.4	8.9	2764.4	47.8
G143	147	76	0.52	14.2133	0.25600	0.53578	0.0074	0.19283	0.0031	2764	34.2	2766	62.0	2767	51.6	-0.1	0.0	2766.5	51.6
G85	230	238	1.03	15.3828	0.25014	0.55523	0.0075	0.20139	0.0028	2839	31.0	2847	62.5	2838	45.1	-0.3	-0.3	2837.5	45.1
G56	56	27	0.47	16.0826	0.28332	0.57372	0.0081	0.20376	0.0032	2882	33.7	2923	66.4	2857	50.8	-1.4	-2.3	2856.5	50.8
G45	161	112	0.69	16.5288	0.25108	0.56411	0.0076	0.21297	0.0027	2908	29.1	2884	62.2	2928	40.8	0.8	1.5	2928.3	40.8
G76	464	375	0.81	16.9353	0.26223	0.57602	0.0077	0.21371	0.0028	2931	29.7	2933	63.0	2934	41.6	0.0	0.0	2933.9	41.6
G104	165	289	1.75	17.3534	0.29189	0.57762	0.0079	0.21838	0.0032	2955	32.3	2939	64.5	2969	46.6	0.5	1.0	2968.8	46.6
Sample W1																			
G117	109	257	2.36	0.0199	0.00616	0.00300	0.0001	0.04818	0.0151	20	12.3	19	1.6	108	#####	3.6	82.1	19.3	1.6
G9	379	518	1.37	0.0246	0.00216	0.00384	0.0001	0.04663	0.0042	25	4.3	25	1.0	30	402.0	0.0	17.7	24.7	1.0
G5	283	177	0.62	0.0334	0.00265	0.00501	0.0001	0.04845	0.0039	33	5.2	32	1.3	122	357.7	3.7	73.5	32.2	1.3
G106	1868	1361	0.73	0.0639	0.00188	0.00922	0.0001	0.05038	0.0015	63	3.6	59	1.7	213	131.3	6.2	72.2	59.2	1.7
G129	468	103	0.22	0.0632	0.00317	0.01039	0.0002	0.04418	0.0022	62	6.0	67	2.1	0	37.5	-6.6	-66500.0	66.6	2.1
G105	521	295	0.57	0.0717	0.00366	0.01058	0.0002	0.04931	0.0025	70	6.9	68	2.3	162	232.0	3.7	58.3	67.8	2.3
G115	1509	388	0.26	0.0713	0.00217	0.01090	0.0002	0.04752	0.0014	70	4.1	70	2.0	75	140.5	0.0	6.6	69.9	2.0
G44	1108	687	0.62	0.0748	0.00222	0.01128	0.0002	0.04824	0.0014	73	4.2	72	2.0	111	134.5	1.4	34.9	72.3	2.0
G43	1020	270	0.26	0.0736	0.00235	0.01129	0.0002	0.04739	0.0015	72	4.5	72	2.1	68	147.9	-0.4	-6.0	72.4	2.1
G84	1043	432	0.41	0.0827	0.00298	0.01147	0.0002	0.05244	0.0019	81	5.6	74	2.2	305	159.0	9.8	75.9	73.5	2.2
G93	380	201	0.53	0.0768	0.00496	0.01164	0.0002	0.04797	0.0031	75	9.4	75	2.7	97	298.1	0.7	22.7	74.6	2.7
G118	349	223	0.64	0.0783	0.00416	0.01193	0.0002	0.04770	0.0026	77	7.8	77	2.5	83	246.7	0.0	8.3	76.5	2.5
G150	272	223	0.82	0.0820	0.00652	0.01248	0.0003	0.04776	0.0039	80	12.2	80	3.2	86	363.4	0.0	7.3	80.0	3.2
G40	368	226	0.61	0.0840	0.00425	0.01270	0.0002	0.04811	0.0025	82	8.0	81	2.7	105	232.4	0.7	22.3	81.3	2.7
G114	568	183	0.32	0.0853	0.00346	0.01284	0.0002	0.04827	0.0020	83	6.5	82	2.5	113	186.1	1.1	27.1	82.2	2.5
G58	210	66	0.32	0.0884	0.00592	0.01340	0.0002	0.04795	0.0032	86	11.0	86	3.1	96	307.7	0.2	10.5	85.8	3.1
G71	394	175	0.44	0.0992	0.00441	0.01383	0.0002	0.05213	0.0023	96	8.1	89	2.8	291	197.5	8.4	69.6	88.6	2.8
G74	899	369	0.41	0.0942	0.00294	0.01430	0.0002	0.04786	0.0015	91	5.5	92	2.6	91	144.5	-0.2	-0.5	91.6	2.6
G116	1335	662	0.50	0.0965	0.00262	0.01445	0.0002	0.04857	0.0013	94	4.9	93	2.5	127	122.0	1.2	27.3	92.5	2.5
G94	2029	798	0.39	0.0992	0.00283	0.01468	0.0002	0.04910	0.0014	96	5.2	94	2.6	153	128.4	2.2	38.5	93.9	2.6
G38	919	513	0.56	0.0978	0.00280	0.01471	0.0002	0.04832	0.0014	95	5.2	94	2.6	115	129.4	0.6	18.2	94.1	2.6
G131	474	199	0.42	0.0963	0.00398	0.01488	0.0002	0.04704	0.0019	93	7.4	95	2.9	51	192.4	-2.0	-87.0	95.2	2.9
G57	409	316	0.77	0.1087	0.00461	0.01556	0.0002	0.05079	0.0022	105	8.5	100	3.1	232	190.6	5.2	57.0	99.6	3.1
G98	505	265	0.52	0.1052	0.00471	0.01595	0.0003	0.04794	0.0022	102	8.7	102	3.2	95	208.4	-0.4	-6.9	102.0	3.2
G132	1423	764	0.54	0.1102	0.00277	0.01678	0.0002	0.04772	0.0012	106	5.1	107	2.9	85	115.0	-1.1	-27.0	107.3	2.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G90	1189	299	0.25	0.1309	0.00402	0.01877	0.0003	0.05069	0.0015	125	7.2	120	3.4	227	137.0	4.2	47.1	119.9	3.4
G28	353	299	0.85	0.1801	0.00578	0.02601	0.0004	0.05034	0.0016	168	9.9	166	4.7	211	143.3	1.6	21.5	165.5	4.7
G146	585	361	0.62	0.1822	0.00582	0.02604	0.0004	0.05088	0.0016	170	10.0	166	4.7	235	142.6	2.6	29.6	165.7	4.7
G8	400	214	0.53	0.1882	0.00536	0.02740	0.0004	0.04994	0.0014	175	9.2	174	4.9	192	126.7	0.5	9.4	174.2	4.9
G45	74	105	1.43	0.1833	0.01327	0.02744	0.0005	0.04856	0.0036	171	22.8	175	6.6	127	327.8	-2.1	-37.7	174.5	6.6
G69	161	147	0.92	0.1948	0.00985	0.02980	0.0005	0.04753	0.0024	181	16.7	189	6.2	75	234.8	-4.5	-151.1	189.3	6.2
G124	426	256	0.60	0.2026	0.00634	0.02996	0.0004	0.04918	0.0015	187	10.7	190	5.4	156	141.3	-1.5	-21.8	190.3	5.4
G12	846	426	0.50	0.2108	0.00456	0.03011	0.0004	0.05089	0.0010	194	7.7	191	5.1	236	92.6	1.5	18.9	191.3	5.1
G119	381	126	0.33	0.2327	0.00740	0.03325	0.0005	0.05089	0.0016	212	12.2	211	6.0	236	141.7	0.8	10.5	210.8	6.0
G148	147	42	0.28	0.2479	0.01456	0.03611	0.0007	0.04991	0.0030	225	23.7	229	8.1	191	265.5	-1.7	-19.9	228.7	8.1
G51	676	69	0.10	0.3959	0.00807	0.05351	0.0007	0.05378	0.0010	339	11.7	336	8.8	362	84.8	0.8	7.1	336.1	8.8
G104	406	275	0.68	0.5818	0.01307	0.07444	0.0010	0.05681	0.0012	466	16.8	463	12.2	484	93.4	0.6	4.3	462.8	12.2
G59	391	297	0.76	0.7916	0.01614	0.09528	0.0013	0.06040	0.0012	592	18.3	587	15.1	618	81.1	0.9	5.0	586.7	15.1
G110	62	26	0.42	0.8826	0.03962	0.09794	0.0017	0.06551	0.0030	642	42.7	602	19.6	791	184.8	6.7	23.8	602.3	19.6
G143	433	1160	2.68	0.8000	0.01642	0.09805	0.0013	0.05932	0.0011	597	18.5	603	15.5	579	82.5	-1.0	-4.2	602.9	15.5
G125	120	51	0.42	1.6512	0.04303	0.16083	0.0023	0.07464	0.0019	990	33.0	961	25.6	1058	101.2	3.0	9.2	961.4	25.6
G39	48	34	0.70	1.7599	0.05038	0.17019	0.0025	0.07517	0.0021	1031	37.1	1013	27.7	1073	111.0	1.7	5.6	1013.2	27.7
G107	189	163	0.86	1.7131	0.03528	0.17120	0.0023	0.07274	0.0014	1014	26.4	1019	25.6	1007	77.4	-0.5	-1.2	1018.7	25.6
G41	490	254	0.52	1.7591	0.02916	0.17411	0.0023	0.07344	0.0011	1031	21.5	1035	25.3	1026	57.9	-0.4	-0.8	1034.7	25.3
G7	123	114	0.92	1.9355	0.04066	0.17434	0.0024	0.08071	0.0016	1094	28.1	1036	26.4	1214	76.7	5.6	14.7	1036.0	26.4
G50	153	201	1.31	1.7425	0.03550	0.17467	0.0024	0.07252	0.0014	1024	26.3	1038	26.1	1001	76.3	-1.3	-3.7	1037.8	26.1
G34	108	63	0.58	1.8819	0.03989	0.17536	0.0024	0.07801	0.0016	1075	28.1	1042	26.5	1147	78.3	3.2	9.2	1041.6	26.5
G134	41	20	0.48	1.7665	0.06064	0.17616	0.0027	0.07289	0.0025	1033	44.5	1046	30.1	1011	135.8	-1.2	-3.5	1046.0	30.1
G120	189	58	0.31	1.7655	0.03578	0.17627	0.0024	0.07281	0.0014	1033	26.3	1047	26.2	1009	76.0	-1.3	-3.8	1046.6	26.2
G47	51	34	0.67	1.9020	0.05423	0.17761	0.0026	0.07785	0.0022	1082	37.9	1054	28.8	1143	109.4	2.6	7.8	1053.9	28.8
G75	130	88	0.68	1.9936	0.04460	0.19429	0.0027	0.07459	0.0016	1113	30.3	1145	29.1	1057	85.1	-2.7	-8.3	1057.2	85.1
G140	174	275	1.58	1.8073	0.03853	0.17913	0.0025	0.07334	0.0015	1048	27.9	1062	26.7	1023	80.5	-1.3	-3.8	1062.2	26.7
G130	33	23	0.70	1.9590	0.07034	0.17972	0.0029	0.07924	0.0029	1102	48.3	1066	31.6	1178	139.2	3.4	9.6	1065.5	31.6
G13	714	109	0.15	1.8887	0.02968	0.18118	0.0024	0.07578	0.0010	1077	20.9	1073	26.0	1089	53.6	0.3	1.5	1073.4	26.0
G37	310	743	2.40	1.8407	0.03177	0.18129	0.0024	0.07381	0.0011	1060	22.7	1074	26.3	1036	61.6	-1.3	-3.6	1074.0	26.3
G101	136	48	0.35	1.9293	0.04089	0.18648	0.0026	0.07521	0.0015	1091	28.3	1102	27.7	1074	79.3	-1.0	-2.6	1074.1	79.3
G85	212	116	0.55	1.9262	0.04246	0.18618	0.0026	0.07521	0.0016	1090	29.5	1101	28.0	1074	83.0	-0.9	-2.5	1074.2	83.0
G3	13	15	1.17	2.0366	0.09161	0.18236	0.0033	0.08118	0.0037	1128	61.3	1080	35.6	1226	173.5	4.4	11.9	1079.9	35.6
G151	38	29	0.77	1.8561	0.06494	0.18291	0.0029	0.07377	0.0026	1066	46.2	1083	31.2	1035	138.0	-1.6	-4.6	1082.8	31.2

Table S2

Grain	U		Th/U	RATIOS						207/235		AGES 206/238		207/206		%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	235	± 2s	238	± 2s	206	± 2s	%disc	(7/6)	[Ma]	± 2s
G96	328	121	0.37	1.9158	0.03455	0.18316	0.0024	0.07604	0.0012	1087	24.1	1084	26.6	1096	64.9	0.2	1.1	1084.2	26.6
G92	68	109	1.60	1.8949	0.05897	0.18383	0.0028	0.07493	0.0023	1079	41.4	1088	30.4	1067	121.5	-0.8	-2.0	1087.9	30.4
G111	121	52	0.43	1.9369	0.04304	0.18533	0.0026	0.07597	0.0016	1094	29.8	1096	27.9	1094	83.6	-0.2	-0.1	1096.0	27.9
G89	463	88	0.19	1.9853	0.03370	0.18907	0.0025	0.07633	0.0012	1111	22.9	1116	27.1	1104	60.2	-0.5	-1.1	1103.8	60.2
G11	49	29	0.60	2.0643	0.05694	0.19621	0.0029	0.07648	0.0021	1137	37.7	1155	31.0	1108	105.9	-1.5	-4.3	1107.7	105.9
G14	350	80	0.23	2.0162	0.03388	0.19157	0.0025	0.07651	0.0011	1121	22.8	1130	27.5	1109	58.7	-0.8	-1.9	1108.5	58.7
G79	398	125	0.31	2.1860	0.04039	0.20463	0.0027	0.07766	0.0013	1177	25.7	1200	29.4	1138	66.4	-2.0	-5.4	1138.2	66.4
G20	76	27	0.36	2.0742	0.04713	0.19049	0.0027	0.07916	0.0017	1140	31.1	1124	28.9	1176	84.5	1.5	4.4	1176.1	84.5
G4	768	356	0.46	2.1230	0.03293	0.19420	0.0026	0.07947	0.0011	1156	21.4	1144	27.6	1184	51.9	1.1	3.4	1183.9	51.9
G42	132	58	0.44	2.2201	0.04473	0.20235	0.0028	0.07976	0.0015	1187	28.2	1188	29.6	1191	73.2	0.0	0.3	1191.0	73.2
G86	122	46	0.38	2.2819	0.05761	0.20698	0.0030	0.08014	0.0020	1207	35.6	1213	31.8	1201	95.1	-0.5	-1.0	1200.5	95.1
G122	231	81	0.35	2.2638	0.04234	0.20485	0.0027	0.08033	0.0014	1201	26.3	1201	29.4	1205	67.0	0.0	0.3	1205.2	67.0
G49	394	157	0.40	2.1725	0.03610	0.19534	0.0026	0.08085	0.0012	1172	23.1	1150	27.9	1218	57.1	1.9	5.5	1217.8	57.1
G64	28	33	1.16	2.3155	0.08031	0.20801	0.0033	0.08093	0.0028	1217	49.2	1218	35.4	1220	133.0	-0.1	0.1	1219.6	133.0
G126	201	92	0.46	2.3137	0.04423	0.20673	0.0028	0.08136	0.0014	1217	27.1	1211	29.7	1230	68.6	0.4	1.5	1230.1	68.6
G60	664	18	0.03	2.3450	0.03932	0.20934	0.0028	0.08143	0.0012	1226	23.9	1225	29.5	1232	57.7	0.1	0.5	1231.9	57.7
G19	204	141	0.69	2.4115	0.04229	0.21487	0.0029	0.08159	0.0013	1246	25.2	1255	30.5	1236	61.1	-0.7	-1.5	1235.6	61.1
G103	120	45	0.38	2.4913	0.05144	0.22166	0.0030	0.08170	0.0016	1270	29.9	1291	32.0	1238	74.7	-1.6	-4.2	1238.4	74.7
G138	67	42	0.62	2.3558	0.06265	0.20894	0.0030	0.08196	0.0021	1229	37.9	1223	32.4	1245	100.1	0.5	1.7	1244.7	100.1
G21	76	25	0.33	2.4765	0.05407	0.21877	0.0031	0.08229	0.0017	1265	31.6	1275	32.3	1253	79.7	-0.8	-1.8	1252.5	79.7
G24	262	119	0.45	2.4867	0.04222	0.21822	0.0029	0.08284	0.0013	1268	24.6	1272	30.7	1266	58.1	-0.3	-0.5	1265.5	58.1
G67	745	67	0.09	2.4243	0.04060	0.20986	0.0028	0.08398	0.0013	1250	24.1	1228	29.6	1292	57.2	1.8	5.0	1292.0	57.2
G139	136	94	0.69	2.7357	0.05553	0.23070	0.0032	0.08620	0.0016	1338	30.2	1338	33.0	1343	72.7	0.0	0.3	1342.7	72.7
G22	43	20	0.47	2.8863	0.07127	0.23928	0.0035	0.08769	0.0021	1378	37.2	1383	36.0	1376	90.3	-0.3	-0.5	1375.7	90.3
G15	157	54	0.34	2.9772	0.05364	0.24660	0.0033	0.08777	0.0014	1402	27.4	1421	34.3	1377	61.9	-1.3	-3.2	1377.4	61.9
G55	232	526	2.27	3.1080	0.05458	0.25430	0.0034	0.08885	0.0014	1435	27.0	1461	35.0	1401	59.8	-1.8	-4.3	1400.8	59.8
G141	209	60	0.29	3.0460	0.05616	0.24808	0.0033	0.08926	0.0015	1419	28.2	1429	34.3	1410	63.9	-0.7	-1.3	1409.6	63.9
G6	218	100	0.46	3.0058	0.05057	0.24422	0.0033	0.08947	0.0013	1409	25.6	1409	33.7	1414	56.3	0.0	0.4	1414.3	56.3
G108	132	43	0.33	3.0040	0.06047	0.23912	0.0033	0.09132	0.0017	1409	30.7	1382	34.1	1453	71.1	1.9	4.9	1453.3	71.1
G135	323	119	0.37	3.3130	0.05628	0.26228	0.0035	0.09183	0.0014	1484	26.5	1502	35.4	1464	57.4	-1.2	-2.6	1463.7	57.4
G91	55	17	0.31	3.4107	0.08764	0.26390	0.0039	0.09395	0.0024	1507	40.4	1510	39.6	1507	93.2	-0.2	-0.2	1507.2	93.2
G17	136	142	1.04	3.2628	0.05871	0.24944	0.0034	0.09509	0.0016	1472	28.0	1436	34.7	1530	60.7	2.5	6.2	1529.9	60.7
G80	1604	748	0.47	3.9780	0.06083	0.28753	0.0038	0.10058	0.0013	1630	24.8	1629	37.6	1635	48.1	0.0	0.3	1634.7	48.1
G127	576	103	0.18	4.3257	0.06905	0.30599	0.0040	0.10277	0.0014	1698	26.3	1721	39.6	1675	51.1	-1.3	-2.8	1674.7	51.1

Table S2

Grain	U		Th/U	RATIOS						207/235		AGES 206/238		207/206		%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	235	± 2s	238	± 2s	206	± 2s	%disc	(7/6)	[Ma]	± 2s
G144	222	71	0.32	4.1949	0.07332	0.29551	0.0039	0.10319	0.0016	1673	28.7	1669	39.1	1682	57.8	0.2	0.8	1682.4	57.8
G128	207	75	0.36	4.4706	0.07895	0.31173	0.0042	0.10425	0.0017	1726	29.3	1749	41.0	1701	58.4	-1.4	-2.8	1701.2	58.4
G123	284	123	0.44	4.4260	0.07426	0.30775	0.0041	0.10455	0.0016	1717	27.8	1730	40.1	1706	54.5	-0.7	-1.4	1706.4	54.5
G99	128	79	0.62	4.3434	0.07971	0.30075	0.0041	0.10499	0.0018	1702	30.3	1695	40.3	1714	61.1	0.4	1.1	1714.1	61.1
G142	202	103	0.51	4.4613	0.07845	0.30800	0.0041	0.10529	0.0017	1724	29.2	1731	40.5	1720	58.0	-0.4	-0.7	1719.5	58.0
G109	317	161	0.51	4.5010	0.07430	0.31016	0.0041	0.10549	0.0015	1731	27.4	1742	40.3	1723	53.1	-0.6	-1.1	1722.9	53.1
G27	161	98	0.61	4.4898	0.07544	0.30723	0.0041	0.10624	0.0016	1729	27.9	1727	40.5	1736	54.1	0.1	0.5	1735.8	54.1
G46	353	282	0.80	4.6868	0.07413	0.31771	0.0042	0.10724	0.0015	1765	26.5	1779	41.0	1753	49.5	-0.8	-1.4	1753.1	49.5
G136	283	74	0.26	4.7665	0.08180	0.32295	0.0043	0.10729	0.0017	1779	28.8	1804	41.8	1754	55.8	-1.4	-2.9	1754.0	55.8
G145	416	57	0.14	5.0020	0.08532	0.33844	0.0045	0.10744	0.0016	1820	28.9	1879	43.2	1757	55.3	-3.2	-7.0	1756.5	55.3
G77	510	258	0.51	4.7867	0.07615	0.32057	0.0042	0.10855	0.0015	1783	26.7	1793	41.2	1775	50.1	-0.6	-1.0	1775.1	50.1
G35	743	56	0.08	5.0242	0.07656	0.32225	0.0042	0.11334	0.0015	1823	25.8	1801	41.2	1854	46.4	1.3	2.9	1853.7	46.4
G112	126	71	0.56	5.1739	0.09822	0.33175	0.0045	0.11337	0.0020	1848	32.3	1847	43.6	1854	62.8	0.1	0.4	1854.2	62.8
G18	24	33	1.35	5.2545	0.12934	0.33531	0.0050	0.11392	0.0027	1862	42.0	1864	48.3	1863	85.0	-0.1	-0.1	1862.9	85.0
G26	198	156	0.78	5.2923	0.08638	0.33597	0.0045	0.11451	0.0016	1868	27.9	1867	43.1	1872	51.1	0.0	0.3	1872.2	51.1
G52	298	169	0.57	5.4493	0.08652	0.34528	0.0046	0.11473	0.0016	1893	27.2	1912	43.7	1876	49.2	-1.0	-1.9	1875.7	49.2
G133	222	145	0.65	5.5291	0.09371	0.34942	0.0046	0.11503	0.0017	1905	29.1	1932	44.3	1880	54.1	-1.4	-2.7	1880.3	54.1
G95	107	60	0.56	5.6819	0.10736	0.35515	0.0049	0.11630	0.0020	1929	32.6	1959	46.3	1900	62.0	-1.6	-3.1	1900.1	62.0
G82	213	127	0.60	5.8511	0.09706	0.36320	0.0048	0.11711	0.0017	1954	28.8	1997	45.7	1913	52.2	-2.2	-4.4	1912.6	52.2
G72	380	189	0.50	10.8667	0.16660	0.48442	0.0064	0.16307	0.0021	2512	28.5	2547	55.3	2488	43.9	-1.4	-2.4	2487.8	43.9
G10	948	435	0.46	11.8338	0.17483	0.48422	0.0063	0.17766	0.0022	2591	27.7	2546	55.0	2631	40.7	1.8	3.3	2631.2	40.7
G147	512	137	0.27	12.1872	0.19136	0.49714	0.0065	0.17821	0.0024	2619	29.5	2602	56.0	2636	45.0	0.7	1.3	2636.3	45.0
G83	96	74	0.77	12.9021	0.22984	0.50582	0.0070	0.18543	0.0030	2673	33.6	2639	60.0	2702	53.1	1.3	2.3	2702.0	53.1
G113	58	43	0.73	13.9886	0.24620	0.54485	0.0075	0.18664	0.0030	2749	33.4	2804	62.5	2713	52.2	-2.0	-3.4	2712.8	52.2
G121	96	88	0.91	13.7233	0.23450	0.53361	0.0072	0.18696	0.0029	2731	32.3	2757	60.8	2716	50.2	-0.9	-1.5	2715.6	50.2
G65	117	136	1.16	13.6499	0.22008	0.52765	0.0071	0.18806	0.0027	2726	30.5	2732	59.7	2725	46.1	-0.2	-0.2	2725.3	46.1
G63	406	344	0.85	14.6014	0.22235	0.56414	0.0074	0.18816	0.0024	2790	28.9	2884	61.1	2726	42.4	-3.3	-5.8	2726.1	42.4
G48	76	74	0.98	13.9531	0.22918	0.53856	0.0073	0.18834	0.0027	2747	31.1	2777	61.0	2728	47.3	-1.1	-1.8	2727.7	47.3
G73	157	212	1.35	14.2385	0.22720	0.54188	0.0072	0.19102	0.0027	2766	30.3	2791	60.4	2751	45.4	-0.9	-1.5	2750.9	45.4
G33	82	92	1.11	14.1410	0.22708	0.53789	0.0072	0.19112	0.0027	2759	30.5	2775	60.6	2752	45.7	-0.6	-0.8	2751.8	45.7
G32	550	357	0.65	13.9135	0.20838	0.52648	0.0069	0.19212	0.0024	2744	28.4	2727	58.3	2760	41.1	0.6	1.2	2760.4	41.1
G66	1494	531	0.36	15.3243	0.22773	0.54533	0.0071	0.20428	0.0026	2836	28.3	2806	59.3	2861	40.4	1.1	1.9	2860.7	40.4
G23	426	246	0.58	17.3369	0.25798	0.61036	0.0080	0.20649	0.0026	2954	28.6	3071	64.1	2878	40.3	-3.8	-6.7	2878.2	40.3
G70	603	88	0.15	17.2737	0.25948	0.59615	0.0078	0.21064	0.0027	2950	28.8	3014	63.0	2911	40.9	-2.1	-3.6	2910.5	40.9

Table S2

				RATIOS						AGES											
U		Th	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/	206/		207/		%disc	%disc	Best Age				
Grain	[ppm]	[ppm]								235	± 2s	238	± 2s	206						± 2s	(7/6)
G87	45	20	0.43	18.0012	0.37459	0.58188	0.0088	0.22489	0.0045	2990	40.0	2956	72.1	3016	62.9	1.1	2.0	3016.0	62.9		
G137	206	94	0.46	28.0092	0.44091	0.68689	0.0091	0.29643	0.0041	3419	30.9	3371	69.3	3452	42.2	1.4	2.3	3451.6	42.2		
Sample B2																					
G121	6494	10212	1.57	0.0148	0.00077	0.00223	0.0000	0.04807	0.0025	15	1.5	14	0.5	103	239.9	3.5	86.0	14.4	0.5		
G131	1650	1112	0.67	0.0225	0.00165	0.00341	0.0001	0.04785	0.0036	23	3.3	22	0.9	91	339.2	2.7	75.8	22.0	0.9		
G6	707	873	1.23	0.0345	0.00242	0.00492	0.0001	0.05094	0.0036	34	4.8	32	1.3	238	313.0	8.9	86.7	31.6	1.3		
G146	562	209	0.37	0.0586	0.00412	0.00903	0.0002	0.04720	0.0034	58	7.9	58	2.3	59	325.3	-0.2	1.2	58.0	2.3		
G69	692	358	0.52	0.0614	0.00404	0.00927	0.0002	0.04813	0.0032	61	7.7	60	2.2	106	301.0	1.7	43.8	59.5	2.2		
G112	970	337	0.35	0.0598	0.00412	0.00962	0.0002	0.04520	0.0032	59	7.9	62	2.3	0	233.7	-4.4	-61600.0	61.7	2.3		
G138	420	215	0.51	0.0774	0.00692	0.01136	0.0003	0.04949	0.0045	76	13.0	73	3.4	171	400.4	3.8	57.5	72.8	3.4		
G81	222	219	0.99	0.0765	0.00799	0.01169	0.0003	0.04757	0.0051	75	15.1	75	3.7	77	471.2	0.0	3.1	74.9	3.7		
G9	140	76	0.54	0.0866	0.01099	0.01204	0.0004	0.05227	0.0068	84	20.5	77	4.8	297	543.1	9.3	74.0	77.2	4.8		
G10	238	175	0.74	0.0871	0.00703	0.01206	0.0003	0.05250	0.0043	85	13.1	77	3.3	307	352.1	9.7	74.8	77.3	3.3		
G35	378	120	0.32	0.0955	0.00610	0.01338	0.0003	0.05189	0.0034	93	11.3	86	3.2	281	283.4	8.2	69.5	85.7	3.2		
G104	251	152	0.61	0.0924	0.00968	0.01387	0.0004	0.04841	0.0052	90	18.0	89	4.5	119	467.8	1.0	25.4	88.8	4.5		
G73	1262	18	0.01	0.0937	0.00410	0.01456	0.0002	0.04679	0.0021	91	7.6	93	2.9	38	204.3	-2.4	-144.0	93.2	2.9		
G8	1344	373	0.28	0.1012	0.00387	0.01502	0.0002	0.04896	0.0019	98	7.1	96	2.9	146	173.8	1.9	34.3	96.1	2.9		
G13	976	535	0.55	0.1092	0.00436	0.01527	0.0002	0.05194	0.0021	105	8.0	98	3.0	283	177.2	7.7	65.4	97.7	3.0		
G68	98	75	0.76	0.1070	0.01482	0.01545	0.0005	0.05031	0.0071	103	27.2	99	5.7	209	593.6	4.5	52.8	98.8	5.7		
G90	993	365	0.37	0.1126	0.00508	0.01708	0.0003	0.04794	0.0022	108	9.3	109	3.5	95	210.9	-0.7	-14.5	109.2	3.5		
G74	295	207	0.70	0.1168	0.00802	0.01772	0.0004	0.04792	0.0033	112	14.6	113	4.4	94	316.7	-0.9	-19.9	113.2	4.4		
G126	642	340	0.53	0.1184	0.00690	0.01809	0.0003	0.04755	0.0028	114	12.5	116	4.1	76	271.4	-1.7	-51.5	115.6	4.1		
G50	390	208	0.53	0.1293	0.00724	0.01922	0.0003	0.04889	0.0028	124	13.0	123	4.2	143	255.1	0.7	14.0	122.7	4.2		
G118	1484	780	0.53	0.1507	0.00676	0.02040	0.0003	0.05370	0.0024	143	11.9	130	4.2	359	198.4	9.4	63.7	130.2	4.2		
G107	1902	2897	1.52	0.1405	0.00547	0.02082	0.0003	0.04905	0.0019	134	9.7	133	4.0	150	178.6	0.5	11.6	132.8	4.0		
G142	131	64	0.49	0.1644	0.01454	0.02297	0.0005	0.05202	0.0047	155	25.4	146	6.7	286	387.1	5.5	48.9	146.4	6.7		
G49	1266	1067	0.84	0.1703	0.00597	0.02371	0.0004	0.05219	0.0018	160	10.4	151	4.4	294	155.0	5.7	48.6	151.1	4.4		
G31	1131	793	0.70	0.1655	0.00593	0.02428	0.0004	0.04953	0.0018	156	10.3	155	4.6	173	161.9	0.6	10.6	154.6	4.6		
G30	756	458	0.61	0.2168	0.00806	0.03109	0.0005	0.05067	0.0019	199	13.5	197	5.9	226	166.7	0.9	12.6	197.4	5.9		
G45	442	262	0.59	0.2265	0.00978	0.03226	0.0005	0.05104	0.0022	207	16.2	205	6.4	242	193.7	1.3	15.6	204.7	6.4		
G123	607	423	0.70	0.2375	0.01125	0.03524	0.0006	0.04899	0.0024	216	18.5	223	7.2	148	217.7	-3.1	-51.3	223.2	7.2		
G71	279	137	0.49	0.2593	0.01378	0.03671	0.0006	0.05135	0.0028	234	22.2	232	7.9	257	237.8	0.7	9.4	232.4	7.9		
G79	163	55	0.34	0.4947	0.02437	0.06725	0.0011	0.05348	0.0027	408	33.1	420	13.7	349	217.1	-2.7	-20.2	419.5	13.7		

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G101	328	86	0.26	0.5375	0.02197	0.06884	0.0011	0.05676	0.0023	437	29.0	429	13.1	482	178.4	1.8	10.9	429.1	13.1
G7	282	355	1.26	0.5659	0.02066	0.07120	0.0011	0.05774	0.0021	455	26.8	443	13.0	520	155.7	2.7	14.7	443.4	13.0
G15	867	236	0.27	0.7062	0.02041	0.08700	0.0012	0.05898	0.0017	543	24.3	538	14.7	566	120.2	0.9	5.0	537.8	14.7
G24	204	125	0.61	1.1937	0.04024	0.13031	0.0020	0.06656	0.0022	798	37.2	790	22.3	824	136.3	1.0	4.2	789.6	22.3
G133	164	132	0.81	1.4184	0.05968	0.14697	0.0024	0.07016	0.0030	897	50.1	884	26.8	933	170.5	1.4	5.3	883.9	26.8
G93	98	78	0.79	1.6977	0.06928	0.16887	0.0028	0.07308	0.0030	1008	52.2	1006	30.3	1016	162.5	0.2	1.0	1005.9	30.3
G18	246	151	0.62	1.7129	0.05219	0.16964	0.0025	0.07337	0.0022	1013	39.1	1010	27.3	1024	118.6	0.3	1.4	1010.1	27.3
G33	461	180	0.39	1.9008	0.05412	0.16993	0.0024	0.08129	0.0023	1081	37.9	1012	26.8	1228	106.9	6.9	17.6	1011.7	26.8
G19	212	104	0.49	1.8408	0.05662	0.17401	0.0026	0.07686	0.0023	1060	40.5	1034	28.1	1118	118.3	2.5	7.5	1034.2	28.1
G85	110	58	0.53	1.7872	0.06989	0.17477	0.0028	0.07434	0.0029	1041	50.9	1038	30.6	1051	154.7	0.2	1.2	1038.3	30.6
G40	121	44	0.36	1.8156	0.06431	0.17582	0.0027	0.07505	0.0027	1051	46.4	1044	29.8	1070	138.7	0.7	2.4	1044.1	29.8
G114	211	207	0.98	1.9006	0.07209	0.18622	0.0029	0.07419	0.0028	1081	50.5	1101	31.6	1047	150.6	-1.8	-5.2	1046.8	150.6
G106	247	124	0.50	1.8525	0.06594	0.17665	0.0027	0.07624	0.0027	1064	46.9	1049	29.4	1101	139.8	1.5	4.8	1048.6	29.4
G32	344	108	0.32	1.8205	0.05346	0.17713	0.0026	0.07468	0.0022	1053	38.5	1051	28.0	1060	113.6	0.1	0.8	1051.3	28.0
G38	644	370	0.57	1.7948	0.05062	0.17724	0.0025	0.07359	0.0020	1044	36.8	1052	27.6	1030	109.3	-0.8	-2.1	1051.9	27.6
G59	256	127	0.50	1.8773	0.05982	0.17817	0.0026	0.07659	0.0024	1073	42.2	1057	28.8	1110	123.6	1.5	4.8	1057.0	28.8
G52	1473	1059	0.72	1.7748	0.05131	0.17825	0.0025	0.07237	0.0021	1036	37.6	1057	27.6	996	113.0	-2.0	-6.1	1057.4	27.6
G116	586	8	0.01	1.8150	0.06246	0.17882	0.0027	0.07379	0.0026	1051	45.1	1061	29.1	1036	136.6	-0.9	-2.4	1060.5	29.1
G22	268	221	0.82	1.8713	0.05609	0.17937	0.0026	0.07581	0.0022	1071	39.7	1064	28.5	1090	115.5	0.7	2.4	1063.5	28.5
G66	497	339	0.68	1.8356	0.05852	0.17994	0.0027	0.07415	0.0023	1058	41.9	1067	28.9	1046	124.9	-0.8	-2.0	1066.6	28.9
G43	629	295	0.47	1.8564	0.05266	0.18045	0.0026	0.07476	0.0021	1066	37.4	1069	28.0	1062	109.5	-0.3	-0.7	1069.4	28.0
G150	122	51	0.42	1.9880	0.08311	0.18069	0.0029	0.07998	0.0034	1111	56.5	1071	32.1	1197	163.1	3.8	10.5	1070.7	32.1
G70	56	81	1.45	1.9722	0.08902	0.19065	0.0033	0.07519	0.0034	1106	60.8	1125	35.8	1074	178.1	-1.7	-4.8	1073.7	178.1
G109	135	60	0.44	1.8629	0.07349	0.18153	0.0029	0.07460	0.0030	1068	52.1	1075	31.6	1058	157.0	-0.7	-1.7	1075.3	31.6
G56	1177	536	0.46	1.9097	0.05406	0.18171	0.0026	0.07638	0.0021	1085	37.7	1076	28.1	1105	108.9	0.8	2.6	1076.3	28.1
G99	102	48	0.48	1.9110	0.07614	0.18227	0.0029	0.07622	0.0031	1085	53.1	1079	32.1	1101	156.8	0.5	2.0	1079.3	32.1
G98	261	159	0.61	1.9055	0.06482	0.18295	0.0027	0.07571	0.0026	1083	45.3	1083	29.8	1088	133.5	0.0	0.4	1083.1	29.8
G61	82	38	0.46	1.9245	0.07729	0.18335	0.0030	0.07629	0.0031	1090	53.7	1085	32.6	1103	157.4	0.4	1.6	1085.3	32.6
G28	156	90	0.58	2.0042	0.06491	0.19104	0.0029	0.07623	0.0024	1117	43.9	1127	31.0	1101	125.4	-0.9	-2.3	1101.2	125.4
G47	224	195	0.87	2.1463	0.06594	0.20166	0.0030	0.07735	0.0023	1164	42.6	1184	31.7	1130	118.3	-1.7	-4.8	1130.3	118.3
G5	136	93	0.69	2.0130	0.06427	0.18812	0.0028	0.07774	0.0024	1120	43.3	1111	30.5	1140	122.5	0.8	2.5	1140.2	122.5
G83	1325	156	0.12	2.0111	0.06018	0.18750	0.0027	0.07797	0.0023	1119	40.6	1108	29.1	1146	115.4	1.0	3.3	1146.0	115.4
G63	208	128	0.62	2.0728	0.06766	0.19308	0.0029	0.07803	0.0025	1140	44.7	1138	31.1	1148	126.2	0.2	0.8	1147.7	126.2
G2	28	24	0.86	2.0966	0.10620	0.19434	0.0036	0.07838	0.0040	1148	69.6	1145	39.3	1156	196.9	0.3	1.0	1156.4	196.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G88	44	26	0.60	2.2706	0.10798	0.21044	0.0038	0.07843	0.0038	1203	67.0	1231	40.4	1158	185.8	-2.3	-6.3	1157.9	185.8
G102	77	37	0.48	2.2270	0.09226	0.20437	0.0034	0.07922	0.0033	1190	58.1	1199	36.2	1178	161.4	-0.8	-1.8	1177.6	161.4
G113	523	178	0.34	2.0752	0.07057	0.19028	0.0028	0.07928	0.0027	1141	46.6	1123	30.7	1179	132.1	1.6	4.8	1179.3	132.1
G17	60	33	0.54	2.2068	0.08530	0.20117	0.0033	0.07971	0.0031	1183	54.0	1182	35.1	1190	149.0	0.1	0.7	1189.7	149.0
G128	242	129	0.54	2.4677	0.09183	0.21991	0.0034	0.08158	0.0031	1263	53.8	1281	36.0	1235	143.9	-1.5	-3.7	1235.4	143.9
G86	211	66	0.31	2.2833	0.07703	0.20279	0.0031	0.08185	0.0028	1207	47.6	1190	32.7	1242	129.1	1.4	4.1	1241.8	129.1
G11	87	74	0.84	2.4933	0.08413	0.21920	0.0034	0.08264	0.0028	1270	48.9	1278	35.6	1261	127.7	-0.6	-1.3	1260.8	127.7
G14	65	59	0.90	2.6019	0.09355	0.22546	0.0036	0.08385	0.0030	1301	52.7	1311	37.6	1289	136.5	-0.7	-1.7	1288.9	136.5
G103	195	107	0.55	2.6757	0.09390	0.23145	0.0035	0.08404	0.0030	1322	51.9	1342	36.9	1293	134.2	-1.5	-3.8	1293.4	134.2
G105	649	300	0.46	2.9681	0.09585	0.24788	0.0036	0.08705	0.0028	1400	49.1	1428	37.5	1362	121.7	-2.0	-4.8	1361.5	121.7
G147	927	231	0.25	2.8740	0.10241	0.23677	0.0035	0.08825	0.0032	1375	53.7	1370	36.9	1388	135.2	0.4	1.3	1387.8	135.2
G48	308	156	0.51	2.9913	0.08731	0.24411	0.0035	0.08906	0.0026	1405	44.4	1408	36.5	1405	107.6	-0.2	-0.2	1405.4	107.6
G137	438	210	0.48	2.8265	0.10065	0.22865	0.0035	0.08987	0.0032	1363	53.4	1327	36.2	1423	134.6	2.7	6.7	1422.7	134.6
G92	361	96	0.27	3.3168	0.10451	0.26619	0.0039	0.09058	0.0028	1485	49.2	1521	39.6	1438	117.4	-2.4	-5.8	1437.7	117.4
G91	177	83	0.47	3.2189	0.10705	0.25696	0.0039	0.09106	0.0030	1462	51.5	1474	39.6	1448	124.1	-0.9	-1.8	1447.8	124.1
G145	364	250	0.69	3.3219	0.12020	0.26506	0.0040	0.09111	0.0033	1486	56.5	1516	40.9	1449	136.6	-1.9	-4.6	1448.8	136.6
G58	382	150	0.39	3.0485	0.09024	0.24188	0.0035	0.09160	0.0027	1420	45.3	1397	36.3	1459	109.1	1.7	4.3	1459.1	109.1
G140	338	123	0.36	3.0716	0.11089	0.24200	0.0037	0.09227	0.0034	1426	55.3	1397	38.1	1473	135.7	2.0	5.1	1472.9	135.7
G117	192	121	0.63	3.2981	0.11935	0.25901	0.0040	0.09257	0.0034	1481	56.4	1485	41.0	1479	135.5	-0.3	-0.4	1479.0	135.5
G76	112	46	0.41	3.3178	0.11312	0.26028	0.0040	0.09266	0.0032	1485	53.2	1491	40.9	1481	126.7	-0.4	-0.7	1480.8	126.7
G36	149	80	0.54	3.2891	0.10118	0.25708	0.0038	0.09297	0.0028	1479	47.9	1475	39.2	1487	112.7	0.2	0.8	1487.4	112.7
G75	440	187	0.43	3.2948	0.09862	0.25609	0.0037	0.09352	0.0028	1480	46.6	1470	37.9	1498	109.8	0.7	1.9	1498.4	109.8
G39	358	183	0.51	3.3100	0.09376	0.25531	0.0037	0.09422	0.0026	1483	44.2	1466	37.6	1513	102.7	1.2	3.1	1512.5	102.7
G141	530	247	0.47	4.1823	0.14828	0.30212	0.0045	0.10064	0.0036	1671	58.1	1702	44.9	1636	130.3	-1.8	-4.0	1635.9	130.3
G54	496	270	0.55	3.9024	0.11038	0.27992	0.0040	0.10133	0.0028	1614	45.7	1591	40.1	1649	101.0	1.5	3.5	1648.6	101.0
G139	380	93	0.25	4.2990	0.15215	0.30575	0.0046	0.10222	0.0037	1693	58.3	1720	45.4	1665	129.5	-1.5	-3.3	1664.8	129.5
G115	276	165	0.60	4.2284	0.14416	0.29899	0.0045	0.10281	0.0035	1680	56.0	1686	44.6	1676	124.0	-0.4	-0.6	1675.5	124.0
G89	486	243	0.50	4.2378	0.12971	0.29929	0.0043	0.10293	0.0031	1681	50.3	1688	43.0	1678	110.1	-0.4	-0.6	1677.6	110.1
G135	262	124	0.47	4.0024	0.14275	0.28147	0.0043	0.10337	0.0037	1635	57.9	1599	43.0	1686	130.1	2.2	5.1	1685.6	130.1
G144	195	81	0.42	4.4975	0.16454	0.31548	0.0048	0.10364	0.0038	1731	60.8	1768	47.4	1690	133.7	-2.1	-4.6	1690.3	133.7
G42	89	106	1.19	4.2999	0.13774	0.30107	0.0046	0.10379	0.0033	1693	52.8	1697	45.6	1693	114.8	-0.2	-0.2	1693.1	114.8
G26	274	104	0.38	4.5773	0.12695	0.31962	0.0046	0.10406	0.0028	1745	46.2	1788	44.7	1698	97.8	-2.4	-5.3	1697.8	97.8
G96	457	342	0.75	4.3344	0.13502	0.30250	0.0044	0.10416	0.0032	1700	51.4	1704	43.5	1700	112.0	-0.2	-0.2	1699.6	112.0
G151	375	227	0.60	4.4945	0.16327	0.31364	0.0047	0.10418	0.0038	1730	60.3	1759	46.5	1700	132.6	-1.6	-3.5	1699.8	132.6

Table S2

Grain	U		Th/U	RATIOS						207/235		AGES 206/238		207/206		%disc	%disc (7/6)	Best Age [Ma]	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	235	± 2s	238	± 2s	206	± 2s			± 2s	± 2s
G110	528	199	0.38	4.5481	0.14804	0.31650	0.0047	0.10447	0.0034	1740	54.2	1773	45.6	1705	117.6	-1.9	-4.0	1705.0	117.6
G29	314	114	0.36	4.6066	0.12653	0.31495	0.0045	0.10628	0.0028	1751	45.8	1765	43.9	1737	96.2	-0.8	-1.6	1736.6	96.2
G148	260	129	0.50	4.5206	0.16508	0.30909	0.0047	0.10633	0.0039	1735	60.7	1736	46.4	1737	132.7	-0.1	0.1	1737.4	132.7
G60	343	203	0.59	4.5045	0.13063	0.30577	0.0044	0.10708	0.0031	1732	48.2	1720	43.4	1750	102.5	0.7	1.7	1750.2	102.5
G97	294	114	0.39	4.5497	0.14363	0.30874	0.0045	0.10712	0.0034	1740	52.6	1735	44.5	1751	112.9	0.3	0.9	1751.1	112.9
G124	225	304	1.35	4.7954	0.16912	0.32249	0.0049	0.10810	0.0038	1784	59.3	1802	48.1	1768	127.2	-1.0	-1.9	1767.6	127.2
G51	237	111	0.47	4.8675	0.13991	0.32528	0.0047	0.10876	0.0031	1797	48.4	1815	45.6	1779	101.2	-1.0	-2.1	1778.7	101.2
G149	253	80	0.32	4.5927	0.17079	0.30646	0.0047	0.10895	0.0041	1748	62.0	1723	46.7	1782	134.6	1.4	3.3	1781.8	134.6
G82	513	130	0.25	4.8247	0.14397	0.32063	0.0046	0.10938	0.0032	1789	50.2	1793	45.0	1789	105.7	-0.2	-0.2	1789.1	105.7
G120	344	137	0.40	4.3969	0.15121	0.28900	0.0044	0.11061	0.0038	1712	56.9	1637	43.6	1809	123.2	4.6	9.6	1809.4	123.2
G34	255	246	0.96	4.9816	0.13875	0.32569	0.0047	0.11115	0.0030	1816	47.1	1818	45.4	1818	96.9	-0.1	0.0	1818.3	96.9
G132	278	92	0.33	5.2245	0.18334	0.33719	0.0051	0.11264	0.0040	1857	59.8	1873	49.2	1842	125.5	-0.9	-1.7	1842.4	125.5
G129	450	168	0.37	5.3166	0.18299	0.33437	0.0050	0.11560	0.0040	1872	58.8	1860	48.4	1889	122.3	0.6	1.6	1889.2	122.3
G122	164	214	1.31	5.8564	0.20596	0.34863	0.0054	0.12212	0.0043	1955	61.0	1928	51.3	1988	123.5	1.4	3.0	1987.5	123.5
G78	352	166	0.47	10.9162	0.31916	0.47972	0.0069	0.16541	0.0048	2516	54.4	2526	60.0	2512	95.4	-0.4	-0.6	2511.7	95.4
G25	434	476	1.10	10.7939	0.28552	0.44711	0.0063	0.17542	0.0045	2506	49.2	2382	56.1	2610	83.9	5.2	8.7	2610.0	83.9
G119	217	133	0.61	13.5953	0.45018	0.53411	0.0080	0.18505	0.0062	2722	62.6	2759	67.0	2699	107.7	-1.3	-2.2	2698.6	107.7
G77	255	168	0.66	13.2760	0.38808	0.51934	0.0075	0.18582	0.0054	2700	55.2	2696	63.5	2706	93.6	0.1	0.3	2705.5	93.6
G20	1181	876	0.74	14.5403	0.37897	0.56165	0.0079	0.18811	0.0047	2786	49.5	2873	64.8	2726	81.5	-3.1	-5.4	2725.7	81.5
G100	246	262	1.07	14.2115	0.44191	0.54887	0.0080	0.18823	0.0058	2764	59.0	2821	67.0	2727	100.2	-2.0	-3.4	2726.7	100.2
G95	110	93	0.85	13.3311	0.41770	0.51380	0.0077	0.18861	0.0059	2703	59.2	2673	65.4	2730	101.0	1.1	2.1	2730.1	101.0
G108	211	158	0.75	14.3994	0.46310	0.55299	0.0082	0.18930	0.0061	2776	61.1	2838	68.2	2736	103.9	-2.2	-3.7	2736.1	103.9
G65	493	230	0.47	13.4285	0.37857	0.51082	0.0073	0.19108	0.0053	2710	53.3	2660	62.0	2751	89.4	1.9	3.3	2751.4	89.4
G80	126	60	0.47	13.7351	0.41380	0.52170	0.0077	0.19138	0.0057	2732	57.0	2706	65.4	2754	96.4	0.9	1.7	2754.0	96.4
G16	90	57	0.63	14.5922	0.40027	0.54588	0.0080	0.19422	0.0052	2789	52.1	2808	66.7	2778	86.0	-0.7	-1.1	2778.3	86.0
G130	191	159	0.83	15.7528	0.53883	0.57306	0.0087	0.19984	0.0069	2862	65.3	2920	71.1	2825	110.3	-2.0	-3.4	2824.9	110.3
G67	242	58	0.24	15.0373	0.43004	0.54003	0.0078	0.20240	0.0057	2818	54.5	2784	65.1	2846	90.1	1.2	2.2	2845.6	90.1
G125	130	152	1.17	16.7201	0.57124	0.60029	0.0092	0.20249	0.0070	2919	65.5	3031	74.2	2846	109.9	-3.7	-6.5	2846.4	109.9
Sample W3																			
G117	328	3225	9.83	0.0199	0.00616	0.00300	0.0001	0.04818	0.0151	20	12.3	19	1.6	108	####	3.6	82.1	19.3	1.6
G9	123	628	5.11	0.0246	0.00216	0.00384	0.0001	0.04663	0.0042	25	4.3	25	1.0	30	402.0	0.0	17.7	24.7	1.0
G5	13	96	7.63	0.0334	0.00265	0.00501	0.0001	0.04845	0.0039	33	5.2	32	1.3	122	357.7	3.7	73.5	32.2	1.3
G106	212	105	0.50	0.0639	0.00188	0.00922	0.0001	0.05038	0.0015	63	3.6	59	1.7	213	131.3	6.2	72.2	59.2	1.7

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G129	132	23	0.17	0.0632	0.00317	0.01039	0.0002	0.04418	0.0022	62	6.0	67	2.1	0	37.5	-6.6	-66500.0	66.6	2.1
G105	1043	172	0.16	0.0717	0.00366	0.01058	0.0002	0.04931	0.0025	70	6.9	68	2.3	162	232.0	3.7	58.3	67.8	2.3
G115	2029	382	0.19	0.0713	0.00217	0.01090	0.0002	0.04752	0.0014	70	4.1	70	2.0	75	140.5	0.0	6.6	69.9	2.0
G44	453	1022	2.25	0.0748	0.00222	0.01128	0.0002	0.04824	0.0014	73	4.2	72	2.0	111	134.5	1.4	34.9	72.3	2.0
G43	743	138	0.19	0.0736	0.00235	0.01129	0.0002	0.04739	0.0015	72	4.5	72	2.1	68	147.9	-0.4	-6.0	72.4	2.1
G84	745	27	0.04	0.0827	0.00298	0.01147	0.0002	0.05244	0.0019	81	5.6	74	2.2	305	159.0	9.8	75.9	73.5	2.2
G93	130	151	1.16	0.0768	0.00496	0.01164	0.0002	0.04797	0.0031	75	9.4	75	2.7	97	298.1	0.7	22.7	74.6	2.7
G118	328	127	0.39	0.0783	0.00416	0.01193	0.0002	0.04770	0.0026	77	7.8	77	2.5	83	246.7	0.0	8.3	76.5	2.5
G150	207	120	0.58	0.0820	0.00652	0.01248	0.0003	0.04776	0.0039	80	12.2	80	3.2	86	363.4	0.0	7.3	80.0	3.2
G40	550	81	0.15	0.0840	0.00425	0.01270	0.0002	0.04811	0.0025	82	8.0	81	2.7	105	232.4	0.7	22.3	81.3	2.7
G114	380	80	0.21	0.0853	0.00346	0.01284	0.0002	0.04827	0.0020	83	6.5	82	2.5	113	186.1	1.1	27.1	82.2	2.5
G58	51	441	8.63	0.0884	0.00592	0.01340	0.0002	0.04795	0.0032	86	11.0	86	3.1	96	307.7	0.2	10.5	85.8	3.1
G71	409	162	0.40	0.0992	0.00441	0.01383	0.0002	0.05213	0.0023	96	8.1	89	2.8	291	197.5	8.4	69.6	88.6	2.8
G74	664	112	0.17	0.0942	0.00294	0.01430	0.0002	0.04786	0.0015	91	5.5	92	2.6	91	144.5	-0.2	-0.5	91.6	2.6
G116	107	61	0.56	0.0965	0.00262	0.01445	0.0002	0.04857	0.0013	94	4.9	93	2.5	127	122.0	1.2	27.3	92.5	2.5
G94	86	57	0.66	0.0992	0.00283	0.01468	0.0002	0.04910	0.0014	96	5.2	94	2.6	153	128.4	2.2	38.5	93.9	2.6
G38	335	65	0.20	0.0978	0.00280	0.01471	0.0002	0.04832	0.0014	95	5.2	94	2.6	115	129.4	0.6	18.2	94.1	2.6
G131	62	21	0.34	0.0963	0.00398	0.01488	0.0002	0.04704	0.0019	93	7.4	95	2.9	51	192.4	-2.0	-87.0	95.2	2.9
G57	353	163	0.46	0.1087	0.00461	0.01556	0.0002	0.05079	0.0022	105	8.5	100	3.1	232	190.6	5.2	57.0	99.6	3.1
G98	398	313	0.79	0.1052	0.00471	0.01595	0.0003	0.04794	0.0022	102	8.7	102	3.2	95	208.4	-0.4	-6.9	102.0	3.2
G132	121	97	0.80	0.1102	0.00277	0.01678	0.0002	0.04772	0.0012	106	5.1	107	2.9	85	115.0	-1.1	-27.0	107.3	2.9
G90	380	94	0.25	0.1309	0.00402	0.01877	0.0003	0.05069	0.0015	125	7.2	120	3.4	227	137.0	4.2	47.1	119.9	3.4
G28	262	129	0.49	0.1801	0.00578	0.02601	0.0004	0.05034	0.0016	168	9.9	166	4.7	211	143.3	1.6	21.5	165.5	4.7
G146	120	129	1.08	0.1822	0.00582	0.02604	0.0004	0.05088	0.0016	170	10.0	166	4.7	235	142.6	2.6	29.6	165.7	4.7
G8	218	362	1.66	0.1882	0.00536	0.02740	0.0004	0.04994	0.0014	175	9.2	174	4.9	192	126.7	0.5	9.4	174.2	4.9
G45	310	231	0.75	0.1833	0.01327	0.02744	0.0005	0.04856	0.0036	171	22.8	175	6.6	127	327.8	-2.1	-37.7	174.5	6.6
G69	232	254	1.10	0.1948	0.00985	0.02980	0.0005	0.04753	0.0024	181	16.7	189	6.2	75	234.8	-4.5	-151.1	189.3	6.2
G124	120	191	1.60	0.2026	0.00634	0.02996	0.0004	0.04918	0.0015	187	10.7	190	5.4	156	141.3	-1.5	-21.8	190.3	5.4
G12	948	175	0.18	0.2108	0.00456	0.03011	0.0004	0.05089	0.0010	194	7.7	191	5.1	236	92.6	1.5	18.9	191.3	5.1
G119	505	21	0.04	0.2327	0.00740	0.03325	0.0005	0.05089	0.0016	212	12.2	211	6.0	236	141.7	0.8	10.5	210.8	6.0
G148	576	158	0.28	0.2479	0.01456	0.03611	0.0007	0.04991	0.0030	225	23.7	229	8.1	191	265.5	-1.7	-19.9	228.7	8.1
G51	1020	16	0.02	0.3959	0.00807	0.05351	0.0007	0.05378	0.0010	339	11.7	336	8.8	362	84.8	0.8	7.1	336.1	8.8
G104	96	78	0.81	0.5818	0.01307	0.07444	0.0010	0.05681	0.0012	466	16.8	463	12.2	484	93.4	0.6	4.3	462.8	12.2
G59	76	134	1.76	0.7916	0.01614	0.09528	0.0013	0.06040	0.0012	592	18.3	587	15.1	618	81.1	0.9	5.0	586.7	15.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G110	463	30	0.06	0.8826	0.03962	0.09794	0.0017	0.06551	0.0030	642	42.7	602	19.6	791	184.8	6.7	23.8	602.3	19.6
G143	231	965	4.18	0.8000	0.01642	0.09805	0.0013	0.05932	0.0011	597	18.5	603	15.5	579	82.5	-1.0	-4.2	602.9	15.5
G125	406	48	0.12	1.6512	0.04303	0.16083	0.0023	0.07464	0.0019	990	33.0	961	25.6	1058	101.2	3.0	9.2	961.4	25.6
G39	676	189	0.28	1.7599	0.05038	0.17019	0.0025	0.07517	0.0021	1031	37.1	1013	27.7	1073	111.0	1.7	5.6	1013.2	27.7
G107	122	182	1.49	1.7131	0.03528	0.17120	0.0023	0.07274	0.0014	1014	26.4	1019	25.6	1007	77.4	-0.5	-1.2	1018.7	25.6
GG1	33	76	2.28	1.7912	0.04062	0.17341	0.0024	0.07509	0.0016	1042	29.6	1031	26.3	1071	86.0	1.1	3.7	1030.9	26.3
G41	82	83	1.01	1.7591	0.02916	0.17411	0.0023	0.07344	0.0011	1031	21.5	1035	25.3	1026	57.9	-0.4	-0.8	1034.7	25.3
G7	283	680	2.40	1.9355	0.04066	0.17434	0.0024	0.08071	0.0016	1094	28.1	1036	26.4	1214	76.7	5.6	14.7	1036.0	26.4
G50	132	97	0.74	1.7425	0.03550	0.17467	0.0024	0.07252	0.0014	1024	26.3	1038	26.1	1001	76.3	-1.3	-3.7	1037.8	26.1
G34	161	201	1.24	1.8819	0.03989	0.17536	0.0024	0.07801	0.0016	1075	28.1	1042	26.5	1147	78.3	3.2	9.2	1041.6	26.5
G134	58	412	7.09	1.7665	0.06064	0.17616	0.0027	0.07289	0.0025	1033	44.5	1046	30.1	1011	135.8	-1.2	-3.5	1046.0	30.1
G120	128	189	1.48	1.7655	0.03578	0.17627	0.0024	0.07281	0.0014	1033	26.3	1047	26.2	1009	76.0	-1.3	-3.8	1046.6	26.2
G47	48	142	2.94	1.9020	0.05423	0.17761	0.0026	0.07785	0.0022	1082	37.9	1054	28.8	1143	109.4	2.6	7.8	1053.9	28.8
G75	904	160	0.18	1.9936	0.04460	0.19429	0.0027	0.07459	0.0016	1113	30.3	1145	29.1	1057	85.1	-2.7	-8.3	1057.2	85.1
G140	381	354	0.93	1.8073	0.03853	0.17913	0.0025	0.07334	0.0015	1048	27.9	1062	26.7	1023	80.5	-1.3	-3.8	1062.2	26.7
G130	317	125	0.39	1.9590	0.07034	0.17972	0.0029	0.07924	0.0029	1102	48.3	1066	31.6	1178	139.2	3.4	9.6	1065.5	31.6
G13	49	48	0.97	1.8887	0.02968	0.18118	0.0024	0.07578	0.0010	1077	20.9	1073	26.0	1089	53.6	0.3	1.5	1073.4	26.0
G37	627	176	0.28	1.8407	0.03177	0.18129	0.0024	0.07381	0.0011	1060	22.7	1074	26.3	1036	61.6	-1.3	-3.6	1074.0	26.3
G101	773	51	0.07	1.9293	0.04089	0.18648	0.0026	0.07521	0.0015	1091	28.3	1102	27.7	1074	79.3	-1.0	-2.6	1074.1	79.3
G85	1697	92	0.05	1.9262	0.04246	0.18618	0.0026	0.07521	0.0016	1090	29.5	1101	28.0	1074	83.0	-0.9	-2.5	1074.2	83.0
G3	199	126	0.63	2.0366	0.09161	0.18236	0.0033	0.08118	0.0037	1128	61.3	1080	35.6	1226	173.5	4.4	11.9	1079.9	35.6
G151	468	219	0.47	1.8561	0.06494	0.18291	0.0029	0.07377	0.0026	1066	46.2	1083	31.2	1035	138.0	-1.6	-4.6	1082.8	31.2
G96	265	197	0.74	1.9158	0.03455	0.18316	0.0024	0.07604	0.0012	1087	24.1	1084	26.6	1096	64.9	0.2	1.1	1084.2	26.6
G92	899	58	0.06	1.8949	0.05897	0.18383	0.0028	0.07493	0.0023	1079	41.4	1088	30.4	1067	121.5	-0.8	-2.0	1087.9	30.4
G111	1189	309	0.26	1.9369	0.04304	0.18533	0.0026	0.07597	0.0016	1094	29.8	1096	27.9	1094	83.6	-0.2	-0.1	1096.0	27.9
G89	394	24	0.06	1.9853	0.03370	0.18907	0.0025	0.07633	0.0012	1111	22.9	1116	27.1	1104	60.2	-0.5	-1.1	1103.8	60.2
G11	379	137	0.36	2.0643	0.05694	0.19621	0.0029	0.07648	0.0021	1137	37.7	1155	31.0	1108	105.9	-1.5	-4.3	1107.7	105.9
G14	846	240	0.28	2.0162	0.03388	0.19157	0.0025	0.07651	0.0011	1121	22.8	1130	27.5	1109	58.7	-0.8	-1.9	1108.5	58.7
G79	406	63	0.15	2.1860	0.04039	0.20463	0.0027	0.07766	0.0013	1177	25.7	1200	29.4	1138	66.4	-2.0	-5.4	1138.2	66.4
G20	136	216	1.59	2.0742	0.04713	0.19049	0.0027	0.07916	0.0017	1140	31.1	1124	28.9	1176	84.5	1.5	4.4	1176.1	84.5
G4	1	375	#####	2.1230	0.03293	0.19420	0.0026	0.07947	0.0011	1156	21.4	1144	27.6	1184	51.9	1.1	3.4	1183.9	51.9
G42	108	35	0.33	2.2201	0.04473	0.20235	0.0028	0.07976	0.0015	1187	28.2	1188	29.6	1191	73.2	0.0	0.3	1191.0	73.2
G86	161	49	0.31	2.2819	0.05761	0.20698	0.0030	0.08014	0.0020	1207	35.6	1213	31.8	1201	95.1	-0.5	-1.0	1200.5	95.1
G122	136	53	0.39	2.2638	0.04234	0.20485	0.0027	0.08033	0.0014	1201	26.3	1201	29.4	1205	67.0	0.0	0.3	1205.2	67.0

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G49	490	347	0.71	2.1725	0.03610	0.19534	0.0026	0.08085	0.0012	1172	23.1	1150	27.9	1218	57.1	1.9	5.5	1217.8	57.1
G64	676	112	0.17	2.3155	0.08031	0.20801	0.0033	0.08093	0.0028	1217	49.2	1218	35.4	1220	133.0	-0.1	0.1	1219.6	133.0
G126	521	42	0.08	2.3137	0.04423	0.20673	0.0028	0.08136	0.0014	1217	27.1	1211	29.7	1230	68.6	0.4	1.5	1230.1	68.6
G60	394	6	0.02	2.3450	0.03932	0.20934	0.0028	0.08143	0.0012	1226	23.9	1225	29.5	1232	57.7	0.1	0.5	1231.9	57.7
G19	1062	92	0.09	2.4115	0.04229	0.21487	0.0029	0.08159	0.0013	1246	25.2	1255	30.5	1236	61.1	-0.7	-1.5	1235.6	61.1
G103	213	337	1.58	2.4913	0.05144	0.22166	0.0030	0.08170	0.0016	1270	29.9	1291	32.0	1238	74.7	-1.6	-4.2	1238.4	74.7
G138	109	157	1.44	2.3558	0.06265	0.20894	0.0030	0.08196	0.0021	1229	37.9	1223	32.4	1245	100.1	0.5	1.7	1244.7	100.1
G21	24	51	2.11	2.4765	0.05407	0.21877	0.0031	0.08229	0.0017	1265	31.6	1275	32.3	1253	79.7	-0.8	-1.8	1252.5	79.7
G24	76	45	0.59	2.4867	0.04222	0.21822	0.0029	0.08284	0.0013	1268	24.6	1272	30.7	1266	58.1	-0.3	-0.5	1265.5	58.1
G67	2530	14	0.01	2.4243	0.04060	0.20986	0.0028	0.08398	0.0013	1250	24.1	1228	29.6	1292	57.2	1.8	5.0	1292.0	57.2
G139	349	62	0.18	2.7357	0.05553	0.23070	0.0032	0.08620	0.0016	1338	30.2	1338	33.0	1343	72.7	0.0	0.3	1342.7	72.7
G22	204	169	0.83	2.8863	0.07127	0.23928	0.0035	0.08769	0.0021	1378	37.2	1383	36.0	1376	90.3	-0.3	-0.5	1375.7	90.3
G15	714	93	0.13	2.9772	0.05364	0.24660	0.0033	0.08777	0.0014	1402	27.4	1421	34.3	1377	61.9	-1.3	-3.2	1377.4	61.9
G55	74	994	13.52	3.1080	0.05458	0.25430	0.0034	0.08885	0.0014	1435	27.0	1461	35.0	1401	59.8	-1.8	-4.3	1400.8	59.8
G141	189	25	0.13	3.0460	0.05616	0.24808	0.0033	0.08926	0.0015	1419	28.2	1429	34.3	1410	63.9	-0.7	-1.3	1409.6	63.9
G6	768	154	0.20	3.0058	0.05057	0.24422	0.0033	0.08947	0.0013	1409	25.6	1409	33.7	1414	56.3	0.0	0.4	1414.3	56.3
G108	45	28	0.62	3.0040	0.06047	0.23912	0.0033	0.09132	0.0017	1409	30.7	1382	34.1	1453	71.1	1.9	4.9	1453.3	71.1
G135	568	56	0.10	3.3130	0.05628	0.26228	0.0035	0.09183	0.0014	1484	26.5	1502	35.4	1464	57.4	-1.2	-2.6	1463.7	57.4
G91	157	72	0.46	3.4107	0.08764	0.26390	0.0039	0.09395	0.0024	1507	40.4	1510	39.6	1507	93.2	-0.2	-0.2	1507.2	93.2
G17	350	296	0.84	3.2628	0.05871	0.24944	0.0034	0.09509	0.0016	1472	28.0	1436	34.7	1530	60.7	2.5	6.2	1529.9	60.7
G80	28	56	2.00	3.9780	0.06083	0.28753	0.0038	0.10058	0.0013	1630	24.8	1629	37.6	1635	48.1	0.0	0.3	1634.7	48.1
G127	1868	54	0.03	4.3257	0.06905	0.30599	0.0040	0.10277	0.0014	1698	26.3	1721	39.6	1675	51.1	-1.3	-2.8	1674.7	51.1
G144	284	222	0.78	4.1949	0.07332	0.29551	0.0039	0.10319	0.0016	1673	28.7	1669	39.1	1682	57.8	0.2	0.8	1682.4	57.8
G128	189	128	0.68	4.4706	0.07895	0.31173	0.0042	0.10425	0.0017	1726	29.3	1749	41.0	1701	58.4	-1.4	-2.8	1701.2	58.4
G123	6	95	15.03	4.4260	0.07426	0.30775	0.0041	0.10455	0.0016	1717	27.8	1730	40.1	1706	54.5	-0.7	-1.4	1706.4	54.5
G99	1604	665	0.41	4.3434	0.07971	0.30075	0.0041	0.10499	0.0018	1702	30.3	1695	40.3	1714	61.1	0.4	1.1	1714.1	61.1
G142	96	196	2.04	4.4613	0.07845	0.30800	0.0041	0.10529	0.0017	1724	29.2	1731	40.5	1720	58.0	-0.4	-0.7	1719.5	58.0
G109	667	444	0.67	4.5010	0.07430	0.31016	0.0041	0.10549	0.0015	1731	27.4	1742	40.3	1723	53.1	-0.6	-1.1	1722.9	53.1
G27	426	465	1.09	4.4898	0.07544	0.30723	0.0041	0.10624	0.0016	1729	27.9	1727	40.5	1736	54.1	0.1	0.5	1735.8	54.1
G46	919	290	0.32	4.6868	0.07413	0.31771	0.0042	0.10724	0.0015	1765	26.5	1779	41.0	1753	49.5	-0.8	-1.4	1753.1	49.5
G136	1509	19	0.01	4.7665	0.08180	0.32295	0.0043	0.10729	0.0017	1779	28.8	1804	41.8	1754	55.8	-1.4	-2.9	1754.0	55.8
G145	426	33	0.08	5.0020	0.08532	0.33844	0.0045	0.10744	0.0016	1820	28.9	1879	43.2	1757	55.3	-3.2	-7.0	1756.5	55.3
G77	155	701	4.52	4.7867	0.07615	0.32057	0.0042	0.10855	0.0015	1783	26.7	1793	41.2	1775	50.1	-0.6	-1.0	1775.1	50.1
G35	353	21	0.06	5.0242	0.07656	0.32225	0.0042	0.11334	0.0015	1823	25.8	1801	41.2	1854	46.4	1.3	2.9	1853.7	46.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G112	55	93	1.70	5.1739	0.09822	0.33175	0.0045	0.11337	0.0020	1848	32.3	1847	43.6	1854	62.8	0.1	0.4	1854.2	62.8
G18	157	383	2.44	5.2545	0.12934	0.33531	0.0050	0.11392	0.0027	1862	42.0	1864	48.3	1863	85.0	-0.1	-0.1	1862.9	85.0
G26	43	273	6.41	5.2923	0.08638	0.33597	0.0045	0.11451	0.0016	1868	27.9	1867	43.1	1872	51.1	0.0	0.3	1872.2	51.1
G52	1108	126	0.11	5.4493	0.08652	0.34528	0.0046	0.11473	0.0016	1893	27.2	1912	43.7	1876	49.2	-1.0	-1.9	1875.7	49.2
G133	126	82	0.65	5.5291	0.09371	0.34942	0.0046	0.11503	0.0017	1905	29.1	1932	44.3	1880	54.1	-1.4	-2.7	1880.3	54.1
G95	510	207	0.41	5.6819	0.10736	0.35515	0.0049	0.11630	0.0020	1929	32.6	1959	46.3	1900	62.0	-1.6	-3.1	1900.1	62.0
G82	117	94	0.80	5.8511	0.09706	0.36320	0.0048	0.11711	0.0017	1954	28.8	1997	45.7	1913	52.2	-2.2	-4.4	1912.6	52.2
G72	210	93	0.44	10.8667	0.16660	0.48442	0.0064	0.16307	0.0021	2512	28.5	2547	55.3	2488	43.9	-1.4	-2.4	2487.8	43.9
G10	400	137	0.34	11.8338	0.17483	0.48422	0.0063	0.17766	0.0022	2591	27.7	2546	55.0	2631	40.7	1.8	3.3	2631.2	40.7
G147	201	191	0.95	12.1872	0.19136	0.49714	0.0065	0.17821	0.0024	2619	29.5	2602	56.0	2636	45.0	0.7	1.3	2636.3	45.0
G83	1494	358	0.24	12.9021	0.22984	0.50582	0.0070	0.18543	0.0030	2673	33.6	2639	60.0	2702	53.1	1.3	2.3	2702.0	53.1
G113	68	290	4.25	13.9886	0.24620	0.54485	0.0075	0.18664	0.0030	2749	33.4	2804	62.5	2713	52.2	-2.0	-3.4	2712.8	52.2
G121	1288	316	0.25	13.7233	0.23450	0.53361	0.0072	0.18696	0.0029	2731	32.3	2757	60.8	2716	50.2	-0.9	-1.5	2715.6	50.2
G65	298	181	0.61	13.6499	0.22008	0.52765	0.0071	0.18806	0.0027	2726	30.5	2732	59.7	2725	46.1	-0.2	-0.2	2725.3	46.1
G63	153	48	0.31	14.6014	0.22235	0.56414	0.0074	0.18816	0.0024	2790	28.9	2884	61.1	2726	42.4	-3.3	-5.8	2726.1	42.4
G48	368	478	1.30	13.9531	0.22918	0.53856	0.0073	0.18834	0.0027	2747	31.1	2777	61.0	2728	47.3	-1.1	-1.8	2727.7	47.3
G73	391	268	0.69	14.2385	0.22720	0.54188	0.0072	0.19102	0.0027	2766	30.3	2791	60.4	2751	45.4	-0.9	-1.5	2750.9	45.4
G33	198	534	2.69	14.1410	0.22708	0.53789	0.0072	0.19112	0.0027	2759	30.5	2775	60.6	2752	45.7	-0.6	-0.8	2751.8	45.7
G32	332	393	1.18	13.9135	0.20838	0.52648	0.0069	0.19212	0.0024	2744	28.4	2727	58.3	2760	41.1	0.6	1.2	2760.4	41.1
G66	384	107	0.28	15.3243	0.22773	0.54533	0.0071	0.20428	0.0026	2836	28.3	2806	59.3	2861	40.4	1.1	1.9	2860.7	40.4
G23	76	95	1.26	17.3369	0.25798	0.61036	0.0080	0.20649	0.0026	2954	28.6	3071	64.1	2878	40.3	-3.8	-6.7	2878.2	40.3
G70	2037	23	0.01	17.2737	0.25948	0.59615	0.0078	0.21064	0.0027	2950	28.8	3014	63.0	2911	40.9	-2.1	-3.6	2910.5	40.9
G87	603	65	0.11	18.0012	0.37459	0.58188	0.0088	0.22489	0.0045	2990	40.0	2956	72.1	3016	62.9	1.1	2.0	3016.0	62.9
G137	1335	153	0.11	28.0092	0.44091	0.68689	0.0091	0.29643	0.0041	3419	30.9	3371	69.3	3452	42.2	1.4	2.3	3451.6	42.2
Sample W11-2																			
G1	1239	883	0.71	0.1047	0.00273	0.01446	0.0002	0.05278	0.0014	101	5.0	93	2.0	319	118.6	9.3	71.0	92.5	2.0
G2	386	135	0.35	4.9830	0.06793	0.31139	0.0032	0.11666	0.0016	1816	23.1	1748	31.3	1906	49.7	3.9	8.3	1905.7	49.7
G3	426	192	0.45	3.9615	0.05426	0.27396	0.0028	0.10541	0.0015	1626	22.2	1561	28.3	1722	51.0	4.2	9.3	1721.5	51.0
G4	292	122	0.42	4.2454	0.05924	0.28532	0.0029	0.10847	0.0016	1683	22.9	1618	29.3	1774	51.8	4.0	8.8	1773.8	51.8
G5	281	46	0.16	1.5072	0.02449	0.15327	0.0016	0.07169	0.0012	933	19.8	919	17.8	977	67.1	1.5	5.9	919.3	17.8
G6	71	22	0.30	2.1583	0.04670	0.18488	0.0021	0.08510	0.0019	1168	30.0	1094	22.5	1318	84.9	6.8	17.0	1093.6	22.5
G7	367	162	0.44	4.4417	0.06187	0.29605	0.0030	0.10937	0.0016	1720	23.1	1672	30.2	1789	51.6	2.9	6.5	1788.8	51.6
G8	292	85	0.29	4.2769	0.05975	0.29074	0.0030	0.10723	0.0015	1689	23.0	1645	29.8	1753	51.8	2.7	6.1	1752.9	51.8

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G9	175	78	0.45	4.2071	0.06224	0.28548	0.0030	0.10742	0.0016	1675	24.3	1619	29.7	1756	54.9	3.5	7.8	1756.2	54.9
G10	720	219	0.30	4.2759	0.05740	0.28605	0.0029	0.10896	0.0015	1689	22.1	1622	29.1	1782	49.8	4.1	9.0	1782.0	49.8
G11	407	149	0.37	4.0019	0.05510	0.27516	0.0028	0.10601	0.0015	1635	22.4	1567	28.4	1732	51.3	4.3	9.5	1731.8	51.3
G12	351	114	0.32	1.9561	0.02946	0.17095	0.0018	0.08340	0.0013	1101	20.2	1017	19.4	1278	59.8	8.2	20.4	1017.3	19.4
G13	389	240	0.62	4.2462	0.05961	0.28628	0.0029	0.10810	0.0016	1683	23.1	1623	29.4	1768	52.2	3.7	8.2	1767.6	52.2
G14	368	246	0.67	1.5663	0.02474	0.14950	0.0016	0.07635	0.0012	957	19.6	898	17.4	1104	64.1	6.5	18.7	898.2	17.4
G15	208	154	0.74	3.0784	0.04657	0.23888	0.0025	0.09392	0.0015	1427	23.2	1381	25.8	1507	58.1	3.4	8.3	1506.5	58.1
G16	25	31	1.23	12.9415	0.26920	0.49775	0.0064	0.18948	0.0041	2675	39.2	2604	55.3	2738	69.9	2.7	4.9	2737.7	69.9
G17	352	210	0.60	3.0187	0.04330	0.23777	0.0024	0.09252	0.0014	1412	21.9	1375	25.4	1478	55.5	2.7	7.0	1478.0	55.5
G18	1170	437	0.37	0.1068	0.00297	0.01525	0.0002	0.05104	0.0015	103	5.5	98	2.2	243	128.4	5.6	59.8	97.6	2.2
G19	229	123	0.54	12.5457	0.17564	0.48898	0.0051	0.18697	0.0027	2646	26.3	2566	43.9	2716	47.0	3.1	5.5	2715.7	47.0
G20	425	204	0.48	5.2586	0.07309	0.33403	0.0034	0.11472	0.0016	1862	23.7	1858	32.9	1876	51.0	0.2	0.9	1875.5	51.0
G21	545	275	0.50	2.8916	0.04066	0.23166	0.0024	0.09096	0.0013	1380	21.2	1343	24.7	1446	54.5	2.7	7.1	1445.6	54.5
G22	238	99	0.41	3.9928	0.05859	0.27800	0.0029	0.10466	0.0016	1633	23.8	1581	28.9	1708	55.0	3.3	7.4	1708.3	55.0
G23	185	108	0.59	4.3021	0.06444	0.29203	0.0030	0.10734	0.0017	1694	24.7	1652	30.2	1755	55.7	2.5	5.9	1754.7	55.7
G24	173	76	0.44	3.9775	0.06114	0.27767	0.0029	0.10437	0.0017	1630	24.9	1580	29.2	1703	57.6	3.2	7.3	1703.3	57.6
G25	382	254	0.67	3.0583	0.04412	0.23879	0.0024	0.09332	0.0014	1422	22.1	1380	25.4	1494	55.6	3.0	7.6	1494.4	55.6
G26	887	804	0.91	4.5503	0.06379	0.29587	0.0030	0.11205	0.0016	1740	23.3	1671	29.9	1833	51.8	4.2	8.8	1832.9	51.8
G27	755	424	0.56	14.9678	0.20448	0.53080	0.0054	0.20544	0.0029	2813	26.0	2745	45.3	2870	45.3	2.5	4.4	2869.9	45.3
G28	255	341	1.34	1.6281	0.02777	0.14847	0.0016	0.07987	0.0014	981	21.5	892	17.5	1194	68.6	9.9	25.3	892.4	17.5
G29	1306	1200	0.92	4.0916	0.05753	0.27911	0.0028	0.10678	0.0016	1653	22.9	1587	28.4	1745	52.5	4.1	9.1	1745.1	52.5
G30	730	226	0.31	3.9959	0.05929	0.27788	0.0028	0.10473	0.0016	1633	24.1	1581	28.6	1710	55.8	3.3	7.5	1709.5	55.8
G31	651	951	1.46	0.5098	0.00955	0.06263	0.0007	0.05928	0.0011	418	12.8	392	8.0	577	82.7	6.8	32.2	391.6	8.0
G32	744	461	0.62	0.0995	0.00338	0.01416	0.0002	0.05119	0.0018	96	6.2	91	2.1	249	155.8	6.3	63.6	90.6	2.1
G33	219	164	0.75	2.7539	0.04818	0.22501	0.0024	0.08911	0.0016	1343	26.1	1308	25.0	1407	68.4	2.7	7.0	1406.5	68.4
G34	114	43	0.38	3.9266	0.07649	0.27471	0.0030	0.10404	0.0021	1619	31.5	1565	30.4	1697	73.5	3.5	7.8	1697.4	73.5
G35	170	80	0.47	1.6949	0.03799	0.16010	0.0018	0.07705	0.0018	1007	28.6	957	19.9	1123	91.1	5.1	14.7	957.3	19.9
G36	378	123	0.32	4.8506	0.08308	0.32490	0.0034	0.10866	0.0019	1794	28.8	1814	33.1	1777	64.3	-1.1	-2.1	1777.1	64.3
G37	740	170	0.23	2.9051	0.04706	0.23286	0.0024	0.09080	0.0015	1383	24.5	1350	24.9	1442	63.4	2.5	6.4	1442.4	63.4
G38	325	92	0.28	4.2938	0.07145	0.29043	0.0030	0.10760	0.0019	1692	27.4	1644	30.0	1759	62.5	3.0	6.6	1759.2	62.5
G39	203	166	0.82	4.9560	0.08409	0.31368	0.0033	0.11499	0.0020	1812	28.7	1759	32.1	1880	62.8	3.0	6.4	1879.7	62.8
G40	355	194	0.55	3.0225	0.05118	0.23624	0.0025	0.09312	0.0016	1413	25.8	1367	25.5	1490	65.9	3.4	8.3	1490.2	65.9
G41	1958	1178	0.60	0.0915	0.00216	0.01333	0.0001	0.04995	0.0012	89	4.0	85	1.8	193	111.1	4.1	55.7	85.4	1.8
G42	442	202	0.46	10.6423	0.17207	0.45062	0.0046	0.17188	0.0029	2492	30.0	2398	41.1	2576	55.6	3.9	6.9	2576.0	55.6

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G43	321	239	0.75	0.2022	0.00730	0.02736	0.0003	0.05380	0.0020	187	12.3	174	4.1	362	162.0	7.5	52.0	174.0	4.1
G44	157	97	0.62	8.3193	0.14732	0.41156	0.0044	0.14710	0.0027	2266	32.1	2222	40.2	2313	62.6	2.0	3.9	2312.5	62.6
G45	600	282	0.47	0.2018	0.00527	0.02752	0.0003	0.05335	0.0014	187	8.9	175	3.8	344	119.5	6.7	49.1	175.0	3.8
G46	456	202	0.44	4.0124	0.06851	0.28067	0.0029	0.10402	0.0019	1637	27.8	1595	29.2	1697	64.8	2.6	6.0	1697.1	64.8
G47	696	282	0.41	2.1459	0.03759	0.18211	0.0019	0.08574	0.0016	1164	24.3	1079	20.5	1332	69.9	7.9	19.0	1078.5	20.5
G48	1707	2099	1.23	0.0770	0.00197	0.01120	0.0001	0.05002	0.0013	75	3.7	72	1.6	196	120.3	4.9	63.3	71.8	1.6
G49	423	721	1.70	11.0982	0.18903	0.47256	0.0049	0.17087	0.0030	2531	31.7	2495	42.7	2566	58.8	1.5	2.8	2566.2	58.8
G50	331	261	0.79	11.9366	0.21188	0.46279	0.0049	0.18765	0.0035	2599	33.3	2452	43.2	2722	60.4	6.0	9.9	2721.7	60.4
G51	401	264	0.66	4.2310	0.07479	0.28485	0.0030	0.10806	0.0020	1680	29.0	1616	29.7	1767	66.7	4.0	8.6	1766.9	66.7
G52	473	179	0.38	4.0418	0.07219	0.28118	0.0029	0.10457	0.0020	1643	29.1	1597	29.5	1707	67.8	2.8	6.4	1706.8	67.8
G53	303	166	0.55	2.1860	0.04163	0.19415	0.0020	0.08191	0.0016	1177	26.5	1144	22.1	1243	76.5	2.9	8.0	1243.3	76.5
G54	659	328	0.50	4.3660	0.07726	0.29128	0.0030	0.10904	0.0020	1706	29.2	1648	30.0	1783	66.7	3.5	7.6	1783.3	66.7
G55	251	157	0.62	0.6615	0.01598	0.08026	0.0009	0.05995	0.0015	516	19.5	498	10.5	602	106.4	3.6	17.3	497.7	10.5
G56	453	181	0.40	4.1835	0.07565	0.28147	0.0029	0.10812	0.0020	1671	29.6	1599	29.5	1768	68.3	4.5	9.6	1767.8	68.3
G57	76	56	0.74	3.1336	0.07035	0.24598	0.0028	0.09267	0.0022	1441	34.6	1418	28.5	1481	87.4	1.6	4.3	1481.0	87.4
G58	705	660	0.94	2.9959	0.05437	0.23887	0.0025	0.09123	0.0017	1407	27.6	1381	25.8	1451	71.5	1.9	4.9	1451.3	71.5
G59	296	90	0.30	1.6664	0.03323	0.16385	0.0017	0.07398	0.0015	996	25.3	978	19.2	1041	82.7	1.8	6.0	978.1	19.2
G60	530	226	0.43	1.6873	0.03171	0.16474	0.0017	0.07450	0.0015	1004	24.0	983	19.0	1055	78.6	2.1	6.8	983.1	19.0
G61	1555	1042	0.67	0.1689	0.00371	0.02338	0.0003	0.05254	0.0012	159	6.4	149	3.1	309	101.9	6.4	51.8	149.0	3.1
G62	390	64	0.16	1.5170	0.03040	0.14584	0.0016	0.07566	0.0016	937	24.5	878	17.4	1086	82.6	6.8	19.2	877.6	17.4
G63	7421	3927	0.53	0.0352	0.00078	0.00521	0.0001	0.04913	0.0011	35	1.5	34	0.7	154	106.4	4.8	78.2	33.5	0.7
G64	637	202	0.32	4.4338	0.08075	0.29481	0.0031	0.10939	0.0021	1719	30.2	1666	30.4	1789	68.7	3.2	6.9	1789.2	68.7
G65	262	61	0.23	4.9613	0.09321	0.31562	0.0033	0.11433	0.0023	1813	31.8	1768	32.5	1869	70.1	2.5	5.4	1869.3	70.1
G66	598	476	0.80	0.7961	0.01639	0.09404	0.0010	0.06157	0.0013	595	18.5	579	11.7	659	90.7	2.6	12.1	579.4	11.7
G67	322	190	0.59	11.1866	0.20660	0.47963	0.0050	0.16962	0.0033	2539	34.4	2526	43.6	2554	64.0	0.5	1.1	2553.9	64.0
G68	366	209	0.57	0.5018	0.01238	0.06294	0.0007	0.05798	0.0015	413	16.7	394	8.4	529	110.9	4.9	25.6	393.5	8.4
G69	318	78	0.24	4.1683	0.07998	0.28957	0.0031	0.10469	0.0021	1668	31.4	1639	30.5	1709	73.0	1.7	4.1	1708.8	73.0
G70	417	173	0.41	1.8262	0.03637	0.17309	0.0018	0.07673	0.0016	1055	26.1	1029	20.1	1114	82.0	2.5	7.6	1029.1	20.1
G71	822	126	0.15	7.4702	0.13978	0.37700	0.0039	0.14409	0.0028	2169	33.5	2062	36.6	2277	66.8	5.2	9.4	2276.9	66.8
G72	490	315	0.64	4.2919	0.05529	0.29530	0.0030	0.10566	0.0014	1692	21.2	1668	29.9	1726	47.7	1.4	3.4	1725.8	47.7
G73	862	372	0.43	4.3180	0.05422	0.30297	0.0031	0.10361	0.0013	1697	20.7	1706	30.3	1690	46.7	-0.5	-1.0	1689.7	46.7
G74	268	217	0.81	12.7164	0.16080	0.49747	0.0051	0.18582	0.0024	2659	23.8	2603	43.7	2706	42.1	2.2	3.8	2705.5	42.1
G75	444	341	0.77	3.1880	0.04254	0.25345	0.0026	0.09144	0.0012	1454	20.6	1456	26.6	1456	51.2	-0.1	0.0	1455.6	51.2
G76	684	286	0.42	0.0357	0.00213	0.00518	0.0001	0.05010	0.0030	36	4.2	33	0.9	200	269.2	6.9	83.3	33.3	0.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G77	493	402	0.81	4.0119	0.05234	0.28586	0.0029	0.10203	0.0014	1637	21.2	1621	29.2	1661	48.7	1.0	2.4	1661.3	48.7
G78	323	145	0.45	4.4117	0.05910	0.29564	0.0030	0.10848	0.0015	1715	22.2	1670	30.2	1774	49.5	2.7	5.9	1774.0	49.5
G79	456	164	0.36	4.5508	0.05939	0.31348	0.0032	0.10553	0.0014	1740	21.7	1758	31.4	1724	48.4	-1.0	-2.0	1723.6	48.4
G80	680	439	0.65	0.0368	0.00218	0.00536	0.0001	0.04991	0.0030	37	4.3	35	1.0	191	267.3	6.4	81.9	34.5	1.0
G81	138	111	0.80	4.2146	0.06410	0.29090	0.0031	0.10532	0.0016	1677	25.0	1646	30.7	1720	56.6	1.9	4.3	1719.9	56.6
G82	346	258	0.75	2.2070	0.03199	0.19949	0.0021	0.08043	0.0012	1183	20.3	1173	22.1	1208	57.6	0.9	2.9	1207.5	57.6
G83	303	226	0.75	4.0127	0.05503	0.28929	0.0030	0.10084	0.0014	1637	22.3	1638	29.8	1640	51.4	-0.1	0.1	1639.6	51.4
G84	271	142	0.53	1.7615	0.02828	0.16315	0.0017	0.07849	0.0013	1031	20.8	974	19.0	1159	64.3	5.9	16.0	974.3	19.0
G85	75	41	0.54	3.8253	0.06920	0.28669	0.0032	0.09700	0.0018	1598	29.1	1625	31.6	1567	68.6	-1.7	-3.7	1567.2	68.6
G86	210	109	0.52	4.1869	0.06047	0.29159	0.0030	0.10438	0.0015	1672	23.7	1650	30.3	1704	53.7	1.3	3.2	1703.5	53.7
G87	668	124	0.19	0.5601	0.00927	0.07302	0.0008	0.05576	0.0009	452	12.1	454	9.1	443	73.4	-0.6	-2.7	454.3	9.1
G88	480	240	0.50	2.9877	0.04176	0.24217	0.0025	0.08969	0.0013	1405	21.3	1398	25.8	1419	53.8	0.5	1.5	1418.8	53.8
G89	466	69	0.15	4.1241	0.06229	0.28014	0.0030	0.10702	0.0017	1659	24.7	1592	29.7	1749	55.8	4.2	9.0	1749.3	55.8
G90	617	559	0.91	0.0655	0.00367	0.00955	0.0002	0.04991	0.0029	65	7.0	61	1.9	191	255.3	5.4	67.9	61.2	1.9
G91	229	322	1.41	2.4935	0.03922	0.21530	0.0023	0.08420	0.0014	1270	22.8	1257	24.0	1297	61.8	1.1	3.1	1297.0	61.8
G92	263	68	0.26	4.7534	0.06760	0.31720	0.0033	0.10894	0.0016	1777	23.9	1776	32.1	1782	52.4	0.0	0.3	1781.7	52.4
G93	930	403	0.43	0.0987	0.00267	0.01490	0.0002	0.04814	0.0013	96	4.9	95	2.1	106	127.8	0.2	10.1	95.3	2.1
G94	251	104	0.42	4.5639	0.06961	0.31384	0.0033	0.10572	0.0016	1743	25.4	1760	32.4	1727	56.6	-1.0	-1.9	1726.8	56.6
G95	134	63	0.47	4.4859	0.07139	0.31047	0.0033	0.10504	0.0017	1728	26.4	1743	32.5	1715	59.1	-0.8	-1.6	1715.0	59.1
G96	204	212	1.04	2.9313	0.04709	0.24092	0.0025	0.08846	0.0015	1390	24.3	1392	26.4	1392	62.1	-0.1	0.1	1392.4	62.1
G97	176	79	0.45	3.1496	0.05110	0.25134	0.0027	0.09110	0.0015	1445	25.0	1445	27.4	1449	62.4	0.0	0.2	1448.5	62.4
G98	208	137	0.66	3.2983	0.05243	0.25614	0.0027	0.09362	0.0015	1481	24.8	1470	27.7	1500	60.7	0.7	2.0	1500.4	60.7
G99	130	110	0.85	0.5987	0.02311	0.07592	0.0010	0.05733	0.0023	476	29.4	472	12.1	504	170.1	1.0	6.4	471.7	12.1
G100	293	118	0.40	2.8470	0.04663	0.23274	0.0025	0.08893	0.0015	1368	24.6	1349	25.8	1403	63.2	1.4	3.8	1402.6	63.2
G101	233	145	0.62	14.7537	0.21509	0.52497	0.0055	0.20431	0.0030	2800	27.7	2720	46.8	2861	47.9	2.9	4.9	2860.9	47.9
G102	150	77	0.51	1.8231	0.03542	0.17432	0.0019	0.07603	0.0015	1054	25.5	1036	20.9	1096	78.5	1.7	5.5	1035.9	20.9
G103	492	87	0.18	0.4287	0.00882	0.05835	0.0006	0.05341	0.0011	362	12.5	366	7.7	346	93.5	-0.9	-5.6	365.6	7.7
G104	410	203	0.50	4.7416	0.06950	0.31303	0.0032	0.11012	0.0016	1775	24.6	1756	31.8	1801	53.8	1.1	2.5	1801.4	53.8
G105	1004	1483	1.48	0.0591	0.00225	0.00873	0.0001	0.04927	0.0019	58	4.3	56	1.3	161	175.6	4.1	65.2	56.0	1.3
G106	353	158	0.45	2.4983	0.04128	0.22605	0.0024	0.08035	0.0014	1272	24.0	1314	25.1	1206	65.6	-3.2	-9.0	1205.5	65.6
G107	301	248	0.82	2.1948	0.03906	0.19824	0.0021	0.08049	0.0015	1179	24.8	1166	22.9	1209	70.7	1.2	3.6	1209.0	70.7
G108	300	76	0.25	16.6502	0.25068	0.57655	0.0061	0.20995	0.0032	2915	28.8	2935	49.7	2905	49.2	-0.7	-1.0	2905.2	49.2
G109	1256	1172	0.93	0.0323	0.00147	0.00508	0.0001	0.04631	0.0021	32	2.9	33	0.8	14	215.0	-0.9	-139.7	32.6	0.8
G110	434	174	0.40	0.3431	0.00820	0.04699	0.0005	0.05308	0.0013	300	12.4	296	6.4	332	108.7	1.2	10.9	296.0	6.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc	%disc (7/6)	Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s			[Ma]	± 2s
G111	763	99	0.13	2.1347	0.03314	0.19766	0.0021	0.07851	0.0012	1160	21.5	1163	22.1	1160	62.0	-0.2	-0.3	1159.9	62.0
G112	191	64	0.33	5.1233	0.08531	0.33144	0.0035	0.11238	0.0019	1840	28.3	1845	34.3	1838	60.9	-0.3	-0.4	1838.2	60.9
G113	337	436	1.30	0.8658	0.01729	0.09596	0.0010	0.06560	0.0013	633	18.8	591	12.2	794	84.3	7.2	25.6	590.7	12.2
G114	160	78	0.49	0.5100	0.01606	0.06712	0.0008	0.05524	0.0018	419	21.6	419	9.7	422	139.4	-0.1	0.7	418.8	9.7
G115	613	369	0.60	3.8505	0.05986	0.28013	0.0029	0.09993	0.0016	1603	25.1	1592	29.3	1623	58.2	0.7	1.9	1622.8	58.2
G116	376	344	0.92	0.4198	0.01021	0.05822	0.0007	0.05243	0.0013	356	14.6	365	7.9	304	110.8	-2.4	-19.9	364.8	7.9
G117	92	15	0.17	2.9854	0.06102	0.23543	0.0026	0.09219	0.0019	1404	31.1	1363	27.5	1471	78.5	3.0	7.4	1471.2	78.5
G118	122	68	0.55	7.4454	0.13610	0.42143	0.0047	0.12844	0.0024	2166	32.7	2267	42.5	2077	65.0	-4.4	-9.2	2076.7	65.0
G119	404	166	0.41	4.2202	0.06827	0.29863	0.0031	0.10274	0.0017	1678	26.6	1685	31.1	1674	60.2	-0.4	-0.6	1674.2	60.2
G120	157	119	0.76	2.2245	0.04592	0.20288	0.0023	0.07971	0.0017	1189	28.9	1191	24.2	1190	82.1	-0.2	-0.1	1189.9	82.1
G121	528	336	0.64	2.8149	0.04678	0.23267	0.0024	0.08796	0.0015	1360	24.9	1349	25.5	1382	64.1	0.8	2.4	1381.5	64.1
G122	230	49	0.21	2.2842	0.04231	0.20580	0.0022	0.08069	0.0015	1207	26.2	1206	23.7	1214	73.4	0.1	0.6	1213.9	73.4
G123	370	165	0.45	10.4082	0.16799	0.47173	0.0049	0.16041	0.0026	2472	29.9	2491	43.3	2460	54.9	-0.8	-1.3	2460.0	54.9
G124	841	552	0.66	0.0645	0.00248	0.01003	0.0001	0.04673	0.0018	64	4.7	64	1.6	36	182.6	-1.4	-81.4	64.4	1.6
Sample B1-2																			
G1	407	240	0.59	3.3359	0.04334	0.24954	0.0026	0.09716	0.0013	1490	20.3	1436	26.6	1570	48.7	3.7	8.5	1570.3	48.7
G2	315	153	0.49	6.4400	0.08019	0.36385	0.0038	0.12865	0.0016	2038	21.9	2000	35.4	2080	43.8	1.9	3.8	2079.6	43.8
G3	613	338	0.55	5.5826	0.06782	0.35035	0.0036	0.11582	0.0014	1913	20.9	1936	34.2	1893	43.6	-1.2	-2.3	1892.6	43.6
G4	516	448	0.87	4.2180	0.05291	0.29503	0.0030	0.10391	0.0013	1678	20.6	1667	30.2	1695	46.2	0.7	1.7	1695.2	46.2
G5	400	131	0.33	0.1859	0.00548	0.02658	0.0003	0.05083	0.0015	173	9.4	169	3.8	233	135.3	2.4	27.5	169.1	3.8
G6	1156	771	0.67	0.0792	0.00213	0.01187	0.0001	0.04847	0.0013	77	4.0	76	1.7	122	126.0	1.7	37.7	76.1	1.7
G7	304	131	0.43	3.4186	0.04540	0.26411	0.0027	0.09408	0.0013	1509	20.9	1511	27.9	1510	50.2	-0.1	-0.1	1509.7	50.2
G8	249	109	0.44	1.9616	0.03046	0.17254	0.0018	0.08263	0.0013	1102	20.9	1026	20.1	1261	60.8	7.4	18.6	1026.1	20.1
G9	160	45	0.28	2.2141	0.03649	0.20508	0.0022	0.07847	0.0013	1186	23.1	1203	23.5	1159	65.7	-1.4	-3.8	1158.8	65.7
G10	279	109	0.39	4.3468	0.05706	0.30067	0.0031	0.10508	0.0014	1702	21.7	1695	30.9	1716	48.3	0.5	1.2	1715.7	48.3
G11	207	184	0.89	4.0725	0.05604	0.28876	0.0030	0.10251	0.0014	1649	22.4	1635	30.2	1670	51.1	0.8	2.1	1670.0	51.1
G12	121	58	0.47	4.2361	0.06307	0.29527	0.0032	0.10428	0.0016	1681	24.5	1668	31.3	1702	55.1	0.8	2.0	1701.6	55.1
G13	155	298	1.92	2.7592	0.04339	0.22437	0.0024	0.08938	0.0014	1345	23.4	1305	25.3	1412	60.4	3.0	7.6	1412.3	60.4
G14	335	192	0.57	3.2374	0.04329	0.25905	0.0027	0.09083	0.0012	1466	20.7	1485	27.5	1443	51.0	-1.3	-2.9	1443.0	51.0
G15	363	255	0.70	4.2254	0.05462	0.29591	0.0031	0.10379	0.0014	1679	21.2	1671	30.4	1693	47.7	0.5	1.3	1692.9	47.7
G16	116	54	0.46	4.3436	0.06580	0.29814	0.0032	0.10589	0.0016	1702	25.0	1682	31.7	1730	55.9	1.2	2.8	1729.8	55.9
G17	273	86	0.31	1.6633	0.02586	0.16616	0.0018	0.07276	0.0012	995	19.7	991	19.4	1007	63.3	0.4	1.6	990.9	19.4
G18	840	173	0.21	4.7015	0.05779	0.31387	0.0032	0.10887	0.0014	1768	20.6	1760	31.5	1781	44.8	0.4	1.2	1780.6	44.8

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G19	246	104	0.42	4.3059	0.05808	0.30218	0.0032	0.10357	0.0014	1695	22.2	1702	31.2	1689	49.9	-0.4	-0.8	1689.0	49.9
G20	724	586	0.81	0.0963	0.00293	0.01433	0.0002	0.04881	0.0015	93	5.4	92	2.1	139	142.2	1.7	33.8	91.7	2.1
G21	317	158	0.50	2.3702	0.03384	0.20672	0.0022	0.08334	0.0012	1234	20.4	1211	23.1	1277	56.0	1.8	5.1	1276.9	56.0
G22	147	57	0.39	14.6150	0.18733	0.52976	0.0056	0.20052	0.0026	2791	24.4	2740	46.7	2830	41.9	1.8	3.2	2830.4	41.9
G23	650	661	1.02	0.1749	0.00427	0.02446	0.0003	0.05196	0.0013	164	7.4	156	3.4	284	111.7	5.0	45.1	155.8	3.4
G24	257	93	0.36	2.9617	0.04540	0.23755	0.0025	0.09062	0.0014	1398	23.3	1374	26.3	1439	58.7	1.7	4.5	1438.5	58.7
G25	208	74	0.35	2.9174	0.04309	0.22975	0.0024	0.09229	0.0014	1386	22.3	1333	25.4	1473	56.5	4.0	9.5	1473.3	56.5
G26	292	124	0.42	4.8922	0.06502	0.31725	0.0033	0.11208	0.0015	1801	22.4	1776	32.3	1834	48.2	1.4	3.1	1833.5	48.2
G27	1338	1310	0.98	0.1723	0.00331	0.02501	0.0003	0.05008	0.0010	161	5.7	159	3.4	199	89.3	1.4	19.8	159.2	3.4
G28	349	105	0.30	4.3210	0.05732	0.30204	0.0031	0.10398	0.0014	1697	21.9	1701	31.0	1696	49.0	-0.2	-0.3	1696.4	49.0
G29	445	168	0.38	0.4342	0.00883	0.05771	0.0006	0.05469	0.0011	366	12.5	362	7.6	400	89.2	1.2	9.6	361.7	7.6
G30	999	495	0.50	0.1876	0.00379	0.02656	0.0003	0.05133	0.0011	175	6.5	169	3.6	256	93.0	3.3	34.0	169.0	3.6
G31	230	102	0.44	0.5216	0.01632	0.06510	0.0008	0.05823	0.0019	426	21.8	407	9.6	538	137.9	4.8	24.4	406.6	9.6
G32	100	50	0.50	3.7101	0.06769	0.26620	0.0030	0.10130	0.0019	1574	29.2	1522	30.4	1648	68.3	3.4	7.7	1648.1	68.3
G33	823	518	0.63	0.1779	0.00434	0.02548	0.0003	0.05075	0.0013	166	7.5	162	3.6	230	112.6	2.5	29.4	162.2	3.6
G34	298	234	0.79	3.1118	0.04375	0.24639	0.0026	0.09180	0.0013	1436	21.6	1420	26.6	1463	53.8	1.1	3.0	1463.0	53.8
G35	579	157	0.27	1.6995	0.02506	0.16612	0.0017	0.07436	0.0011	1008	18.9	991	19.2	1051	59.6	1.8	5.8	990.7	19.2
G36	572	328	0.57	4.1656	0.05417	0.28315	0.0029	0.10693	0.0014	1667	21.3	1607	29.3	1748	47.5	3.7	8.0	1747.7	47.5
G37	295	82	0.28	4.4107	0.06036	0.30262	0.0032	0.10593	0.0015	1714	22.7	1704	31.2	1731	50.3	0.6	1.5	1730.6	50.3
G38	110	60	0.54	0.9704	0.02543	0.10304	0.0012	0.06845	0.0018	689	26.2	632	14.2	882	108.8	8.9	28.3	632.2	14.2
G39	283	64	0.23	4.0422	0.05618	0.28937	0.0030	0.10153	0.0014	1643	22.6	1638	30.2	1652	51.7	0.3	0.8	1652.3	51.7
G40	616	99	0.16	1.7356	0.02443	0.16649	0.0017	0.07577	0.0011	1022	18.1	993	19.1	1089	56.5	2.9	8.8	992.8	19.1
G41	364	244	0.67	6.7722	0.08909	0.36566	0.0038	0.13462	0.0018	2082	23.3	2009	35.8	2159	46.0	3.6	7.0	2159.0	46.0
G42	832	321	0.39	0.1043	0.00371	0.01462	0.0002	0.05184	0.0019	101	6.8	94	2.3	278	161.9	7.6	66.4	93.6	2.3
G43	666	34	0.05	4.4507	0.05896	0.30704	0.0032	0.10536	0.0014	1722	22.0	1726	31.3	1721	48.7	-0.2	-0.3	1720.6	48.7
G44	510	103	0.20	4.0593	0.05594	0.29447	0.0031	0.10020	0.0014	1646	22.5	1664	30.5	1628	51.3	-1.1	-2.2	1627.7	51.3
G45	359	157	0.44	0.1089	0.00487	0.01634	0.0002	0.04844	0.0022	105	8.9	105	2.7	121	207.1	0.5	13.6	104.5	2.7
G46	139	95	0.69	12.4266	0.17444	0.50345	0.0054	0.17941	0.0026	2637	26.4	2629	45.9	2647	46.8	0.3	0.7	2647.4	46.8
G47	394	190	0.48	0.0810	0.00511	0.01220	0.0002	0.04828	0.0031	79	9.6	78	2.4	113	289.6	1.2	30.7	78.2	2.4
G48	523	227	0.43	1.8560	0.02947	0.17608	0.0019	0.07661	0.0012	1066	21.0	1046	20.4	1111	63.7	1.9	5.9	1045.5	20.4
G49	274	338	1.23	0.4970	0.01260	0.06352	0.0007	0.05687	0.0015	410	17.1	397	8.8	486	111.9	3.2	18.3	397.0	8.8
G50	436	163	0.37	1.4810	0.02316	0.15072	0.0016	0.07142	0.0011	923	19.0	905	17.8	970	64.0	2.0	6.7	905.0	17.8
G51	812	409	0.50	1.9102	0.02699	0.18053	0.0019	0.07691	0.0011	1085	18.8	1070	20.5	1119	56.5	1.4	4.4	1069.9	20.5
G52	520	558	1.07	0.2625	0.00680	0.03664	0.0004	0.05207	0.0014	237	10.9	232	5.2	289	118.3	2.0	19.6	232.0	5.2

Table S2

Grain	U		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G53	153	121	0.79	4.3305	0.06909	0.30199	0.0033	0.10423	0.0017	1699	26.3	1701	32.2	1701	59.1	-0.1	0.0	1700.8	59.1
G54	228	63	0.28	2.1604	0.03602	0.19802	0.0021	0.07930	0.0013	1168	23.1	1165	22.8	1180	66.2	0.3	1.3	1179.6	66.2
G55	745	176	0.24	4.2435	0.06065	0.28577	0.0030	0.10793	0.0016	1683	23.5	1620	30.0	1765	52.3	3.8	8.2	1764.8	52.3
G56	433	152	0.35	4.1846	0.06227	0.28532	0.0030	0.10660	0.0016	1671	24.4	1618	30.2	1742	54.6	3.3	7.1	1742.1	54.6
G57	330	80	0.24	0.1260	0.00588	0.01813	0.0002	0.05052	0.0024	121	10.6	116	3.0	219	212.0	4.1	47.1	115.8	3.0
G58	91	78	0.86	1.9228	0.04326	0.18165	0.0021	0.07694	0.0018	1089	30.1	1076	22.8	1120	90.3	1.2	3.9	1076.0	22.8
G59	411	138	0.34	2.1284	0.03293	0.19840	0.0021	0.07797	0.0012	1158	21.4	1167	22.5	1146	61.7	-0.7	-1.8	1146.2	61.7
G60	216	114	0.53	4.7604	0.07226	0.31230	0.0033	0.11080	0.0017	1778	25.5	1752	32.5	1813	55.4	1.5	3.3	1812.5	55.4
G61	238	126	0.53	4.0536	0.06513	0.28665	0.0031	0.10279	0.0017	1645	26.2	1625	30.8	1675	59.7	1.2	3.0	1675.1	59.7
G62	123	92	0.75	24.4605	0.34756	0.65806	0.0070	0.27017	0.0039	3287	27.7	3260	54.5	3307	44.7	0.8	1.4	3307.0	44.7
G63	294	324	1.10	4.9450	0.07353	0.31974	0.0034	0.11242	0.0017	1810	25.1	1788	32.9	1839	54.1	1.2	2.7	1838.8	54.1
G64	295	126	0.43	0.1481	0.00668	0.02030	0.0003	0.05304	0.0024	140	11.8	130	3.5	330	201.5	8.3	60.8	129.6	3.5
G65	166	58	0.35	1.4606	0.03003	0.13829	0.0015	0.07677	0.0016	914	24.8	835	17.5	1115	82.6	9.5	25.1	835.0	17.5
G66	387	454	1.18	15.9869	0.23060	0.55803	0.0059	0.20824	0.0030	2876	27.6	2859	48.9	2892	47.0	0.6	1.2	2891.9	47.0
G67	655	298	0.45	2.0897	0.03172	0.18109	0.0019	0.08388	0.0013	1145	20.9	1073	20.7	1290	59.4	6.8	16.8	1072.9	20.7
G68	35	50	1.43	1.6741	0.07047	0.15891	0.0022	0.07657	0.0033	999	53.5	951	24.8	1110	166.9	5.0	14.4	950.7	24.8
G69	1108	320	0.29	1.8196	0.02804	0.17524	0.0018	0.07548	0.0012	1053	20.2	1041	20.2	1081	62.0	1.1	3.7	1040.9	20.2
G70	382	133	0.35	4.2891	0.06467	0.29451	0.0031	0.10586	0.0016	1691	24.8	1664	30.9	1729	55.6	1.6	3.8	1729.2	55.6
G71	201	81	0.40	1.8264	0.03577	0.17328	0.0019	0.07661	0.0015	1055	25.7	1030	21.0	1111	78.7	2.4	7.3	1030.2	21.0
G72	202	130	0.64	0.5225	0.01488	0.06733	0.0008	0.05640	0.0016	427	19.9	420	9.5	468	126.6	1.6	10.2	420.0	9.5
G73	205	160	0.78	4.3028	0.07437	0.29970	0.0033	0.10436	0.0018	1694	28.5	1690	32.5	1703	64.1	0.2	0.8	1703.0	64.1
G74	330	216	0.65	4.8379	0.07401	0.32162	0.0034	0.10934	0.0017	1792	25.7	1798	33.1	1788	56.0	-0.3	-0.5	1788.3	56.0
G75	193	193	1.00	3.1715	0.05417	0.25458	0.0028	0.09055	0.0016	1450	26.4	1462	28.2	1437	65.5	-0.8	-1.7	1437.1	65.5
G76	263	121	0.46	4.0842	0.06810	0.28335	0.0031	0.10477	0.0018	1651	27.2	1608	30.7	1710	61.8	2.7	6.0	1710.3	61.8
G77	160	59	0.37	2.1989	0.04407	0.20075	0.0022	0.07962	0.0016	1181	28.0	1179	24.1	1188	79.7	0.1	0.7	1187.5	79.7
G78	740	503	0.68	0.0923	0.00340	0.01346	0.0002	0.04981	0.0019	90	6.3	86	2.1	186	169.9	3.9	53.7	86.2	2.1
G79	390	612	1.57	0.8585	0.01644	0.10197	0.0011	0.06120	0.0012	629	18.0	626	12.9	646	82.6	0.5	3.1	626.0	12.9
G80	254	98	0.38	3.2841	0.05597	0.25619	0.0028	0.09318	0.0016	1477	26.5	1470	28.3	1492	64.9	0.5	1.4	1491.5	64.9
G81	72	38	0.53	2.6523	0.06195	0.22548	0.0027	0.08550	0.0020	1315	34.4	1311	27.8	1327	91.2	0.4	1.2	1326.9	91.2
G82	225	129	0.57	4.4358	0.07275	0.31055	0.0033	0.10382	0.0017	1719	27.2	1743	32.7	1694	60.8	-1.4	-2.9	1693.6	60.8
G83	682	494	0.72	4.7769	0.07319	0.31091	0.0033	0.11168	0.0017	1781	25.7	1745	32.1	1827	55.8	2.0	4.5	1826.9	55.8
G84	705	364	0.52	4.5526	0.07000	0.31337	0.0033	0.10560	0.0016	1741	25.6	1757	32.3	1725	56.7	-1.0	-1.9	1724.8	56.7
G85	147	86	0.58	4.2021	0.07545	0.29903	0.0033	0.10214	0.0019	1674	29.5	1687	32.5	1663	66.9	-0.7	-1.4	1663.4	66.9
G86	735	452	0.61	2.0800	0.03689	0.18985	0.0021	0.07963	0.0014	1142	24.3	1121	22.2	1188	70.4	1.9	5.7	1187.9	70.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G87	514	474	0.92	1.9156	0.03972	0.17769	0.0020	0.07836	0.0017	1087	27.7	1054	21.8	1156	82.8	3.1	8.8	1054.3	21.8
G88	694	450	0.65	3.6602	0.05920	0.26313	0.0028	0.10111	0.0017	1563	25.8	1506	28.4	1645	60.3	3.8	8.4	1644.5	60.3
G89	3139	859	0.27	0.0933	0.00208	0.01392	0.0002	0.04872	0.0011	91	3.9	89	1.9	134	104.8	1.7	33.7	89.1	1.9
G90	170	50	0.29	0.8607	0.02427	0.10172	0.0012	0.06150	0.0018	631	26.5	625	14.1	657	121.0	1.0	4.9	624.5	14.1
G91	403	247	0.61	3.9995	0.07084	0.28514	0.0031	0.10195	0.0018	1634	28.8	1617	31.0	1660	66.0	1.0	2.6	1660.0	66.0
G92	1932	2373	1.23	0.0687	0.00205	0.00986	0.0001	0.05066	0.0015	68	3.9	63	1.5	225	137.4	6.8	71.9	63.2	1.5
G93	244	78	0.32	4.7438	0.08710	0.31648	0.0035	0.10895	0.0020	1775	30.8	1773	34.0	1782	67.5	0.1	0.5	1781.9	67.5
G94	328	145	0.44	11.0621	0.18441	0.45698	0.0049	0.17596	0.0030	2528	31.0	2426	43.2	2615	55.8	4.2	7.2	2615.1	55.8
G95	672	854	1.27	3.1157	0.05407	0.24501	0.0026	0.09244	0.0016	1437	26.7	1413	27.1	1476	66.4	1.7	4.3	1476.2	66.4
G96	197	95	0.48	7.3200	0.13001	0.38338	0.0042	0.13878	0.0025	2151	31.7	2092	38.9	2212	62.0	2.8	5.4	2212.1	62.0
G97	888	486	0.55	4.5199	0.07880	0.29812	0.0032	0.11021	0.0020	1735	29.0	1682	31.6	1803	63.7	3.1	6.7	1802.8	63.7
G98	233	121	0.52	4.0428	0.07622	0.28676	0.0031	0.10248	0.0020	1643	30.7	1625	31.5	1670	70.2	1.1	2.6	1669.5	70.2
G99	358	140	0.39	11.7877	0.20679	0.50728	0.0055	0.16891	0.0030	2588	32.8	2645	46.6	2547	59.1	-2.2	-3.9	2546.8	59.1
G100	194	161	0.83	3.0538	0.06095	0.24009	0.0027	0.09246	0.0019	1421	30.5	1387	27.7	1477	76.4	2.5	6.1	1476.7	76.4
G101	152	118	0.77	0.6988	0.02166	0.08501	0.0010	0.05975	0.0019	538	25.9	526	12.3	594	134.5	2.3	11.5	526.0	12.3
G102	835	518	0.62	1.9759	0.03762	0.18255	0.0020	0.07868	0.0015	1107	25.7	1081	21.6	1164	75.8	2.4	7.1	1080.9	21.6
G103	448	465	1.04	6.3538	0.11770	0.34889	0.0038	0.13238	0.0025	2026	32.5	1929	36.5	2130	65.3	5.0	9.4	2129.8	65.3
G104	6	2	0.35	4.3612	0.08031	0.30381	0.0034	0.10434	0.0020	1705	30.4	1710	33.3	1703	68.9	-0.3	-0.4	1702.8	68.9
G105	11	11	0.97	1.8664	0.03714	0.17692	0.0019	0.07668	0.0016	1069	26.3	1050	21.2	1113	80.5	1.8	5.6	1050.1	21.2
G106	20	9	0.44	2.8399	0.04394	0.23334	0.0024	0.08847	0.0014	1366	23.2	1352	25.4	1393	60.1	1.1	2.9	1392.6	60.1
G107	96	27	0.28	0.0735	0.00226	0.01052	0.0001	0.05077	0.0016	72	4.3	67	1.6	230	142.1	6.8	70.7	67.4	1.6
G108	22	7	0.31	0.5008	0.01330	0.06212	0.0007	0.05861	0.0016	412	18.0	389	8.6	553	116.5	6.1	29.7	388.5	8.6
G109	82	40	0.49	0.1102	0.00301	0.01648	0.0002	0.04861	0.0014	106	5.5	105	2.3	129	128.6	0.8	18.5	105.3	2.3
G110	27	7	0.24	0.5586	0.01217	0.06963	0.0008	0.05831	0.0013	451	15.9	434	9.1	541	97.4	3.8	19.7	434.0	9.1
G111	20	14	0.71	0.0717	0.00660	0.01053	0.0002	0.04951	0.0046	70	12.5	68	2.2	172	407.4	4.1	60.7	67.5	2.2
G112	34	13	0.38	4.7855	0.06595	0.31687	0.0032	0.10978	0.0016	1782	23.1	1774	31.6	1796	51.0	0.5	1.2	1795.7	51.0
G113	8	6	0.80	4.2378	0.08707	0.28739	0.0033	0.10718	0.0023	1681	33.8	1629	33.3	1752	76.4	3.2	7.1	1752.1	76.4
G114	49	30	0.60	4.1575	0.05677	0.28522	0.0029	0.10595	0.0015	1666	22.4	1618	29.0	1731	50.9	3.0	6.5	1730.9	50.9
G115	3	2	0.48	2.0392	0.06247	0.18509	0.0024	0.08008	0.0025	1129	41.7	1095	25.7	1199	121.6	3.1	8.7	1094.7	25.7
G116	42	35	0.84	0.0103	0.00218	0.00171	0.0000	0.04363	0.0093	10	4.4	11	0.6	0	650.5	-5.5	-10900.0	11.0	0.6
G117	44	22	0.50	0.7539	0.01324	0.09097	0.0010	0.06024	0.0011	571	15.3	561	11.2	612	76.8	1.6	8.3	561.3	11.2
G118	16	6	0.37	4.5893	0.07609	0.29884	0.0032	0.11163	0.0019	1747	27.6	1686	31.8	1826	61.2	3.7	7.7	1826.0	61.2
G119	8	9	1.09	2.7816	0.05516	0.22717	0.0025	0.08900	0.0018	1351	29.6	1320	26.4	1404	77.0	2.3	6.0	1404.2	77.0
G120	36	24	0.66	0.0889	0.00430	0.01308	0.0002	0.04940	0.0024	87	8.0	84	2.2	167	222.0	3.2	49.8	83.8	2.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G121	62	13	0.21	4.2451	0.05877	0.30223	0.0031	0.10210	0.0015	1683	22.8	1702	30.3	1663	52.1	-1.1	-2.4	1662.6	52.1
G122	18	10	0.56	4.2828	0.06580	0.29919	0.0031	0.10405	0.0016	1690	25.3	1687	30.9	1698	57.6	0.2	0.6	1697.6	57.6
G123	29	22	0.78	2.0732	0.03339	0.19301	0.0020	0.07808	0.0013	1140	22.1	1138	21.6	1149	65.0	0.2	1.0	1148.8	65.0
G124	86	43	0.50	0.0994	0.00299	0.01382	0.0002	0.05228	0.0016	96	5.5	89	2.0	298	137.4	8.7	70.3	88.5	2.0
G125	27	9	0.35	4.2308	0.06330	0.29279	0.0030	0.10503	0.0016	1680	24.6	1656	30.0	1715	56.0	1.5	3.5	1714.9	56.0
G126	75	16	0.22	4.3957	0.06243	0.29998	0.0030	0.10651	0.0016	1712	23.5	1691	30.2	1741	52.8	1.2	2.8	1740.6	52.8
G127	84	9	0.11	0.7586	0.01228	0.08434	0.0009	0.06538	0.0011	573	14.2	522	10.3	787	69.0	9.8	33.6	522.0	10.3
G128	26	47	1.78	2.3635	0.03964	0.20826	0.0022	0.08249	0.0014	1232	23.9	1220	23.3	1257	66.4	1.0	3.0	1257.3	66.4
G129	26	18	0.69	0.0680	0.00528	0.01129	0.0002	0.04378	0.0034	67	10.0	72	2.1	0	118.9	-7.7	-72300.0	72.4	2.1
G130	26	10	0.38	4.9061	0.08023	0.32630	0.0034	0.10929	0.0018	1803	27.6	1820	33.4	1788	60.7	-0.9	-1.8	1787.6	60.7
G131	59	21	0.36	4.5965	0.06719	0.31028	0.0032	0.10768	0.0016	1749	24.4	1742	31.0	1761	54.3	0.4	1.0	1760.5	54.3
G132	31	15	0.48	0.0942	0.00496	0.01366	0.0002	0.05013	0.0027	91	9.2	88	2.4	201	239.5	4.5	56.5	87.5	2.4
G133	21	10	0.49	3.0784	0.05108	0.24287	0.0025	0.09213	0.0016	1427	25.4	1402	26.3	1470	64.3	1.8	4.7	1470.0	64.3
G134	7	3	0.43	1.9634	0.04717	0.18455	0.0021	0.07734	0.0019	1103	32.3	1092	23.1	1130	96.8	1.0	3.4	1091.8	23.1
G135	19	10	0.55	3.9494	0.06511	0.27803	0.0029	0.10325	0.0018	1624	26.7	1582	29.3	1683	62.0	2.7	6.1	1683.4	62.0
G136	24	16	0.69	1.7347	0.03772	0.17064	0.0019	0.07389	0.0017	1022	28.0	1016	20.9	1039	89.0	0.6	2.2	1015.7	20.9
G137	22	7	0.33	1.6960	0.03118	0.16608	0.0018	0.07423	0.0014	1007	23.5	991	19.4	1048	75.3	1.7	5.5	990.5	19.4
G138	151	201	1.33	0.0288	0.00114	0.00427	0.0001	0.04902	0.0020	29	2.3	28	0.7	149	184.2	4.7	81.5	27.5	0.7
G139	10	1	0.12	0.8231	0.02432	0.09801	0.0012	0.06105	0.0019	610	27.1	603	13.6	641	127.6	1.2	5.9	602.7	13.6
G140	22	23	1.07	0.6660	0.01605	0.07633	0.0009	0.06342	0.0016	518	19.6	474	10.2	722	103.3	9.3	34.4	474.2	10.2
G141	9	6	0.65	1.8840	0.04207	0.18065	0.0020	0.07581	0.0017	1076	29.6	1071	22.0	1090	90.6	0.5	1.8	1070.5	22.0
G142	3	1	0.32	5.5022	0.15612	0.35388	0.0048	0.11302	0.0033	1901	48.8	1953	45.7	1849	104.0	-2.7	-5.7	1848.5	104.0
G143	20	13	0.66	4.8434	0.08142	0.32312	0.0034	0.10896	0.0019	1793	28.3	1805	32.9	1782	62.5	-0.7	-1.3	1782.0	62.5
G144	19	8	0.45	0.1468	0.01022	0.02072	0.0004	0.05148	0.0037	139	18.1	132	4.4	263	310.4	5.1	49.6	132.2	4.4
G145	14	10	0.74	0.5381	0.01626	0.07084	0.0008	0.05522	0.0017	437	21.5	441	10.0	421	134.2	-0.9	-4.8	441.2	10.0
G146	18	18	1.02	4.6479	0.08087	0.31146	0.0033	0.10847	0.0019	1758	29.1	1748	32.2	1774	64.8	0.6	1.5	1773.9	64.8
G147	13	11	0.87	4.1270	0.07563	0.29017	0.0031	0.10339	0.0020	1660	30.0	1642	31.0	1686	68.9	1.1	2.6	1685.8	68.9
G148	30	12	0.41	4.2910	0.07286	0.30280	0.0032	0.10301	0.0018	1692	28.0	1705	31.1	1679	63.9	-0.8	-1.6	1679.1	63.9
Sample 20092401																			
G1	298	156	0.53	0.2621	0.00744	0.03710	0.0004	0.04991	0.0014	236	12.0	235	5.2	191	131.8	0.6	-22.9	234.8	5.2
G2	288	146	0.51	0.5119	0.01118	0.06661	0.0007	0.05431	0.0012	420	15.0	416	8.6	384	98.0	1.0	-8.3	415.7	8.6
G3	152	41	0.27	2.0202	0.03434	0.18660	0.0020	0.07652	0.0013	1122	23.1	1103	21.2	1109	68.4	1.8	0.5	1108.6	68.4
G4	130	148	1.14	9.7769	0.12562	0.44376	0.0045	0.15574	0.0020	2414	23.7	2367	40.3	2410	43.9	2.0	1.8	2409.9	43.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G5	173	79	0.46	3.0373	0.04437	0.24306	0.0025	0.08834	0.0013	1417	22.3	1403	25.8	1390	56.3	1.0	-0.9	1389.9	56.3
G6	426	489	1.15	0.0988	0.00476	0.01426	0.0002	0.04898	0.0024	96	8.8	91	2.5	147	222.7	4.7	37.8	91.3	2.5
G7	212	118	0.56	16.3524	0.19575	0.55945	0.0056	0.20668	0.0025	2898	22.9	2864	46.2	2880	39.0	1.2	0.5	2879.7	39.0
G8	139	106	0.76	0.7093	0.01801	0.08670	0.0010	0.05785	0.0015	544	21.4	536	11.4	524	112.1	1.5	-2.3	536.0	11.4
G9	390	238	0.61	2.7950	0.04006	0.22185	0.0023	0.08911	0.0013	1354	21.4	1292	23.8	1406	55.2	4.8	8.2	1406.4	55.2
G10	120	55	0.46	2.3841	0.04721	0.20405	0.0022	0.08264	0.0017	1238	28.3	1197	24.0	1261	78.0	3.4	5.1	1260.8	78.0
G11	539	532	0.99	0.1859	0.00465	0.02665	0.0003	0.04936	0.0013	173	8.0	170	3.6	165	116.8	2.2	-2.7	169.5	3.6
G12	376	141	0.37	4.2991	0.05687	0.30097	0.0030	0.10106	0.0014	1693	21.8	1696	30.0	1644	49.3	-0.2	-3.2	1643.8	49.3
G13	314	101	0.32	1.6164	0.02860	0.16018	0.0017	0.07141	0.0013	977	22.2	958	18.7	969	72.8	2.0	1.2	957.8	18.7
G14	985	437	0.44	0.0935	0.00245	0.01426	0.0002	0.04640	0.0012	91	4.5	91	2.0	18	124.0	-0.7	-401.6	91.3	2.0
G15	198	88	0.44	2.9141	0.04179	0.23695	0.0024	0.08707	0.0013	1386	21.7	1371	25.1	1362	55.7	1.1	-0.6	1362.0	55.7
G16	249	88	0.35	2.0920	0.03068	0.19064	0.0019	0.07770	0.0012	1146	20.1	1125	20.9	1139	58.7	1.9	1.3	1139.2	58.7
G17	728	28	0.04	9.8437	0.11470	0.44591	0.0044	0.15632	0.0018	2420	21.5	2377	39.0	2416	39.7	1.8	1.6	2416.3	39.7
G18	67	30	0.45	12.2517	0.16640	0.48710	0.0051	0.17813	0.0025	2624	25.5	2558	44.0	2636	45.6	2.6	2.9	2635.5	45.6
G19	21	10	0.48	1.6750	0.07068	0.16177	0.0023	0.07334	0.0032	999	53.7	967	25.6	1023	169.8	3.4	5.5	966.6	25.6
G20	219	87	0.40	2.8096	0.03976	0.22542	0.0023	0.08829	0.0013	1358	21.2	1310	24.0	1389	54.6	3.6	5.6	1388.8	54.6
G21	268	91	0.34	2.0216	0.03352	0.18912	0.0020	0.07573	0.0013	1123	22.5	1117	21.3	1088	67.0	0.6	-2.6	1088.0	67.0
G22	105	39	0.38	1.6855	0.03303	0.16779	0.0018	0.07117	0.0014	1003	25.0	1000	19.9	962	80.7	0.3	-3.9	999.9	19.9
G23	69	38	0.54	5.2421	0.08295	0.32594	0.0035	0.11397	0.0018	1860	27.0	1819	33.6	1864	57.8	2.2	2.4	1863.6	57.8
G24	581	326	0.56	0.0706	0.00282	0.01091	0.0001	0.04587	0.0019	69	5.3	70	1.7	0	169.5	-1.0	-69800.0	69.9	1.7
G25	47	25	0.53	2.0171	0.05089	0.18768	0.0022	0.07617	0.0020	1121	34.3	1109	23.8	1100	101.7	1.1	-0.8	1099.7	101.7
G26	87	51	0.59	1.7041	0.03508	0.16334	0.0018	0.07396	0.0016	1010	26.3	975	19.8	1040	83.9	3.6	6.2	975.3	19.8
G27	1283	758	0.59	0.0783	0.00252	0.01141	0.0001	0.04864	0.0016	77	4.8	73	1.7	131	151.3	4.7	44.0	73.1	1.7
G28	523	185	0.35	3.8172	0.04717	0.27004	0.0027	0.10024	0.0013	1596	19.9	1541	27.1	1629	46.2	3.6	5.4	1628.5	46.2
G29	651	603	0.93	1.6584	0.02173	0.15250	0.0015	0.07713	0.0010	993	16.6	915	16.9	1125	52.6	8.5	18.6	915.0	16.9
G30	323	99	0.31	4.4043	0.05598	0.29532	0.0029	0.10578	0.0014	1713	21.0	1668	29.2	1728	47.0	2.7	3.5	1727.9	47.0
G31	971	471	0.48	0.0346	0.00203	0.00510	0.0001	0.04821	0.0029	35	4.0	33	1.0	110	271.3	5.5	70.1	32.8	1.0
G32	192	153	0.80	4.3124	0.05818	0.29079	0.0029	0.10521	0.0014	1696	22.2	1646	29.3	1718	50.0	3.1	4.2	1718.0	50.0
G33	84	24	0.29	1.6189	0.03478	0.16135	0.0018	0.07119	0.0016	978	27.0	964	19.6	963	88.4	1.4	-0.1	964.3	19.6
G34	468	372	0.80	4.5578	0.05642	0.30329	0.0030	0.10664	0.0013	1742	20.6	1708	29.6	1743	45.5	2.0	2.0	1742.8	45.5
G35	203	48	0.23	1.8945	0.02966	0.17950	0.0018	0.07491	0.0012	1079	20.8	1064	20.1	1066	63.5	1.4	0.2	1064.2	20.1
G36	186	38	0.20	2.0277	0.03177	0.18901	0.0019	0.07615	0.0012	1125	21.3	1116	21.0	1099	63.3	0.8	-1.5	1099.0	63.3
G37	148	63	0.43	4.0347	0.05786	0.27651	0.0028	0.10358	0.0015	1641	23.3	1574	28.5	1689	53.5	4.3	6.8	1689.3	53.5
G38	113	59	0.52	1.6960	0.03295	0.16963	0.0018	0.07099	0.0014	1007	24.8	1010	19.9	957	80.1	-0.3	-5.5	1010.1	19.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G39	135	109	0.80	1.7139	0.03095	0.16646	0.0018	0.07311	0.0014	1014	23.2	993	19.4	1017	73.2	2.1	2.4	992.6	19.4
G40	43	27	0.63	1.7671	0.05193	0.16630	0.0021	0.07546	0.0023	1033	38.1	992	22.9	1081	118.7	4.2	8.2	991.7	22.9
G41	22	11	0.49	14.2431	0.23996	0.51152	0.0060	0.19776	0.0034	2766	32.0	2663	50.7	2808	56.1	3.9	5.2	2807.8	56.1
G42	131	106	0.81	2.8724	0.04578	0.23213	0.0024	0.08790	0.0014	1375	24.0	1346	25.2	1380	61.8	2.2	2.5	1380.2	61.8
G43	359	96	0.27	3.0322	0.03993	0.24226	0.0024	0.08892	0.0012	1416	20.1	1398	25.0	1402	50.8	1.2	0.3	1402.4	50.8
G44	443	252	0.57	0.0984	0.00359	0.01382	0.0002	0.05061	0.0019	95	6.6	89	2.1	223	167.6	7.7	60.3	88.5	2.1
G45	357	206	0.58	0.0938	0.00427	0.01462	0.0002	0.04558	0.0021	91	7.9	94	2.3	0	165.8	-2.8	-93500.0	93.6	2.3
G46	622	267	0.43	0.1010	0.00311	0.01468	0.0002	0.04888	0.0015	98	5.7	94	2.1	142	144.3	3.9	33.9	93.9	2.1
G47	199	35	0.18	1.7876	0.02844	0.16966	0.0017	0.07492	0.0012	1041	20.7	1010	19.1	1066	64.7	3.0	5.3	1010.2	19.1
G48	253	142	0.56	1.8062	0.02729	0.17379	0.0018	0.07391	0.0011	1048	19.8	1033	19.3	1039	61.6	1.4	0.6	1033.0	19.3
G49	129	46	0.36	4.5455	0.07721	0.30680	0.0033	0.10538	0.0018	1739	28.3	1725	32.5	1721	63.3	0.8	-0.2	1720.9	63.3
G50	236	89	0.38	1.7659	0.02743	0.17049	0.0017	0.07369	0.0012	1033	20.1	1015	19.1	1033	63.5	1.8	1.8	1014.8	19.1
G51	446	335	0.75	4.5362	0.05756	0.30272	0.0030	0.10662	0.0014	1738	21.1	1705	29.6	1742	46.8	1.9	2.2	1742.4	46.8
G52	36	11	0.30	1.6003	0.05132	0.15804	0.0020	0.07206	0.0024	970	40.1	946	22.2	988	130.8	2.6	4.2	945.9	22.2
G53	166	58	0.35	2.9825	0.04458	0.23575	0.0024	0.09004	0.0014	1403	22.7	1365	25.1	1426	57.7	2.8	4.3	1426.2	57.7
G54	53	41	0.78	1.8788	0.04619	0.17238	0.0020	0.07758	0.0020	1074	32.6	1025	21.8	1136	98.7	4.7	9.8	1025.2	21.8
G55	296	159	0.54	2.2700	0.03762	0.20037	0.0021	0.08065	0.0014	1203	23.4	1177	22.3	1213	66.1	2.2	2.9	1212.8	66.1
G56	830	307	0.37	0.0759	0.00224	0.01074	0.0001	0.05029	0.0015	74	4.2	69	1.5	208	137.0	7.8	66.9	68.9	1.5
G57	134	59	0.44	3.9918	0.05937	0.27998	0.0029	0.10153	0.0016	1633	24.2	1591	28.9	1652	55.9	2.6	3.7	1652.3	55.9
G58	381	276	0.72	2.8525	0.03855	0.23187	0.0023	0.08764	0.0012	1370	20.3	1344	24.1	1375	52.5	1.9	2.2	1374.6	52.5
G59	252	108	0.43	2.0133	0.03001	0.18830	0.0019	0.07618	0.0012	1120	20.2	1112	20.6	1100	60.4	0.7	-1.1	1099.7	60.4
G60	1302	438	0.34	0.0870	0.00203	0.01315	0.0001	0.04712	0.0011	85	3.8	84	1.8	55	112.3	0.6	-53.4	84.2	1.8
G61	83	51	0.61	1.7982	0.03651	0.17236	0.0019	0.07435	0.0016	1045	26.5	1025	20.5	1051	82.7	1.9	2.5	1025.1	20.5
G62	489	72	0.15	2.6848	0.03571	0.22233	0.0022	0.08608	0.0012	1324	19.7	1294	23.2	1340	52.1	2.3	3.4	1340.0	52.1
G63	153	155	1.01	0.1563	0.00803	0.02207	0.0003	0.05048	0.0026	148	14.1	141	3.7	217	233.1	4.8	35.2	140.7	3.7
G64	316	191	0.60	3.2212	0.05126	0.25278	0.0026	0.09086	0.0015	1462	24.7	1453	26.9	1444	61.5	0.7	-0.6	1443.6	61.5
G65	491	374	0.76	0.8068	0.01267	0.09310	0.0009	0.06179	0.0010	601	14.2	574	11.1	667	68.0	4.7	14.0	573.8	11.1
G66	48	31	0.64	13.0965	0.19154	0.50209	0.0053	0.18602	0.0028	2687	27.6	2623	45.6	2707	49.1	2.4	3.1	2707.3	49.1
G67	172	91	0.53	4.6654	0.06567	0.30157	0.0030	0.11034	0.0016	1761	23.5	1699	30.1	1805	52.0	3.6	5.9	1805.0	52.0
G68	92	53	0.58	3.9295	0.06335	0.27469	0.0029	0.10205	0.0017	1620	26.1	1565	29.0	1662	60.6	3.5	5.8	1661.7	60.6
G69	30	19	0.64	2.0610	0.06412	0.18859	0.0024	0.07797	0.0025	1136	42.5	1114	25.9	1146	124.2	2.0	2.8	1146.0	124.2
G70	119	58	0.49	1.8607	0.03359	0.17633	0.0019	0.07529	0.0014	1067	23.8	1047	20.3	1076	73.4	1.9	2.7	1046.9	20.3
G71	90	78	0.87	1.7676	0.03757	0.17162	0.0019	0.07350	0.0016	1034	27.6	1021	20.6	1028	86.9	1.2	0.7	1021.0	20.6
G72	130	110	0.85	0.1690	0.00928	0.02320	0.0003	0.05200	0.0029	159	16.1	148	4.2	285	246.2	7.2	48.2	147.9	4.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G73	556	268	0.48	2.4626	0.03307	0.21289	0.0021	0.08257	0.0011	1261	19.4	1244	22.4	1259	52.9	1.4	1.2	1259.1	52.9
G74	455	151	0.33	0.5264	0.00933	0.06513	0.0007	0.05770	0.0011	429	12.4	407	8.1	518	79.2	5.6	21.5	406.8	8.1
G75	81	49	0.61	3.9479	0.06576	0.28072	0.0030	0.10043	0.0017	1624	27.0	1595	29.7	1632	62.9	1.8	2.3	1632.1	62.9
G76	352	306	0.87	4.9459	0.06567	0.31722	0.0031	0.11136	0.0015	1810	22.4	1776	30.7	1822	48.9	1.9	2.5	1821.7	48.9
G77	170	54	0.32	4.2555	0.06156	0.29031	0.0029	0.10471	0.0016	1685	23.8	1643	29.3	1709	54.1	2.5	3.9	1709.2	54.1
G78	122	55	0.45	3.0692	0.04962	0.24461	0.0025	0.08964	0.0015	1425	24.8	1411	26.1	1418	62.7	1.0	0.5	1417.7	62.7
G79	311	122	0.39	0.0707	0.00419	0.01092	0.0002	0.04627	0.0028	69	7.9	70	1.9	12	276.5	-0.9	-488.2	70.0	1.9
G80	53	70	1.33	0.6720	0.02876	0.08278	0.0011	0.05801	0.0025	522	34.9	513	12.8	530	186.4	1.8	3.2	512.7	12.8
G81	916	324	0.35	2.6994	0.03633	0.22540	0.0022	0.08559	0.0012	1328	19.9	1310	23.4	1329	53.0	1.4	1.4	1328.8	53.0
G82	385	111	0.29	0.0619	0.00384	0.00977	0.0002	0.04528	0.0029	61	7.3	63	1.9	0	212.1	-2.7	-62600.0	62.7	1.9
G83	210	136	0.65	0.0107	0.00373	0.00167	0.0001	0.04572	0.0160	11	7.5	11	0.7	0	#####	0.0	-10700.0	10.8	0.7
G84	439	56	0.13	4.3862	0.06096	0.30125	0.0030	0.10409	0.0015	1710	23.0	1698	29.8	1698	52.1	0.7	0.0	1698.3	52.1
G85	915	275	0.30	0.1087	0.00291	0.01577	0.0002	0.04928	0.0014	105	5.3	101	2.2	161	125.8	3.9	37.4	100.8	2.2
G86	113	174	1.54	11.5963	0.16048	0.47263	0.0048	0.17545	0.0025	2572	25.9	2495	41.9	2610	46.9	3.1	4.4	2610.4	46.9
G87	212	122	0.57	5.9557	0.08264	0.34136	0.0034	0.12480	0.0018	1969	24.1	1893	32.8	2026	50.0	4.0	6.6	2025.9	50.0
G88	148	95	0.64	2.0829	0.03534	0.18606	0.0019	0.08008	0.0014	1143	23.3	1100	20.9	1199	68.0	3.9	8.3	1199.1	68.0
G89	171	54	0.32	3.4192	0.05279	0.24923	0.0025	0.09815	0.0016	1509	24.3	1435	26.3	1589	58.7	5.2	9.7	1589.3	58.7
G90	139	103	0.74	0.0935	0.00759	0.01387	0.0003	0.04825	0.0040	91	14.1	89	3.2	112	368.7	2.3	20.5	88.8	3.2
G91	205	124	0.60	1.8728	0.03064	0.17321	0.0018	0.07737	0.0013	1072	21.7	1030	19.5	1131	66.2	4.0	8.9	1029.8	19.5
G92	442	228	0.52	0.0670	0.00306	0.01047	0.0001	0.04581	0.0021	66	5.8	67	1.7	0	189.9	-1.8	-67000.0	67.1	1.7
G93	667	1597	2.39	0.0299	0.00197	0.00477	0.0001	0.04477	0.0030	30	3.9	31	0.9	0	173.8	-2.6	-30600.0	30.7	0.9
G94	312	295	0.95	13.4150	0.17993	0.52009	0.0052	0.18472	0.0025	2709	25.3	2700	43.7	2696	45.1	0.4	-0.1	2695.7	45.1
G95	331	118	0.36	0.0864	0.00363	0.01335	0.0002	0.04636	0.0020	84	6.8	86	2.1	17	199.6	-1.6	-418.2	85.5	2.1
G96	1389	158	0.11	0.0837	0.00239	0.01245	0.0001	0.04818	0.0014	82	4.5	80	1.8	108	135.1	2.3	26.3	79.8	1.8
G97	1100	756	0.69	0.0902	0.00234	0.01342	0.0002	0.04814	0.0013	88	4.4	86	1.9	106	123.3	2.0	18.9	86.0	1.9
G98	131	55	0.42	3.8724	0.06110	0.27652	0.0028	0.10036	0.0016	1608	25.5	1574	28.6	1631	59.8	2.2	3.5	1630.8	59.8
G99	172	225	1.31	1.7325	0.02993	0.17013	0.0018	0.07300	0.0013	1021	22.2	1013	19.3	1014	71.2	0.8	0.1	1012.8	19.3
G100	76	40	0.52	4.0380	0.08376	0.27836	0.0032	0.10400	0.0022	1642	33.8	1583	31.8	1697	77.9	3.7	6.7	1696.8	77.9
G101	268	157	0.59	0.4984	0.01059	0.06482	0.0007	0.05513	0.0012	411	14.4	405	8.3	417	94.7	1.4	3.0	404.9	8.3
G102	24	13	0.52	2.9344	0.07963	0.23338	0.0029	0.09017	0.0025	1391	41.1	1352	29.8	1429	104.7	2.9	5.4	1429.0	104.7
G103	91	20	0.22	2.0441	0.04293	0.18999	0.0021	0.07717	0.0017	1130	28.6	1121	22.4	1126	84.9	0.8	0.4	1125.5	84.9
G104	156	65	0.42	2.2042	0.03703	0.19810	0.0020	0.07981	0.0014	1182	23.5	1165	21.9	1192	67.5	1.5	2.3	1192.3	67.5
G105	286	222	0.77	1.8635	0.03276	0.16889	0.0018	0.07915	0.0014	1068	23.2	1006	19.3	1176	70.8	6.2	14.5	1006.0	19.3
G106	165	99	0.60	2.9698	0.04736	0.23867	0.0024	0.08928	0.0015	1400	24.2	1380	25.3	1410	62.1	1.5	2.1	1410.0	62.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G107	76	28	0.37	0.2319	0.01309	0.03059	0.0005	0.05440	0.0031	212	21.6	194	5.6	388	247.8	9.1	49.9	194.2	5.6
G108	118	45	0.38	0.1690	0.01035	0.02417	0.0004	0.05018	0.0031	159	18.0	154	4.8	203	277.6	3.0	24.2	154.0	4.8
G109	29	38	1.29	5.6419	0.14713	0.33979	0.0044	0.11918	0.0032	1923	45.0	1886	42.5	1944	94.8	2.0	3.0	1943.9	94.8
G110	107	54	0.51	1.2599	0.02688	0.13454	0.0014	0.06722	0.0015	828	24.2	814	16.4	845	90.0	1.7	3.7	813.7	16.4
G111	115	27	0.24	1.4304	0.02854	0.13802	0.0015	0.07440	0.0015	902	23.9	834	16.6	1052	81.7	8.2	20.8	833.5	16.6
G112	340	40	0.12	2.0087	0.03092	0.18511	0.0019	0.07791	0.0012	1118	20.9	1095	20.2	1145	62.4	2.2	4.4	1094.8	20.2
G113	217	126	0.58	1.8273	0.03323	0.17690	0.0018	0.07418	0.0014	1055	23.9	1050	20.2	1046	74.7	0.5	-0.4	1050.0	20.2
G114	135	108	0.80	3.9935	0.06346	0.28236	0.0029	0.10158	0.0017	1633	25.8	1603	29.0	1653	60.2	1.9	3.0	1653.1	60.2
G115	333	119	0.36	1.8101	0.02845	0.17468	0.0018	0.07443	0.0012	1049	20.6	1038	19.3	1053	64.6	1.1	1.5	1037.8	19.3
G116	131	59	0.45	2.2605	0.03947	0.19953	0.0021	0.08139	0.0015	1200	24.6	1173	22.2	1231	69.9	2.3	4.7	1230.8	69.9
G117	84	61	0.72	4.8276	0.08041	0.31123	0.0032	0.11144	0.0019	1790	28.0	1747	31.8	1823	61.8	2.5	4.2	1823.1	61.8
G118	81	93	1.14	2.9346	0.05404	0.23442	0.0025	0.08995	0.0017	1391	27.9	1358	25.9	1425	71.7	2.5	4.7	1424.5	71.7
G119	266	96	0.36	2.1094	0.03573	0.19516	0.0020	0.07770	0.0014	1152	23.3	1149	21.5	1139	68.7	0.2	-0.9	1139.1	68.7
G120	244	118	0.48	0.0952	0.00478	0.01343	0.0002	0.05097	0.0026	92	8.9	86	2.3	240	227.2	7.3	64.1	86.0	2.3
G121	205	111	0.54	2.9130	0.04655	0.23633	0.0024	0.08862	0.0015	1385	24.2	1368	25.0	1396	62.5	1.3	2.0	1396.0	62.5
G122	101	74	0.73	3.9932	0.06832	0.27384	0.0029	0.10486	0.0019	1633	27.8	1560	28.9	1712	64.4	4.6	8.9	1711.8	64.4
G123	26	20	0.78	2.1048	0.08019	0.19142	0.0027	0.07908	0.0031	1150	52.5	1129	28.9	1174	151.1	1.9	3.8	1174.1	151.1
G124	350	276	0.79	0.1551	0.00491	0.02266	0.0003	0.04924	0.0016	146	8.6	144	3.3	159	148.1	1.4	9.4	144.4	3.3
G125	119	131	1.10	2.7035	0.04855	0.22483	0.0023	0.08650	0.0016	1329	26.6	1307	24.7	1349	70.7	1.7	3.1	1349.4	70.7
G126	197	234	1.19	0.0743	0.00559	0.01084	0.0002	0.04932	0.0038	73	10.6	70	2.2	163	338.8	4.7	57.4	69.5	2.2
G127	186	99	0.53	0.1822	0.00815	0.02530	0.0003	0.05181	0.0024	170	14.0	161	4.2	277	202.5	5.5	41.8	161.1	4.2
G128	2933	740	0.25	11.4378	0.16353	0.47761	0.0047	0.17234	0.0026	2560	26.7	2517	41.0	2581	49.0	1.7	2.5	2580.5	49.0
G129	15291	2	0.00	6.1816	0.16227	0.37111	0.0048	0.11990	0.0033	2002	45.9	2035	44.7	1955	95.2	-1.6	-4.1	1954.7	95.2
G130	124	58	0.47	4.3494	0.07688	0.29743	0.0031	0.10527	0.0019	1703	29.2	1679	31.1	1719	66.5	1.4	2.4	1719.1	66.5
G131	130	144	1.10	3.8346	0.06440	0.27591	0.0028	0.10007	0.0017	1600	27.1	1571	28.7	1625	64.0	1.9	3.4	1625.3	64.0
G132	173	53	0.31	3.0339	0.05075	0.23802	0.0024	0.09179	0.0016	1416	25.5	1376	25.4	1463	65.3	2.9	5.9	1462.8	65.3
Sample W3-18																			
G1	197	114	0.58	1.7044	0.02690	0.15487	0.0016	0.07396	0.0012	1010	20.2	928	17.7	1040	62.9	8.8	10.8	928.2	17.7
G2	199	87	0.44	4.3886	0.05805	0.30278	0.0030	0.09743	0.0013	1710	21.9	1705	30.0	1576	48.4	0.3	-8.2	1575.5	48.4
G3	216	95	0.44	10.1570	0.11966	0.46611	0.0046	0.14651	0.0017	2449	21.8	2467	40.4	2306	39.0	-0.7	-7.0	2305.6	39.0
G4	903	789	0.87	0.0964	0.00303	0.01457	0.0002	0.04450	0.0014	93	5.6	93	2.1	0	0.0	0.2	-93100.0	93.2	2.1
G5	73	75	1.03	4.2219	0.06863	0.29003	0.0031	0.09792	0.0016	1678	26.7	1642	30.6	1585	60.2	2.2	-3.6	1584.9	60.2
G6	477	289	0.61	5.0659	0.05957	0.30013	0.0029	0.11357	0.0013	1830	19.9	1692	29.2	1857	41.0	8.2	8.9	1857.3	41.0

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G7	98	48	0.49	1.8332	0.03464	0.16924	0.0018	0.07290	0.0014	1057	24.8	1008	19.8	1011	76.2	4.9	0.3	1007.9	19.8
G8	90	35	0.39	1.4608	0.03133	0.15292	0.0017	0.06430	0.0014	914	25.9	917	18.5	752	90.1	-0.3	-22.0	917.3	18.5
G9	47	91	1.95	6.0193	0.09946	0.36277	0.0039	0.11172	0.0019	1979	28.8	1995	37.0	1828	59.5	-0.8	-9.2	1827.6	59.5
G10	248	119	0.48	2.9784	0.03908	0.24160	0.0024	0.08303	0.0011	1402	19.9	1395	25.0	1270	49.7	0.5	-9.9	1269.9	49.7
G11	103	62	0.60	13.1548	0.16198	0.52489	0.0053	0.16884	0.0020	2691	23.2	2720	44.6	2546	40.0	-1.1	-6.8	2546.1	40.0
G12	48	34	0.70	4.6900	0.08308	0.31603	0.0034	0.10000	0.0018	1766	29.7	1770	33.6	1624	65.5	-0.3	-9.0	1624.1	65.5
G13	425	338	0.80	0.5126	0.00918	0.06116	0.0006	0.05649	0.0010	420	12.3	383	7.6	471	79.1	9.8	18.7	382.7	7.6
G14	35	72	2.05	4.9223	0.09609	0.31930	0.0036	0.10396	0.0021	1806	32.9	1786	35.2	1696	71.8	1.1	-5.3	1696.0	71.8
G15	615	944	1.53	0.0303	0.00215	0.00465	0.0001	0.04392	0.0032	30	4.2	30	0.8	0	105.3	1.3	-29800.0	29.9	0.8
G16	354	212	0.60	0.0954	0.00418	0.01437	0.0002	0.04481	0.0020	93	7.7	92	2.3	0	76.7	0.5	-91900.0	92.0	2.3
G17	972	623	0.64	0.1052	0.00257	0.01598	0.0002	0.04443	0.0011	102	4.7	102	2.2	0	0.0	-0.6	#####	102.2	2.2
G18	73	38	0.53	0.6603	0.02351	0.08273	0.0010	0.05388	0.0020	515	28.8	512	11.9	366	158.4	0.5	-40.0	512.4	11.9
G19	258	146	0.57	1.8182	0.02645	0.17537	0.0018	0.07002	0.0010	1052	19.1	1042	19.4	929	58.6	1.0	-12.1	1041.7	19.4
G20	232	46	0.20	4.0430	0.05557	0.28265	0.0029	0.09665	0.0013	1643	22.4	1605	28.8	1560	50.5	2.4	-2.8	1560.4	50.5
G21	92	79	0.86	0.7811	0.02244	0.09368	0.0011	0.05637	0.0016	586	25.6	577	12.6	466	127.1	1.5	-23.9	577.3	12.6
G22	457	464	1.02	0.1690	0.00490	0.02527	0.0003	0.04523	0.0013	159	8.5	161	3.5	0	52.3	-1.5	#####	160.9	3.5
G23	1404	167	0.12	0.4037	0.00570	0.05225	0.0005	0.05225	0.0007	344	8.2	328	6.4	296	62.9	4.9	-10.8	328.3	6.4
G24	186	214	1.15	4.5133	0.06289	0.30472	0.0031	0.10020	0.0014	1733	23.2	1715	30.7	1628	50.8	1.1	-5.3	1627.8	50.8
G25	62	80	1.30	0.1525	0.01743	0.02247	0.0004	0.04594	0.0053	144	30.7	143	5.4	0	503.0	0.7	#####	143.2	5.4
G26	272	89	0.33	1.7002	0.02484	0.16669	0.0017	0.06904	0.0010	1009	18.7	994	18.6	900	59.1	1.5	-10.4	993.9	18.6
G27	98	41	0.42	3.1468	0.06351	0.24855	0.0028	0.08572	0.0018	1444	31.1	1431	28.7	1332	78.1	0.9	-7.5	1331.7	78.1
G28	363	101	0.28	3.8488	0.05225	0.27135	0.0027	0.09605	0.0013	1603	21.9	1548	27.8	1549	49.9	3.6	0.1	1548.8	49.9
G29	43	28	0.66	1.8415	0.04908	0.17639	0.0021	0.07071	0.0019	1060	35.1	1047	22.7	949	108.8	1.3	-10.3	1047.2	22.7
G30	590	174	0.29	2.9073	0.03583	0.23529	0.0023	0.08374	0.0010	1384	18.6	1362	24.2	1286	46.5	1.6	-5.9	1286.4	46.5
G31	290	51	0.18	1.6314	0.02379	0.15113	0.0015	0.07317	0.0011	982	18.4	907	17.1	1019	58.0	8.3	10.9	907.3	17.1
G32	155	70	0.45	5.3337	0.07093	0.33572	0.0034	0.10772	0.0014	1874	22.7	1866	32.7	1761	47.4	0.4	-5.9	1761.3	47.4
G33	577	232	0.40	1.7617	0.02359	0.17301	0.0017	0.06906	0.0009	1032	17.3	1029	18.9	901	53.8	0.3	-14.2	1028.7	18.9
G34	456	156	0.34	2.2206	0.02846	0.19313	0.0019	0.07800	0.0010	1188	17.9	1138	20.7	1147	49.4	4.3	0.7	1146.9	49.4
G35	218	73	0.34	3.6879	0.05712	0.26077	0.0027	0.09596	0.0015	1569	24.7	1494	27.8	1547	57.5	5.0	3.4	1547.0	57.5
G36	336	89	0.26	3.8934	0.04917	0.27110	0.0027	0.09747	0.0012	1612	20.4	1546	27.3	1576	45.9	4.3	1.9	1576.3	45.9
G37	146	68	0.47	2.9881	0.04461	0.23725	0.0024	0.08550	0.0013	1405	22.7	1372	25.3	1327	57.0	2.3	-3.4	1326.9	57.0
G38	354	229	0.65	0.2035	0.00574	0.03030	0.0003	0.04560	0.0013	188	9.7	192	4.2	0	88.1	-2.2	#####	192.4	4.2
G39	282	187	0.66	22.8467	0.26677	0.65675	0.0065	0.23628	0.0027	3220	22.7	3255	50.5	3095	35.8	-1.0	-5.2	3095.1	35.8
G40	92	58	0.63	2.8656	0.05113	0.22126	0.0024	0.08801	0.0016	1373	26.9	1289	25.1	1383	68.0	6.6	6.8	1382.7	68.0

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G41	1112	372	0.33	0.0938	0.00228	0.01446	0.0002	0.04410	0.0011	91	4.2	93	2.0	0	0.0	-1.6	-92500.0	92.6	2.0
G42	127	102	0.80	3.0895	0.04808	0.24870	0.0026	0.08446	0.0013	1430	23.9	1432	26.6	1303	59.7	-0.1	-9.9	1303.1	59.7
G43	297	169	0.57	3.4735	0.04600	0.25793	0.0026	0.09165	0.0012	1521	20.9	1479	26.5	1460	49.0	2.8	-1.3	1460.1	49.0
G44	96	191	1.99	1.5645	0.03244	0.15612	0.0017	0.06823	0.0014	956	25.7	935	19.0	876	85.5	2.2	-6.8	935.2	19.0
G45	118	72	0.61	4.3422	0.07374	0.29532	0.0032	0.10017	0.0017	1701	28.0	1668	31.7	1627	62.7	2.0	-2.5	1627.2	62.7
G46	1651	1682	1.02	0.0720	0.00208	0.01110	0.0001	0.04422	0.0013	71	3.9	71	1.6	0	0.0	-0.7	-71000.0	71.1	1.6
G47	237	84	0.36	4.6583	0.06171	0.31341	0.0032	0.10133	0.0013	1760	22.1	1758	31.0	1649	47.8	0.1	-6.6	1648.7	47.8
G48	78	30	0.38	1.7203	0.03815	0.16702	0.0019	0.07024	0.0016	1016	28.5	996	20.6	936	90.6	2.1	-6.4	995.7	20.6
G49	308	156	0.51	3.1376	0.04259	0.24947	0.0025	0.08583	0.0011	1442	20.9	1436	25.9	1334	51.2	0.4	-7.6	1334.3	51.2
G50	148	72	0.48	2.6519	0.04246	0.22409	0.0023	0.08078	0.0013	1315	23.6	1304	24.5	1216	62.1	0.9	-7.2	1216.1	62.1
G51	282	167	0.59	4.0138	0.05324	0.28711	0.0029	0.09545	0.0012	1637	21.6	1627	28.9	1537	48.5	0.6	-5.9	1537.1	48.5
G52	332	162	0.49	5.2856	0.06788	0.33292	0.0033	0.10843	0.0014	1867	21.9	1853	32.2	1773	45.5	0.8	-4.5	1773.1	45.5
G53	360	196	0.55	0.0801	0.00565	0.01172	0.0002	0.04668	0.0034	78	10.6	75	2.5	33	327.1	4.1	-129.7	75.1	2.5
G54	317	303	0.96	3.7735	0.05490	0.26110	0.0027	0.09878	0.0014	1587	23.4	1496	27.4	1601	53.3	6.1	6.6	1601.2	53.3
G55	317	151	0.48	4.4385	0.05839	0.30405	0.0031	0.09983	0.0013	1720	21.8	1711	30.2	1621	47.5	0.5	-5.6	1620.8	47.5
G56	540	649	1.20	0.5271	0.00933	0.06862	0.0007	0.05254	0.0009	430	12.4	428	8.5	309	79.4	0.5	-38.5	427.8	8.5
G57	199	312	1.57	12.1887	0.15482	0.48732	0.0049	0.17117	0.0021	2619	23.8	2559	42.6	2569	41.1	2.3	0.4	2569.1	41.1
G58	698	396	0.57	1.5458	0.02273	0.15226	0.0016	0.06949	0.0010	949	18.1	914	17.3	913	59.2	3.9	0.0	913.6	17.3
G59	1515	1222	0.81	0.0927	0.00197	0.01370	0.0001	0.04634	0.0010	90	3.7	88	1.8	15	100.1	2.6	-477.0	87.7	1.8
G60	128	60	0.47	4.0882	0.06145	0.28866	0.0030	0.09699	0.0014	1652	24.5	1635	29.9	1567	55.3	1.0	-4.3	1567.1	55.3
G61	99	70	0.70	6.3675	0.09293	0.36656	0.0038	0.11903	0.0017	2028	25.6	2013	36.0	1942	51.2	0.7	-3.7	1941.7	51.2
G62	334	55	0.16	4.6008	0.06032	0.30674	0.0031	0.10280	0.0013	1749	21.9	1725	30.4	1675	47.0	1.4	-2.9	1675.3	47.0
G63	476	113	0.24	3.4059	0.04870	0.24699	0.0025	0.09453	0.0013	1506	22.4	1423	26.1	1519	52.7	5.8	6.3	1518.8	52.7
G64	198	95	0.48	0.5525	0.01331	0.07251	0.0008	0.05224	0.0013	447	17.4	451	9.5	296	108.8	-1.0	-52.5	451.3	9.5
G65	223	70	0.32	1.9996	0.03851	0.18055	0.0020	0.07596	0.0015	1115	26.1	1070	21.4	1094	76.6	4.2	2.2	1070.0	21.4
G66	331	188	0.57	0.4835	0.01060	0.06407	0.0007	0.05178	0.0011	400	14.5	400	8.3	276	99.4	0.0	-45.1	400.3	8.3
G67	782	576	0.74	0.1052	0.00294	0.01506	0.0002	0.04794	0.0014	102	5.4	96	2.1	95	133.4	5.4	-1.0	96.3	2.1
G68	246	55	0.23	4.9287	0.06690	0.32201	0.0033	0.10511	0.0014	1807	22.9	1800	31.8	1716	48.4	0.4	-4.9	1716.3	48.4
G69	366	759	2.07	0.8320	0.01413	0.10113	0.0010	0.05651	0.0010	615	15.7	621	12.2	472	74.6	-1.0	-31.6	621.1	12.2
G70	146	74	0.51	3.9434	0.05914	0.28109	0.0029	0.09640	0.0014	1623	24.3	1597	29.3	1556	55.2	1.6	-2.7	1555.5	55.2
G71	48	26	0.55	4.2805	0.08213	0.28727	0.0032	0.10244	0.0020	1690	31.6	1628	32.2	1669	70.6	3.8	2.5	1668.7	70.6
G72	214	206	0.96	0.1836	0.00950	0.02582	0.0004	0.04890	0.0026	171	16.3	164	4.6	143	237.7	4.1	-15.0	164.4	4.6
G73	57	19	0.34	2.0290	0.04779	0.18689	0.0021	0.07467	0.0018	1125	32.0	1105	23.3	1060	94.4	1.9	-4.2	1059.6	94.4
G74	259	171	0.66	1.9573	0.03404	0.18275	0.0019	0.07370	0.0013	1101	23.4	1082	21.0	1033	69.4	1.8	-4.7	1082.0	21.0

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G75	92	40	0.43	1.9964	0.03965	0.18755	0.0020	0.07327	0.0015	1114	26.9	1108	22.2	1021	79.7	0.6	-8.5	1021.3	79.7
G76	310	113	0.36	3.9945	0.05706	0.27616	0.0028	0.09958	0.0014	1633	23.2	1572	28.5	1616	51.9	3.9	2.7	1616.3	51.9
G77	100	41	0.41	1.9810	0.03894	0.18266	0.0020	0.07469	0.0015	1109	26.5	1082	21.7	1060	78.5	2.6	-2.0	1081.5	21.7
G78	273	212	0.78	2.7266	0.04006	0.22190	0.0023	0.08464	0.0012	1336	21.8	1292	23.9	1307	55.8	3.4	1.2	1307.3	55.8
G79	648	446	0.69	0.3444	0.00640	0.04707	0.0005	0.05042	0.0009	301	9.7	297	6.0	214	84.8	1.3	-38.4	296.5	6.0
G80	94	34	0.36	2.9084	0.05410	0.24082	0.0026	0.08323	0.0016	1384	28.1	1391	27.1	1275	72.1	-0.5	-9.1	1274.5	72.1
G81	249	103	0.41	2.1964	0.03386	0.19900	0.0021	0.07608	0.0012	1180	21.5	1170	22.0	1097	60.4	0.9	-6.6	1097.3	60.4
G82	531	269	0.51	0.0995	0.00351	0.01512	0.0002	0.04540	0.0016	96	6.5	97	2.2	0	98.8	-0.3	-96600.0	96.7	2.2
G83	115	124	1.08	12.4807	0.17618	0.49962	0.0052	0.17229	0.0024	2641	26.5	2612	44.7	2580	45.9	1.1	-1.2	2580.0	45.9
G84	388	170	0.44	0.0817	0.00377	0.01240	0.0002	0.04547	0.0021	80	7.1	79	2.0	0	156.3	0.5	-79300.0	79.4	2.0
G85	314	91	0.29	4.6521	0.06470	0.30718	0.0031	0.10451	0.0014	1759	23.2	1727	30.8	1706	49.7	1.8	-1.2	1705.7	49.7
G86	292	83	0.28	4.1106	0.05857	0.28838	0.0029	0.09851	0.0014	1656	23.3	1633	29.4	1596	51.7	1.4	-2.3	1596.2	51.7
G87	1372	1524	1.11	0.1044	0.00233	0.01546	0.0002	0.04670	0.0011	101	4.3	99	2.1	34	103.9	2.0	-191.7	98.9	2.1
G88	272	87	0.32	3.7437	0.05568	0.26299	0.0027	0.09843	0.0014	1581	23.8	1505	27.7	1595	54.2	5.0	5.6	1594.6	54.2
G89	179	148	0.82	4.9329	0.07294	0.31948	0.0033	0.10679	0.0016	1808	25.0	1787	32.2	1745	52.7	1.2	-2.4	1745.4	52.7
G90	253	115	0.46	3.1090	0.04776	0.24197	0.0025	0.08891	0.0014	1435	23.6	1397	26.0	1402	57.4	2.7	0.4	1402.2	57.4
G91	218	71	0.33	2.3303	0.03724	0.20402	0.0021	0.07906	0.0013	1222	22.7	1197	22.7	1174	61.9	2.1	-2.0	1173.6	61.9
G92	140	75	0.54	1.5715	0.03028	0.15832	0.0017	0.06872	0.0013	959	23.9	947	19.0	890	78.7	1.2	-6.4	947.4	19.0
G93	93	34	0.37	2.2682	0.04455	0.20328	0.0022	0.07727	0.0015	1202	27.7	1193	23.8	1128	77.5	0.8	-5.7	1128.2	77.5
G94	207	137	0.66	17.5324	0.24358	0.57349	0.0059	0.21177	0.0029	2964	26.7	2922	48.4	2919	43.6	1.4	-0.1	2919.1	43.6
G95	139	125	0.90	12.7673	0.18117	0.50258	0.0052	0.17601	0.0024	2663	26.7	2625	44.6	2616	45.8	1.4	-0.4	2615.7	45.8
G96	148	72	0.49	4.1440	0.06530	0.28952	0.0030	0.09920	0.0016	1663	25.8	1639	30.3	1609	57.5	1.5	-1.9	1609.1	57.5
G97	193	110	0.57	0.7738	0.01686	0.09497	0.0010	0.05654	0.0012	582	19.3	585	12.2	473	96.4	-0.5	-23.6	584.8	12.2
G98	324	187	0.58	0.4172	0.00945	0.05557	0.0006	0.05212	0.0012	354	13.5	349	7.4	291	102.3	1.6	-20.0	348.6	7.4
G99	198	90	0.45	4.4681	0.06788	0.30321	0.0031	0.10231	0.0015	1725	25.2	1707	31.1	1667	54.8	1.0	-2.4	1666.5	54.8
G100	805	175	0.22	4.5985	0.06507	0.30290	0.0031	0.10543	0.0015	1749	23.6	1706	30.5	1722	50.3	2.5	0.9	1721.8	50.3
G101	1178	502	0.43	2.1143	0.03004	0.19019	0.0019	0.07722	0.0011	1154	19.6	1122	20.9	1127	54.7	2.8	0.4	1126.9	54.7
G102	544	359	0.66	0.4807	0.00894	0.06376	0.0007	0.05238	0.0010	399	12.3	399	8.1	302	83.3	0.0	-31.9	398.5	8.1
G103	83	34	0.41	2.8259	0.05532	0.22789	0.0025	0.08618	0.0017	1362	29.4	1323	26.3	1342	74.9	2.9	1.4	1342.2	74.9
G104	404	205	0.51	3.9828	0.05815	0.27774	0.0028	0.09969	0.0014	1631	23.7	1580	28.7	1618	52.7	3.2	2.4	1618.3	52.7
G105	729	216	0.30	1.6830	0.02524	0.15617	0.0016	0.07495	0.0011	1002	19.1	936	17.8	1067	58.6	7.1	12.3	935.5	17.8
G106	183	52	0.28	4.2553	0.06689	0.29236	0.0031	0.10126	0.0016	1685	25.8	1653	30.5	1647	56.9	1.9	-0.4	1647.3	56.9
G107	54	24	0.45	1.7028	0.04729	0.16348	0.0020	0.07248	0.0020	1010	35.5	976	21.7	1000	111.6	3.4	2.3	976.1	21.7
G108	394	107	0.27	5.0241	0.07347	0.31694	0.0033	0.11034	0.0016	1823	24.8	1775	31.8	1805	51.5	2.7	1.7	1805.0	51.5

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G109	70	88	1.26	0.5439	0.02383	0.07072	0.0009	0.05354	0.0024	441	31.3	441	11.1	352	194.0	0.1	-25.2	440.5	11.1
G110	327	146	0.45	4.3659	0.06552	0.29680	0.0031	0.10247	0.0015	1706	24.8	1675	30.4	1669	53.9	1.8	-0.4	1669.3	53.9
G111	117	104	0.88	3.9041	0.06720	0.28205	0.0030	0.09645	0.0017	1615	27.8	1602	30.3	1557	63.4	0.8	-2.9	1556.5	63.4
G112	227	184	0.81	1.6879	0.02974	0.16594	0.0018	0.07089	0.0012	1004	22.5	990	19.4	954	70.7	1.4	-3.7	989.7	19.4
G113	204	146	0.72	0.5660	0.01402	0.07286	0.0008	0.05417	0.0014	455	18.2	453	9.8	378	110.0	0.4	-20.0	453.4	9.8
G114	79	51	0.64	1.9125	0.04676	0.17553	0.0020	0.07599	0.0019	1085	32.6	1043	22.4	1095	97.3	4.1	4.8	1042.5	22.4
G115	140	65	0.46	1.9209	0.03699	0.17924	0.0019	0.07477	0.0014	1088	25.7	1063	21.2	1062	76.4	2.4	0.0	1062.8	21.2
G116	364	285	0.78	0.7685	0.01468	0.09202	0.0010	0.05828	0.0011	579	16.9	567	11.5	540	83.5	2.0	-5.1	567.4	11.5
G117	393	616	1.57	0.5302	0.01104	0.06514	0.0007	0.05682	0.0012	432	14.7	407	8.5	484	91.3	6.2	15.9	406.8	8.5
G118	2264	813	0.36	3.7595	0.05471	0.27123	0.0028	0.09683	0.0014	1584	23.3	1547	28.0	1564	52.6	2.4	1.1	1563.9	52.6
G119	41	31	0.74	2.2046	0.06209	0.19393	0.0024	0.07943	0.0023	1183	39.3	1143	25.7	1183	110.7	3.5	3.4	1182.9	110.7
G120	708	38	0.05	0.5868	0.01339	0.06837	0.0008	0.05998	0.0014	469	17.1	426	9.2	603	97.8	9.9	29.3	426.4	9.2
G121	139	111	0.80	4.4646	0.07476	0.29829	0.0032	0.10467	0.0017	1724	27.8	1683	31.5	1708	60.3	2.5	1.5	1708.4	60.3
G122	499	626	1.25	0.6356	0.01187	0.08012	0.0009	0.05549	0.0010	500	14.7	497	10.1	432	80.7	0.5	-15.1	496.9	10.1
G123	626	347	0.55	0.7177	0.01511	0.08330	0.0009	0.06029	0.0013	549	17.9	516	10.8	614	89.8	6.5	16.0	515.8	10.8
G124	385	223	0.58	1.7270	0.02899	0.16813	0.0018	0.07189	0.0012	1019	21.6	1002	19.4	983	66.7	1.7	-1.9	1001.8	19.4
G125	157	41	0.26	1.7093	0.03350	0.16570	0.0018	0.07221	0.0014	1012	25.1	988	19.9	992	78.5	2.4	0.4	988.4	19.9
G126	293	183	0.63	1.8700	0.03743	0.17840	0.0020	0.07340	0.0015	1071	26.5	1058	21.4	1025	79.9	1.2	-3.2	1058.2	21.4
G127	294	217	0.74	0.0431	0.00383	0.00623	0.0001	0.04846	0.0044	43	7.5	40	1.4	122	397.8	7.0	67.1	40.1	1.4
G128	119	62	0.52	0.1817	0.01103	0.02582	0.0004	0.04933	0.0030	170	19.0	164	4.8	164	275.4	3.1	-0.6	164.4	4.8
G129	73	32	0.44	2.7378	0.05907	0.22636	0.0026	0.08482	0.0018	1339	32.1	1315	27.0	1311	83.0	1.8	-0.3	1311.3	83.0
G130	626	261	0.42	3.3727	0.05440	0.24962	0.0026	0.09477	0.0015	1498	25.3	1437	26.9	1524	59.1	4.3	5.7	1523.6	59.1
G131	796	1649	2.07	0.0262	0.00159	0.00395	0.0001	0.04659	0.0029	26	3.2	25	0.7	28	283.2	3.5	9.3	25.4	0.7
G132	1190	227	0.19	0.1016	0.00254	0.01517	0.0002	0.04702	0.0012	98	4.7	97	2.1	50	118.2	1.2	-94.6	97.1	2.1
Sample J6-2																			
G1	7119	2481	0.35	0.0284	0.00053	0.00434	0.0000	0.04657	0.0009	28	1.1	28	0.6	27	88.7	1.8	-2.2	27.9	0.6
G2	347	120	0.35	4.1096	0.05573	0.27803	0.0028	0.10546	0.0014	1656	22.2	1581	28.4	1722	49.9	4.7	8.2	1722.4	49.9
G3	48	22	0.46	2.2966	0.07573	0.19856	0.0027	0.08254	0.0028	1211	46.7	1168	28.6	1258	129.2	3.7	7.2	1258.4	129.2
G4	994	1382	1.39	2.6902	0.03586	0.22053	0.0022	0.08707	0.0012	1326	19.7	1285	23.4	1362	51.3	3.2	5.7	1362.1	51.3
G5	471	673	1.43	3.3788	0.04514	0.25264	0.0025	0.09550	0.0013	1500	20.9	1452	26.1	1538	50.3	3.3	5.6	1537.9	50.3
G6	106	61	0.57	10.9404	0.19366	0.45577	0.0053	0.17143	0.0031	2518	32.9	2421	47.0	2572	60.0	4.0	5.9	2571.6	60.0
G7	216	178	0.82	3.5131	0.05122	0.25727	0.0026	0.09753	0.0014	1530	23.0	1476	27.0	1578	54.8	3.7	6.4	1577.5	54.8
G8	331	318	0.96	2.7198	0.03852	0.22778	0.0023	0.08532	0.0012	1334	21.0	1323	24.2	1323	55.2	0.8	0.0	1322.6	55.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G9	259	127	0.49	0.1882	0.00691	0.02686	0.0003	0.05008	0.0019	175	11.8	171	4.0	199	168.8	2.5	14.1	170.9	4.0
G10	788	326	0.41	4.6280	0.06085	0.29709	0.0030	0.11139	0.0015	1754	22.0	1677	29.5	1822	47.8	4.6	8.0	1822.2	47.8
G11	283	154	0.54	11.0280	0.14645	0.46389	0.0047	0.17002	0.0023	2526	24.7	2457	41.2	2558	44.6	2.8	4.0	2557.8	44.6
G12	376	158	0.42	1.7362	0.02781	0.16734	0.0017	0.07421	0.0012	1022	20.6	997	19.1	1047	64.9	2.5	4.7	997.4	19.1
G13	601	368	0.61	0.1793	0.00452	0.02536	0.0003	0.05057	0.0013	167	7.8	161	3.5	221	116.5	3.7	27.0	161.4	3.5
G14	303	491	1.62	1.0301	0.01804	0.11320	0.0012	0.06510	0.0012	719	18.0	691	13.6	778	74.0	4.0	11.1	691.3	13.6
G15	560	165	0.30	0.0758	0.00381	0.01108	0.0002	0.04896	0.0025	74	7.2	71	1.9	146	231.1	4.5	51.3	71.0	1.9
G16	212	93	0.44	4.1526	0.06067	0.29579	0.0030	0.10047	0.0015	1665	23.9	1670	30.1	1633	54.6	-0.3	-2.3	1632.7	54.6
G17	665	63	0.09	0.3838	0.00778	0.05281	0.0006	0.05201	0.0011	330	11.4	332	6.8	286	92.8	-0.6	-16.1	331.8	6.8
G18	206	191	0.93	2.6407	0.04195	0.21759	0.0023	0.08691	0.0014	1312	23.4	1269	23.8	1359	61.6	3.4	6.6	1358.5	61.6
G19	210	152	0.72	0.8676	0.01747	0.10151	0.0011	0.06122	0.0013	634	19.0	623	12.6	647	86.9	1.8	3.7	623.2	12.6
G20	530	22	0.04	0.4410	0.00863	0.05496	0.0006	0.05748	0.0011	371	12.2	345	7.1	510	87.2	7.6	32.3	344.9	7.1
G21	99	37	0.37	5.1750	0.08220	0.32607	0.0034	0.11369	0.0018	1849	27.0	1819	33.2	1859	57.9	1.6	2.1	1859.2	57.9
G22	430	292	0.68	8.1690	0.11273	0.41472	0.0042	0.14117	0.0020	2250	25.0	2237	38.0	2242	47.9	0.6	0.2	2241.6	47.9
G23	73	88	1.21	3.7549	0.07439	0.27265	0.0030	0.09871	0.0020	1583	31.8	1554	30.7	1600	74.7	1.9	2.9	1599.9	74.7
G24	149	69	0.46	1.9566	0.03538	0.18289	0.0019	0.07670	0.0014	1101	24.3	1083	21.0	1113	72.7	1.7	2.7	1082.7	21.0
G25	294	233	0.79	2.0623	0.03259	0.19497	0.0020	0.07583	0.0012	1136	21.6	1148	21.5	1091	63.7	-1.0	-5.3	1090.6	63.7
G26	1531	957	0.63	0.0810	0.00192	0.01226	0.0001	0.04738	0.0011	79	3.6	79	1.7	68	113.8	0.8	-15.4	78.5	1.7
G27	87	109	1.25	3.1084	0.05987	0.24507	0.0027	0.09095	0.0018	1435	29.6	1413	27.6	1446	74.0	1.5	2.2	1445.5	74.0
G28	115	115	1.00	3.6320	0.06281	0.25961	0.0028	0.10037	0.0018	1557	27.5	1488	28.1	1631	64.9	4.6	8.8	1631.0	64.9
G29	923	339	0.37	4.0543	0.05849	0.27514	0.0028	0.10573	0.0016	1645	23.5	1567	28.0	1727	53.3	5.0	9.3	1727.0	53.3
G30	429	326	0.76	0.1929	0.00546	0.02706	0.0003	0.05115	0.0015	179	9.3	172	3.8	248	130.1	4.1	30.5	172.1	3.8
G31	752	137	0.18	1.6952	0.02563	0.16649	0.0017	0.07309	0.0011	1007	19.3	993	18.6	1016	61.6	1.4	2.3	992.7	18.6
G32	992	910	0.92	9.9250	0.14325	0.45441	0.0046	0.15681	0.0023	2428	26.6	2415	40.5	2422	49.3	0.5	0.3	2421.6	49.3
G33	161	60	0.37	1.6540	0.03131	0.15900	0.0017	0.07469	0.0014	991	24.0	951	18.7	1060	76.8	4.2	10.3	951.2	18.7
G34	2745	8717	3.18	0.0302	0.00090	0.00433	0.0001	0.05001	0.0015	30	1.8	28	0.6	196	138.5	8.6	85.8	27.8	0.6
G35	46	22	0.49	1.9584	0.07040	0.17424	0.0024	0.08072	0.0030	1101	48.3	1036	26.3	1215	141.5	6.4	14.7	1035.5	26.3
G36	172	132	0.77	0.5428	0.01432	0.06537	0.0007	0.05963	0.0016	440	18.8	408	8.9	590	114.6	7.9	30.8	408.2	8.9
G37	964	42	0.04	4.1029	0.06062	0.28134	0.0028	0.10475	0.0016	1655	24.1	1598	28.5	1710	54.7	3.6	6.5	1710.0	54.7
G38	226	70	0.31	6.6672	0.10338	0.37037	0.0038	0.12934	0.0020	2068	27.4	2031	35.7	2089	55.0	1.8	2.8	2089.1	55.0
G39	1199	1067	0.89	0.0306	0.00165	0.00491	0.0001	0.04478	0.0025	31	3.2	32	0.9	0	121.2	-3.2	-31500.0	31.6	0.9
G40	1057	610	0.58	0.0351	0.00165	0.00508	0.0001	0.04963	0.0024	35	3.2	33	0.8	178	215.3	7.0	81.6	32.7	0.8
G41	742	75	0.10	0.3832	0.00847	0.05382	0.0006	0.05117	0.0012	329	12.4	338	7.0	249	102.0	-2.5	-35.9	337.9	7.0
G42	135	68	0.50	4.7254	0.08446	0.29781	0.0032	0.11405	0.0021	1772	30.0	1681	31.7	1865	65.2	5.4	9.9	1864.9	65.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G43	762	77	0.10	0.4019	0.00807	0.05381	0.0006	0.05368	0.0011	343	11.7	338	6.9	358	91.3	1.5	5.5	337.9	6.9
G44	202	65	0.32	3.0134	0.05956	0.24429	0.0027	0.08870	0.0018	1411	30.1	1409	27.5	1398	76.4	0.1	-0.8	1397.8	76.4
G45	581	469	0.81	3.9011	0.06225	0.27327	0.0028	0.10268	0.0017	1614	25.8	1557	28.2	1673	59.5	3.6	6.9	1673.1	59.5
G46	365	269	0.74	4.5578	0.07353	0.30830	0.0032	0.10635	0.0018	1742	26.9	1732	31.1	1738	59.5	0.5	0.3	1737.8	59.5
G47	167	186	1.11	0.8227	0.02326	0.09420	0.0011	0.06283	0.0018	610	25.9	580	12.9	703	120.7	5.0	17.4	580.3	12.9
G48	197	107	0.54	0.8666	0.02421	0.09400	0.0011	0.06634	0.0019	634	26.3	579	13.0	817	117.3	9.4	29.1	579.2	13.0
G49	632	323	0.51	2.0690	0.03823	0.18100	0.0019	0.08229	0.0016	1139	25.3	1072	20.8	1252	72.8	6.2	14.4	1072.4	20.8
G50	363	149	0.41	2.4742	0.04661	0.21639	0.0023	0.08232	0.0016	1265	27.2	1263	24.3	1253	74.2	0.1	-0.8	1253.0	74.2
G51	1321	625	0.47	0.0921	0.00232	0.01388	0.0002	0.04778	0.0012	89	4.3	89	1.9	87	121.7	0.6	-1.7	88.9	1.9
G52	619	506	0.82	0.0737	0.00290	0.01055	0.0001	0.05033	0.0020	72	5.5	68	1.7	210	180.7	6.6	67.8	67.7	1.7
G53	237	479	2.02	2.8149	0.05085	0.23086	0.0024	0.08787	0.0016	1360	27.1	1339	25.2	1380	70.0	1.5	2.9	1379.6	70.0
G54	441	480	1.09	0.6325	0.01331	0.07616	0.0008	0.05985	0.0013	498	16.6	473	9.7	598	91.8	5.2	20.9	473.2	9.7
G55	361	305	0.85	0.0416	0.00396	0.00617	0.0001	0.04861	0.0047	41	7.7	40	1.5	129	425.0	4.3	69.2	39.7	1.5
G56	97	24	0.25	2.3444	0.05940	0.20676	0.0024	0.08174	0.0021	1226	36.1	1212	25.9	1239	100.0	1.2	2.2	1239.3	100.0
G57	83	78	0.93	5.2338	0.11154	0.33078	0.0037	0.11409	0.0025	1858	36.3	1842	36.2	1866	77.9	0.9	1.3	1865.5	77.9
G58	145	115	0.79	0.7028	0.02120	0.08547	0.0010	0.05929	0.0018	540	25.3	529	12.0	578	131.3	2.2	8.5	528.7	12.0
G59	522	187	0.36	1.9460	0.03633	0.18020	0.0019	0.07790	0.0015	1097	25.0	1068	20.5	1144	74.9	2.7	6.7	1068.1	20.5
G60	2701	891	0.33	3.7391	0.06526	0.26708	0.0027	0.10102	0.0018	1580	28.0	1526	27.8	1643	65.4	3.5	7.1	1642.9	65.4
G61	731	73	0.10	0.4106	0.01075	0.05539	0.0006	0.05352	0.0014	349	15.5	348	7.5	351	118.9	0.5	0.9	347.5	7.5
G62	1328	81	0.06	1.7468	0.02156	0.16735	0.0018	0.07586	0.0009	1026	15.9	998	19.6	1092	48.0	2.9	8.6	997.5	19.6
G63	534	78	0.15	4.6286	0.05667	0.32263	0.0034	0.10427	0.0013	1754	20.4	1803	33.4	1701	43.8	-2.7	-5.9	1701.4	43.8
G64	2614	1056	0.40	0.0365	0.00092	0.00524	0.0001	0.05067	0.0013	36	1.8	34	0.8	226	115.8	8.0	85.1	33.7	0.8
G65	127	87	0.68	3.1609	0.05655	0.24930	0.0029	0.09215	0.0017	1448	27.6	1435	29.5	1470	67.9	0.9	2.4	1470.3	67.9
G66	40	33	0.82	13.8678	0.20871	0.54647	0.0063	0.18443	0.0028	2741	28.5	2811	52.7	2693	49.3	-2.5	-4.4	2693.1	49.3
G67	174	54	0.31	3.4577	0.04992	0.26691	0.0029	0.09415	0.0014	1518	22.7	1525	29.6	1511	53.7	-0.5	-0.9	1511.1	53.7
G68	474	149	0.31	0.0794	0.00462	0.01169	0.0002	0.04936	0.0029	78	8.7	75	2.3	165	265.5	3.5	54.5	75.0	2.3
G69	1403	764	0.54	2.2098	0.02683	0.20178	0.0021	0.07959	0.0010	1184	17.0	1185	22.9	1187	46.6	-0.1	0.2	1186.9	46.6
G70	289	255	0.88	11.5470	0.14430	0.47225	0.0051	0.17770	0.0022	2568	23.4	2493	44.5	2632	40.5	3.0	5.2	2631.5	40.5
G71	126	101	0.80	1.5736	0.03667	0.15926	0.0019	0.07181	0.0017	960	28.9	953	21.1	981	94.8	0.8	2.8	952.7	21.1
G72	517	212	0.41	0.1879	0.00703	0.02507	0.0003	0.05447	0.0021	175	12.0	160	4.2	391	165.4	9.5	59.1	159.6	4.2
G73	364	192	0.53	0.6672	0.01335	0.08197	0.0009	0.05916	0.0012	519	16.3	508	10.9	573	86.7	2.2	11.4	507.9	10.9
G74	426	22	0.05	3.9025	0.05322	0.28580	0.0031	0.09924	0.0013	1614	22.0	1621	30.8	1610	50.1	-0.4	-0.7	1609.9	50.1
G75	20	96	4.82	1.7723	0.09330	0.16804	0.0028	0.07666	0.0041	1035	68.3	1001	30.5	1112	207.3	3.4	10.0	1001.3	30.5
G76	254	100	0.39	5.6097	0.07302	0.35159	0.0038	0.11596	0.0015	1918	22.4	1942	35.8	1895	46.1	-1.3	-2.5	1894.9	46.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G77	593	623	1.05	0.1877	0.00500	0.02703	0.0003	0.05048	0.0014	175	8.5	172	3.9	217	122.5	1.6	20.7	171.9	3.9
G78	701	237	0.34	10.1185	0.12433	0.44172	0.0047	0.16649	0.0020	2446	22.7	2358	41.8	2523	40.5	3.7	6.5	2522.6	40.5
G79	346	209	0.60	3.4130	0.04523	0.26746	0.0029	0.09275	0.0012	1507	20.8	1528	28.9	1483	49.7	-1.3	-3.1	1482.6	49.7
G80	246	104	0.42	35.4083	4.47259	0.76457	0.0605	0.33659	0.0440	3650	249.5	3661	441.9	3647	373.1	-0.3	-0.4	3647.4	373.1
G81	352	132	0.37	0.6763	0.01521	0.07850	0.0009	0.06262	0.0014	525	18.4	487	10.8	695	95.9	7.7	29.9	487.2	10.8
G82	302	220	0.73	4.7522	0.06805	0.31622	0.0034	0.10923	0.0016	1777	24.0	1771	33.5	1787	51.9	0.3	0.9	1786.5	51.9
G83	5031	695	0.14	0.1977	0.01178	0.02943	0.0004	0.04881	0.0029	183	20.0	187	4.4	139	269.6	-2.1	-35.0	187.0	4.4
G84	240	72	0.30	0.0877	0.00622	0.01371	0.0002	0.04647	0.0033	85	11.6	88	2.6	22	327.5	-2.8	-297.3	87.8	2.6
G85	53	60	1.14	3.4630	0.07180	0.26890	0.0032	0.09360	0.0020	1519	32.7	1535	32.2	1500	78.7	-1.1	-2.3	1500.1	78.7
G86	444	113	0.25	3.0295	0.04546	0.23490	0.0025	0.09374	0.0014	1415	22.9	1360	26.5	1503	56.6	4.0	9.5	1502.9	56.6
G87	367	123	0.33	0.0720	0.00391	0.01042	0.0002	0.05026	0.0028	71	7.4	67	1.9	207	246.1	5.7	67.7	66.8	1.9
G88	854	127	0.15	6.9089	0.08675	0.38087	0.0040	0.13185	0.0017	2100	22.3	2080	37.2	2123	43.5	0.9	2.0	2122.7	43.5
G89	199	63	0.31	3.7619	0.05946	0.27444	0.0030	0.09963	0.0016	1585	25.4	1563	30.3	1617	59.0	1.4	3.3	1617.3	59.0
G90	1961	631	0.32	0.0989	0.00217	0.01445	0.0002	0.04975	0.0011	96	4.0	93	2.0	183	102.1	3.6	49.5	92.5	2.0
G91	367	71	0.19	1.1391	0.02192	0.12085	0.0013	0.06851	0.0013	772	20.8	736	15.4	884	79.9	5.0	16.8	735.5	15.4
G92	2063	1046	0.51	0.0916	0.00268	0.01311	0.0002	0.05076	0.0015	89	5.0	84	2.0	230	134.9	6.0	63.5	84.0	2.0
Sample J4-2																			
G1	132	148	1.12	3.2049	0.04226	0.25436	0.0026	0.09158	0.0012	1458	20.4	1461	26.6	1459	50.6	-0.2	-0.2	1458.7	50.6
G2	60	46	0.77	2.3835	0.03576	0.21130	0.0022	0.08199	0.0013	1238	21.5	1236	23.3	1245	59.0	0.2	0.8	1245.4	59.0
G3	35	40	1.14	13.1867	0.17334	0.51668	0.0053	0.18551	0.0025	2693	24.8	2685	45.3	2703	43.9	0.3	0.7	2702.8	43.9
G4	57	17	0.30	1.8862	0.02962	0.18080	0.0019	0.07583	0.0012	1076	20.8	1071	20.6	1091	63.6	0.5	1.8	1071.3	20.6
G5	8	5	0.60	6.1558	0.11954	0.35028	0.0041	0.12774	0.0026	1998	33.9	1936	38.9	2067	69.6	3.2	6.3	2067.1	69.6
G6	53	27	0.52	4.5045	0.06258	0.31072	0.0032	0.10537	0.0015	1732	23.1	1744	31.5	1721	51.6	-0.7	-1.4	1720.8	51.6
G7	13	11	0.83	4.9933	0.08973	0.32380	0.0036	0.11209	0.0021	1818	30.4	1808	35.0	1834	66.1	0.5	1.4	1833.6	66.1
G8	613	224	0.37	0.1167	0.00206	0.01674	0.0002	0.05065	0.0009	112	3.8	107	2.2	225	82.3	4.7	52.5	107.0	2.2
G9	214	170	0.79	3.0491	0.03909	0.23936	0.0024	0.09259	0.0012	1420	19.6	1383	25.1	1480	49.3	2.6	6.5	1479.5	49.3
G10	18	9	0.50	2.5949	0.05139	0.21903	0.0024	0.08612	0.0018	1299	29.0	1277	25.7	1341	77.5	1.8	4.8	1340.8	77.5
G11	302	42	0.14	1.7747	0.02319	0.16311	0.0017	0.07909	0.0011	1036	17.0	974	18.3	1174	52.2	6.4	17.1	974.0	18.3
G12	21	20	0.93	5.3328	0.08381	0.33257	0.0036	0.11656	0.0019	1874	26.9	1851	34.4	1904	57.3	1.3	2.8	1904.1	57.3
G13	389	402	1.03	0.0473	0.00139	0.00712	0.0001	0.04826	0.0014	47	2.7	46	1.0	112	138.1	2.4	59.2	45.8	1.0
G14	123	75	0.61	0.0796	0.00337	0.01212	0.0002	0.04776	0.0021	78	6.3	78	1.9	86	199.7	0.1	9.9	77.7	1.9
G15	34	17	0.51	1.6777	0.03083	0.16612	0.0018	0.07341	0.0014	1000	23.4	991	19.7	1025	75.2	0.9	3.4	990.7	19.7
G16	25	17	0.66	0.9043	0.02405	0.10294	0.0012	0.06385	0.0017	654	25.6	632	13.9	737	113.1	3.5	14.3	631.6	13.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G17	45	54	1.20	4.4082	0.06281	0.29876	0.0031	0.10725	0.0016	1714	23.6	1685	30.7	1753	52.7	1.7	3.9	1753.3	52.7
G18	149	129	0.86	0.0717	0.00338	0.01046	0.0001	0.04983	0.0024	70	6.4	67	1.8	187	216.8	4.8	64.1	67.1	1.8
G19	123	104	0.85	0.0359	0.00254	0.00544	0.0001	0.04796	0.0035	36	5.0	35	1.1	96	325.9	2.6	63.7	34.9	1.1
G20	14	9	0.65	2.0996	0.04872	0.19569	0.0023	0.07799	0.0019	1149	31.9	1152	24.3	1147	93.1	-0.3	-0.5	1146.7	93.1
G21	214	231	1.08	0.1808	0.00391	0.02678	0.0003	0.04908	0.0011	169	6.7	170	3.6	152	101.6	-0.9	-12.4	170.3	3.6
G22	32	19	0.58	5.8539	0.08469	0.36053	0.0038	0.11803	0.0018	1954	25.1	1985	35.6	1927	52.6	-1.5	-3.0	1926.5	52.6
G23	98	53	0.54	0.5203	0.01005	0.06747	0.0007	0.05606	0.0011	425	13.4	421	8.6	454	86.0	1.0	7.3	420.9	8.6
G24	188	31	0.17	4.7379	0.06054	0.30919	0.0031	0.11139	0.0015	1774	21.4	1737	30.7	1822	46.9	2.1	4.7	1822.2	46.9
G25	102	37	0.36	1.6973	0.02483	0.16966	0.0017	0.07272	0.0011	1008	18.7	1010	19.2	1006	60.1	-0.3	-0.4	1010.2	19.2
G26	47	13	0.28	1.9241	0.03795	0.18478	0.0020	0.07569	0.0015	1090	26.4	1093	22.0	1087	80.0	-0.3	-0.6	1093.0	22.0
G27	121	46	0.38	4.9453	0.06453	0.32568	0.0033	0.11038	0.0015	1810	22.0	1817	32.1	1806	48.1	-0.4	-0.7	1805.6	48.1
G28	60	34	0.57	0.8723	0.01659	0.10293	0.0011	0.06160	0.0012	637	18.0	632	12.8	660	82.3	0.8	4.4	631.6	12.8
G29	44	75	1.69	4.0521	0.06413	0.28223	0.0030	0.10437	0.0017	1645	25.8	1603	30.1	1703	59.2	2.6	5.9	1703.2	59.2
G30	63	54	0.86	0.5179	0.01157	0.06741	0.0007	0.05585	0.0013	424	15.5	421	8.9	446	99.5	0.8	5.7	420.5	8.9
G31	84	36	0.43	2.3651	0.03386	0.20923	0.0021	0.08217	0.0012	1232	20.4	1225	22.8	1250	56.4	0.6	2.0	1249.5	56.4
G32	89	24	0.27	0.0671	0.00363	0.00973	0.0001	0.05011	0.0028	66	6.9	62	1.7	200	245.9	5.6	68.8	62.4	1.7
G33	84	41	0.48	4.4569	0.05993	0.30586	0.0031	0.10592	0.0015	1723	22.3	1720	30.7	1730	50.0	0.2	0.6	1730.4	50.0
G34	151	94	0.62	1.8933	0.02600	0.18132	0.0018	0.07590	0.0011	1079	18.3	1074	20.1	1093	55.7	0.4	1.7	1074.2	20.1
G35	143	140	0.98	0.6643	0.01076	0.08274	0.0009	0.05836	0.0010	517	13.1	513	10.2	543	71.6	0.9	5.7	512.5	10.2
G36	27	17	0.63	1.7190	0.03427	0.17194	0.0019	0.07268	0.0015	1016	25.6	1023	20.6	1005	81.8	-0.7	-1.8	1022.8	20.6
G37	94	25	0.27	4.5712	0.06124	0.31127	0.0032	0.10675	0.0015	1744	22.3	1747	31.1	1745	49.6	-0.2	-0.1	1744.7	49.6
G38	75	91	1.22	0.8378	0.01589	0.10001	0.0011	0.06090	0.0012	618	17.6	615	12.4	636	82.5	0.6	3.3	614.5	12.4
G39	97	16	0.16	1.6800	0.02493	0.16604	0.0017	0.07355	0.0011	1001	18.9	990	18.8	1029	60.1	1.1	3.8	990.3	18.8
G40	47	48	1.01	4.0158	0.06238	0.28603	0.0030	0.10206	0.0016	1637	25.3	1622	30.1	1662	58.4	1.0	2.4	1661.9	58.4
G41	106	55	0.52	1.9238	0.03014	0.17990	0.0019	0.07773	0.0013	1089	20.9	1067	20.4	1140	63.2	2.1	6.5	1066.5	20.4
G42	173	42	0.24	0.4628	0.00792	0.06078	0.0006	0.05536	0.0010	386	11.0	380	7.7	427	76.1	1.6	10.8	380.3	7.7
G43	297	129	0.44	0.1022	0.00246	0.01510	0.0002	0.04919	0.0012	99	4.5	97	2.1	157	112.9	2.3	38.4	96.6	2.1
G44	207	20	0.10	0.3848	0.00657	0.05262	0.0005	0.05316	0.0009	331	9.6	331	6.7	336	77.9	0.0	1.5	330.6	6.7
G45	60	28	0.47	1.5487	0.02588	0.14730	0.0015	0.07643	0.0013	950	20.6	886	17.3	1106	67.8	7.2	19.9	885.8	17.3
G46	139	163	1.17	0.5814	0.01006	0.06989	0.0007	0.06047	0.0011	465	12.9	436	8.8	621	75.6	6.9	29.8	435.5	8.8
G47	32	30	0.93	3.9957	0.06277	0.28565	0.0030	0.10168	0.0016	1633	25.5	1620	30.1	1655	59.2	0.8	2.1	1655.1	59.2
G48	234	140	0.60	0.1016	0.00266	0.01496	0.0002	0.04939	0.0013	98	4.9	96	2.1	166	122.5	2.7	42.5	95.7	2.1
G49	247	144	0.58	0.0495	0.00175	0.00752	0.0001	0.04782	0.0017	49	3.4	48	1.1	90	168.2	1.4	46.0	48.3	1.1
G50	42	18	0.43	0.6764	0.01636	0.08225	0.0009	0.05978	0.0015	525	19.8	510	10.9	595	106.5	2.9	14.4	509.6	10.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G51	176	148	0.84	1.1170	0.01633	0.12469	0.0013	0.06512	0.0010	762	15.7	758	14.5	778	62.4	0.5	2.6	757.5	14.5
G52	112	41	0.37	2.8363	0.04213	0.23814	0.0025	0.08658	0.0013	1365	22.3	1377	25.5	1351	58.2	-0.9	-1.9	1351.2	58.2
G53	186	122	0.66	0.0633	0.00232	0.00927	0.0001	0.04965	0.0019	62	4.4	60	1.4	179	169.4	4.7	66.7	59.5	1.4
G54	112	99	0.88	0.1700	0.00540	0.02499	0.0003	0.04944	0.0016	159	9.4	159	3.7	169	148.1	0.2	5.8	159.1	3.7
G55	72	54	0.75	0.0708	0.00538	0.01108	0.0002	0.04644	0.0036	69	10.2	71	2.4	21	351.5	-2.3	-244.7	71.0	2.4
G56	18	11	0.59	14.6448	0.21047	0.53825	0.0057	0.19778	0.0029	2792	27.3	2776	47.6	2808	47.9	0.6	1.1	2808.0	47.9
G57	52	92	1.76	4.4993	0.06545	0.31764	0.0033	0.10297	0.0015	1731	24.2	1778	32.0	1678	54.6	-2.7	-6.0	1678.3	54.6
G58	75	44	0.59	0.2414	0.00732	0.03199	0.0004	0.05485	0.0017	220	12.0	203	4.6	406	134.4	8.1	50.0	203.0	4.6
G59	52	29	0.55	1.6282	0.02813	0.16376	0.0017	0.07228	0.0013	981	21.7	978	19.0	994	71.2	0.4	1.6	977.7	19.0
G60	59	36	0.60	5.1887	0.07856	0.33097	0.0035	0.11396	0.0018	1851	25.8	1843	33.4	1864	55.6	0.4	1.1	1863.5	55.6
G61	50	84	1.66	0.7903	0.01674	0.09637	0.0010	0.05961	0.0013	591	19.0	593	12.2	590	92.8	-0.3	-0.6	593.1	12.2
G62	34	38	1.11	0.8642	0.02047	0.10227	0.0011	0.06143	0.0015	632	22.3	628	13.3	654	102.4	0.7	4.1	627.7	13.3
G63	172	80	0.47	0.0815	0.00269	0.01198	0.0001	0.04949	0.0017	80	5.1	77	1.8	171	153.5	3.6	55.1	76.8	1.8
G64	139	211	1.52	0.0365	0.00296	0.00562	0.0001	0.04717	0.0039	36	5.8	36	1.3	57	372.7	0.8	37.0	36.1	1.3
G65	103	49	0.48	4.3752	0.06090	0.30472	0.0031	0.10438	0.0015	1708	23.0	1715	30.6	1703	52.1	-0.4	-0.7	1703.3	52.1
G66	49	41	0.83	14.9398	0.20582	0.56614	0.0058	0.19183	0.0027	2811	26.2	2892	47.8	2758	46.1	-2.8	-4.9	2757.9	46.1
G67	162	125	0.78	0.1761	0.00473	0.02626	0.0003	0.04874	0.0013	165	8.2	167	3.7	135	126.6	-1.4	-23.4	167.1	3.7
G68	138	70	0.51	2.3629	0.03378	0.21010	0.0021	0.08175	0.0012	1231	20.4	1229	22.7	1240	57.0	0.2	0.8	1239.6	57.0
G69	89	43	0.48	0.5780	0.01154	0.07379	0.0008	0.05695	0.0012	463	14.9	459	9.4	489	89.3	0.9	6.1	458.9	9.4
G70	69	59	0.85	0.0569	0.00540	0.00856	0.0002	0.04834	0.0047	56	10.4	55	2.1	116	425.0	2.2	52.5	55.0	2.1
G71	16	13	0.84	0.5672	0.02741	0.06808	0.0010	0.06057	0.0030	456	35.5	425	11.8	624	206.1	7.4	31.9	424.6	11.8
G72	234	45	0.19	3.9572	0.05396	0.27973	0.0028	0.10284	0.0014	1626	22.1	1590	28.4	1676	51.3	2.2	5.1	1676.0	51.3
G73	230	66	0.29	3.9970	0.05455	0.28105	0.0028	0.10338	0.0015	1634	22.2	1597	28.5	1686	51.3	2.3	5.3	1685.7	51.3
G74	190	140	0.73	0.0291	0.00195	0.00474	0.0001	0.04470	0.0030	29	3.8	31	0.9	0	170.8	-4.6	-30400.0	30.5	0.9
G75	62	67	1.09	3.0599	0.04947	0.23926	0.0025	0.09297	0.0016	1423	24.7	1383	26.0	1487	62.3	2.9	7.0	1487.3	62.3
G76	48	36	0.75	0.6136	0.01475	0.07547	0.0008	0.05910	0.0015	486	18.6	469	10.0	571	105.4	3.6	17.8	469.1	10.0
G77	38	17	0.44	1.7441	0.03743	0.17517	0.0019	0.07238	0.0016	1025	27.7	1041	21.3	997	88.3	-1.5	-4.4	1040.5	21.3
G78	76	49	0.64	0.7504	0.01434	0.09145	0.0010	0.05965	0.0012	568	16.6	564	11.4	591	83.9	0.8	4.6	564.1	11.4
G79	5	5	0.93	1.7745	0.07643	0.16960	0.0024	0.07606	0.0034	1036	55.9	1010	26.9	1097	171.5	2.6	7.9	1009.9	26.9
G80	151	37	0.25	0.0661	0.00268	0.01006	0.0001	0.04777	0.0020	65	5.1	65	1.6	87	192.3	0.8	25.9	64.5	1.6
G81	24	33	1.38	0.7058	0.02186	0.08670	0.0010	0.05918	0.0019	542	26.0	536	12.2	574	134.8	1.2	6.6	536.0	12.2
G82	62	29	0.47	4.0811	0.06503	0.28650	0.0030	0.10355	0.0017	1651	26.0	1624	30.0	1689	59.9	1.6	3.8	1688.7	59.9
G83	94	86	0.91	0.5053	0.01021	0.06463	0.0007	0.05683	0.0012	415	13.8	404	8.3	484	90.8	2.9	16.6	403.7	8.3
G84	134	38	0.28	0.4864	0.00992	0.06391	0.0007	0.05533	0.0012	402	13.6	399	8.2	425	90.9	0.8	6.1	399.3	8.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G85	251	54	0.22	4.7417	0.06595	0.31420	0.0032	0.10971	0.0016	1775	23.3	1761	31.0	1795	51.7	0.7	1.8	1794.5	51.7
G86	145	112	0.77	1.9410	0.02899	0.18433	0.0019	0.07655	0.0012	1095	20.0	1091	20.4	1110	60.8	0.4	1.7	1090.6	20.4
G87	46	24	0.53	0.5293	0.01391	0.06803	0.0008	0.05656	0.0015	431	18.5	424	9.2	474	117.4	1.6	10.4	424.3	9.2
G88	58	34	0.59	0.1066	0.00599	0.01609	0.0002	0.04818	0.0027	103	11.0	103	2.8	108	258.6	0.0	4.7	102.9	2.8
G89	145	210	1.44	0.2138	0.00501	0.03000	0.0003	0.05180	0.0012	197	8.4	191	4.1	276	108.0	3.2	31.0	190.6	4.1
G90	44	26	0.60	0.5915	0.01524	0.07527	0.0008	0.05712	0.0015	472	19.4	468	10.1	496	115.4	0.9	5.6	467.8	10.1
G91	54	22	0.41	0.0524	0.00541	0.00781	0.0002	0.04876	0.0051	52	10.4	50	1.9	136	457.4	3.4	63.1	50.2	1.9
G92	158	67	0.42	4.0655	0.05852	0.28409	0.0029	0.10403	0.0015	1647	23.5	1612	28.9	1697	54.1	2.2	5.0	1697.3	54.1
G93	133	72	0.54	3.0773	0.04535	0.24656	0.0025	0.09073	0.0014	1427	22.6	1421	25.9	1441	57.3	0.5	1.4	1440.9	57.3
G94	25	8	0.33	1.4803	0.03932	0.15217	0.0018	0.07072	0.0019	922	32.2	913	20.1	949	109.8	1.0	3.8	913.1	20.1
G95	32	17	0.53	1.8470	0.03984	0.17757	0.0020	0.07561	0.0017	1062	28.4	1054	21.6	1085	87.7	0.8	2.9	1053.7	21.6
G96	150	104	0.70	0.5470	0.01067	0.06992	0.0007	0.05688	0.0011	443	14.0	436	8.9	486	87.8	1.7	10.4	435.7	8.9
G97	29	15	0.51	1.6188	0.03409	0.16123	0.0018	0.07299	0.0016	978	26.4	964	19.6	1014	86.0	1.4	4.9	963.6	19.6
G98	18	11	0.64	4.7988	0.09869	0.31623	0.0036	0.11032	0.0023	1785	34.6	1771	35.5	1805	76.2	0.8	1.8	1804.6	76.2
G99	103	115	1.12	0.3778	0.00832	0.05160	0.0006	0.05323	0.0012	325	12.3	324	6.8	339	100.7	0.3	4.2	324.3	6.8
G100	342	363	1.06	0.0245	0.00109	0.00379	0.0001	0.04694	0.0021	25	2.2	24	0.6	46	209.6	0.8	47.0	24.4	0.6
G101	190	21	0.11	1.7179	0.02610	0.16940	0.0017	0.07372	0.0012	1015	19.5	1009	19.0	1034	62.6	0.6	2.4	1008.8	19.0
G102	12	10	0.85	0.4122	0.02761	0.05773	0.0009	0.05190	0.0035	350	39.7	362	10.7	281	296.4	-3.2	-28.8	361.8	10.7
G103	115	22	0.19	4.6948	0.06959	0.31681	0.0032	0.10773	0.0017	1766	24.8	1774	31.5	1761	55.3	-0.4	-0.7	1761.3	55.3
G104	30	24	0.79	3.0289	0.05415	0.24359	0.0026	0.09039	0.0017	1415	27.3	1405	26.8	1434	69.5	0.7	2.0	1433.7	69.5
G105	186	18	0.10	0.3996	0.00758	0.05397	0.0006	0.05382	0.0011	341	11.0	339	6.9	364	87.0	0.7	6.8	338.9	6.9
G106	53	49	0.92	0.1149	0.00654	0.01615	0.0002	0.05173	0.0030	111	11.9	103	2.9	274	255.0	7.0	62.2	103.3	2.9
G107	60	28	0.47	1.8238	0.03187	0.17635	0.0018	0.07518	0.0014	1054	22.9	1047	20.2	1073	71.5	0.7	2.5	1047.0	20.2
G108	36	26	0.73	2.8464	0.05581	0.23146	0.0025	0.08940	0.0018	1368	29.5	1342	26.5	1413	76.3	1.9	5.0	1412.7	76.3
G109	90	38	0.42	0.0759	0.00475	0.01096	0.0002	0.05036	0.0032	74	9.0	70	2.2	212	282.4	5.7	66.8	70.3	2.2
G110	83	30	0.36	4.5050	0.06978	0.30278	0.0031	0.10816	0.0017	1732	25.7	1705	30.7	1769	57.9	1.6	3.6	1768.7	57.9
G111	18	16	0.89	17.8095	0.28115	0.59622	0.0063	0.21715	0.0035	2980	30.4	3015	51.0	2960	52.1	-1.2	-1.9	2959.7	52.1
G112	65	30	0.46	4.3508	0.06923	0.30011	0.0031	0.10539	0.0017	1703	26.3	1692	30.7	1721	59.8	0.7	1.7	1721.1	59.8
G113	218	2	0.01	2.5201	0.03900	0.21564	0.0022	0.08496	0.0014	1278	22.5	1259	23.3	1315	61.5	1.5	4.2	1314.5	61.5
G114	45	10	0.23	2.9655	0.05146	0.24323	0.0026	0.08863	0.0016	1399	26.4	1404	26.5	1396	67.8	-0.3	-0.5	1396.2	67.8
G115	19	10	0.52	15.6905	0.25386	0.56510	0.0060	0.20185	0.0034	2858	30.9	2888	49.7	2841	54.0	-1.0	-1.6	2841.2	54.0
G116	219	50	0.23	1.5758	0.02484	0.15547	0.0016	0.07368	0.0012	961	19.6	932	17.7	1033	65.1	3.1	9.8	931.5	17.7
G117	84	47	0.56	3.7402	0.06424	0.26687	0.0028	0.10188	0.0018	1580	27.5	1525	28.6	1659	65.0	3.6	8.1	1658.7	65.0
G118	112	46	0.41	2.7469	0.04393	0.22903	0.0024	0.08719	0.0014	1341	23.8	1329	24.6	1365	62.9	0.9	2.6	1364.7	62.9

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G119	42	11	0.25	2.6962	0.04840	0.22844	0.0024	0.08580	0.0016	1327	26.6	1326	25.3	1334	70.9	0.1	0.6	1333.7	70.9
G120	35	25	0.70	15.3653	0.23919	0.55357	0.0057	0.20178	0.0033	2838	29.7	2840	47.6	2841	52.0	-0.1	0.0	2840.7	52.0
G121	60	34	0.56	2.8350	0.04804	0.23056	0.0024	0.08939	0.0016	1365	25.4	1337	25.1	1412	66.2	2.1	5.3	1412.4	66.2
G122	309	38	0.12	0.0726	0.00304	0.01103	0.0001	0.04788	0.0021	71	5.8	71	1.8	92	199.1	0.7	23.3	70.7	1.8
G123	83	61	0.74	1.6507	0.02887	0.16383	0.0017	0.07325	0.0013	990	22.1	978	18.9	1021	71.7	1.2	4.2	978.0	18.9
G124	61	69	1.13	3.2325	0.05557	0.25198	0.0026	0.09326	0.0017	1465	26.7	1449	27.1	1493	66.5	1.1	3.0	1493.1	66.5
G125	44	42	0.95	4.2320	0.07963	0.29710	0.0032	0.10355	0.0020	1680	30.9	1677	32.0	1689	70.9	0.2	0.7	1688.7	70.9
G126	65	39	0.60	0.0706	0.00536	0.01051	0.0002	0.04885	0.0038	69	10.2	67	2.0	141	341.9	2.8	52.1	67.4	2.0
G127	58	96	1.65	3.1714	0.05425	0.25096	0.0026	0.09187	0.0016	1450	26.4	1443	26.9	1465	66.7	0.5	1.4	1464.5	66.7
G128	43	47	1.10	0.0261	0.00593	0.00414	0.0001	0.04584	0.0105	26	11.7	27	1.4	0	927.0	-1.5	-26500.0	26.6	1.4
G129	21	10	0.47	3.0170	0.07979	0.23496	0.0029	0.09335	0.0026	1412	40.3	1360	30.3	1495	101.7	3.8	9.0	1494.9	101.7
G130	39	20	0.52	1.9358	0.03818	0.18520	0.0020	0.07598	0.0016	1094	26.4	1095	21.6	1095	80.0	-0.2	-0.1	1095.3	21.6
G131	93	65	0.70	3.4420	0.06070	0.25290	0.0027	0.09894	0.0018	1514	27.8	1453	27.4	1604	67.3	4.2	9.4	1604.2	67.3
G132	20	11	0.56	7.2820	0.13045	0.38984	0.0042	0.13579	0.0025	2147	32.0	2122	39.0	2174	63.9	1.2	2.4	2174.2	63.9
G133	182	186	1.02	0.9655	0.01731	0.11394	0.0012	0.06160	0.0011	686	17.9	696	13.7	660	78.4	-1.4	-5.4	695.6	13.7
G134	26	21	0.80	0.7967	0.02389	0.09886	0.0012	0.05859	0.0018	595	27.0	608	13.5	552	131.4	-2.1	-10.2	607.7	13.5
G135	228	26	0.11	2.3315	0.03767	0.20666	0.0021	0.08202	0.0014	1222	23.0	1211	22.5	1246	64.4	0.9	2.8	1245.9	64.4
G136	84	25	0.30	4.8937	0.08070	0.33713	0.0035	0.10553	0.0018	1801	27.8	1873	33.5	1724	62.1	-3.8	-8.7	1723.5	62.1
G137	183	291	1.59	0.4503	0.00878	0.06109	0.0006	0.05359	0.0011	378	12.3	382	7.8	354	89.8	-1.2	-8.1	382.2	7.8
G138	192	19	0.10	0.3910	0.00781	0.05374	0.0006	0.05289	0.0011	335	11.4	337	6.9	324	91.9	-0.7	-4.2	337.4	6.9
Sample W2-5																			
G1	694	204	0.29	5.0165	0.06193	0.32609	0.0033	0.11184	0.0014	1822	20.9	1819	32.1	1830	45.2	0.1	0.6	1829.6	45.2
G2	538	778	1.45	0.5146	0.00939	0.06599	0.0007	0.05669	0.0011	422	12.6	412	8.4	479	82.2	2.3	14.0	412.0	8.4
G3	758	312	0.41	4.1438	0.05197	0.29352	0.0030	0.10264	0.0013	1663	20.5	1659	29.7	1672	46.8	0.2	0.8	1672.4	46.8
G4	395	198	0.50	1.8489	0.02745	0.17912	0.0019	0.07505	0.0011	1063	19.6	1062	20.3	1070	60.3	0.1	0.7	1062.2	20.3
G5	956	706	0.74	0.1081	0.00290	0.01553	0.0002	0.05062	0.0014	104	5.3	99	2.2	223	124.0	4.9	55.5	99.3	2.2
G6	563	84	0.15	4.6633	0.05839	0.31148	0.0032	0.10884	0.0014	1761	20.9	1748	31.0	1780	46.2	0.7	1.8	1780.1	46.2
G7	80	40	0.50	3.8017	0.06775	0.27460	0.0030	0.10065	0.0018	1593	28.7	1564	30.6	1636	67.1	1.9	4.4	1636.2	67.1
G8	2136	567	0.27	0.0756	0.00163	0.01109	0.0001	0.04957	0.0011	74	3.1	71	1.5	175	101.1	4.1	59.4	71.1	1.5
G9	125	116	0.92	4.0258	0.06319	0.29046	0.0031	0.10076	0.0016	1639	25.5	1644	30.9	1638	59.1	-0.3	-0.3	1638.2	59.1
G10	385	81	0.21	4.5088	0.05867	0.29324	0.0030	0.11178	0.0015	1733	21.6	1658	29.8	1829	47.8	4.5	9.3	1828.6	47.8
G11	169	111	0.66	4.2130	0.06585	0.31123	0.0033	0.09841	0.0016	1677	25.7	1747	32.5	1594	59.1	-4.0	-9.6	1594.2	59.1
G12	183	65	0.36	4.4016	0.06299	0.30779	0.0032	0.10397	0.0015	1713	23.7	1730	31.6	1696	53.4	-1.0	-2.0	1696.1	53.4
G13	175	64	0.36	0.9426	0.02034	0.11103	0.0012	0.06172	0.0014	674	21.3	679	14.1	665	93.1	-0.6	-2.1	678.7	14.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G14	355	208	0.58	0.1692	0.00579	0.02399	0.0003	0.05126	0.0018	159	10.1	153	3.6	253	156.7	3.9	39.5	152.8	3.6
G15	185	197	1.06	3.4009	0.05097	0.26134	0.0027	0.09461	0.0015	1505	23.5	1497	28.0	1520	57.3	0.5	1.5	1520.2	57.3
G16	622	470	0.76	0.0341	0.00225	0.00536	0.0001	0.04617	0.0031	34	4.4	35	1.0	7	307.5	-1.4	-422.7	34.5	1.0
G17	382	120	0.31	0.6026	0.01150	0.07417	0.0008	0.05906	0.0012	479	14.6	461	9.5	570	83.8	3.8	19.0	461.2	9.5
G18	413	194	0.47	2.1969	0.03079	0.20413	0.0021	0.07824	0.0011	1180	19.6	1198	22.4	1153	56.3	-1.5	-3.9	1153.0	56.3
G19	1571	621	0.40	2.5144	0.03100	0.21783	0.0022	0.08392	0.0011	1276	17.9	1270	23.2	1291	48.5	0.5	1.6	1290.5	48.5
G20	538	246	0.46	4.7094	0.05935	0.31426	0.0032	0.10894	0.0014	1769	21.1	1762	31.2	1782	46.6	0.4	1.1	1781.8	46.6
G21	192	142	0.74	0.3276	0.01737	0.04453	0.0007	0.05348	0.0029	288	26.6	281	8.4	349	234.9	2.5	19.6	280.8	8.4
G22	651	181	0.28	1.8130	0.02452	0.17689	0.0018	0.07451	0.0010	1050	17.7	1050	19.7	1055	55.7	0.0	0.5	1049.9	19.7
G23	271	83	0.31	4.5850	0.06261	0.31701	0.0033	0.10514	0.0015	1747	22.8	1775	31.9	1717	50.9	-1.6	-3.4	1716.8	50.9
G24	58	66	1.13	1.8467	0.04853	0.18176	0.0022	0.07386	0.0020	1062	34.6	1077	23.6	1038	106.9	-1.3	-3.7	1076.6	23.6
G25	309	37	0.12	1.5327	0.02483	0.15584	0.0016	0.07150	0.0012	944	19.9	934	18.2	972	66.9	1.1	3.9	933.6	18.2
G26	147	85	0.58	1.8979	0.03481	0.18074	0.0020	0.07634	0.0014	1080	24.4	1071	21.3	1104	74.3	0.9	3.0	1071.0	21.3
G27	1448	845	0.58	0.0690	0.00183	0.01042	0.0001	0.04809	0.0013	68	3.5	67	1.5	104	125.3	1.2	35.5	66.9	1.5
G28	87	29	0.33	1.7127	0.04090	0.17208	0.0020	0.07235	0.0018	1013	30.6	1024	21.7	996	97.9	-1.0	-2.8	1023.6	21.7
G29	1878	518	0.28	4.1346	0.05080	0.28485	0.0029	0.10552	0.0013	1661	20.1	1616	28.6	1723	45.7	2.8	6.2	1723.4	45.7
G30	379	131	0.35	3.6558	0.05701	0.27245	0.0029	0.09754	0.0016	1562	24.9	1553	29.1	1578	59.3	0.6	1.6	1577.7	59.3
G31	87	61	0.71	4.1486	0.07114	0.29940	0.0033	0.10073	0.0018	1664	28.1	1688	32.2	1638	64.6	-1.4	-3.1	1637.6	64.6
G32	225	75	0.33	0.4795	0.01253	0.06276	0.0007	0.05554	0.0015	398	17.2	392	8.6	434	116.2	1.4	9.5	392.4	8.6
G33	190	118	0.62	4.1020	0.05951	0.29750	0.0031	0.10024	0.0015	1655	23.7	1679	30.6	1629	54.8	-1.4	-3.1	1628.5	54.8
G34	298	148	0.50	0.8728	0.01948	0.10083	0.0011	0.06293	0.0014	637	21.1	619	12.9	706	95.7	2.9	12.3	619.3	12.9
G35	448	344	0.77	0.5505	0.01039	0.07211	0.0008	0.05549	0.0011	445	13.6	449	9.1	432	84.0	-0.8	-4.0	448.9	9.1
G36	632	122	0.19	0.1929	0.00519	0.02614	0.0003	0.05365	0.0015	179	8.8	166	3.7	356	121.8	7.6	53.3	166.4	3.7
G37	465	158	0.34	3.8246	0.05433	0.27828	0.0029	0.09991	0.0015	1598	22.9	1583	28.9	1622	53.7	1.0	2.4	1622.4	53.7
G38	211	285	1.35	3.9280	0.05770	0.28426	0.0030	0.10045	0.0015	1620	23.8	1613	29.6	1633	55.4	0.4	1.2	1632.5	55.4
G39	292	149	0.51	1.8674	0.02917	0.18030	0.0019	0.07529	0.0012	1070	20.7	1069	20.4	1076	63.6	0.1	0.7	1068.6	20.4
G40	130	71	0.54	1.6000	0.03333	0.16100	0.0018	0.07224	0.0015	970	26.0	962	19.7	993	85.7	0.8	3.1	962.4	19.7
G41	361	101	0.28	1.7702	0.02734	0.16976	0.0018	0.07580	0.0012	1035	20.0	1011	19.3	1090	62.8	2.4	7.3	1010.8	19.3
G42	304	74	0.24	12.8021	0.16398	0.49923	0.0051	0.18642	0.0024	2665	24.1	2611	43.6	2711	42.9	2.1	3.7	2710.8	42.9
G43	92	62	0.68	2.9600	0.05597	0.24002	0.0026	0.08965	0.0017	1397	28.7	1387	27.4	1418	73.3	0.8	2.2	1418.0	73.3
G44	422	151	0.36	3.4782	0.04732	0.26638	0.0027	0.09492	0.0013	1522	21.5	1522	27.6	1527	52.1	0.0	0.3	1526.5	52.1
G45	323	101	0.31	2.8120	0.04060	0.23370	0.0024	0.08747	0.0013	1359	21.6	1354	25.0	1371	56.4	0.4	1.2	1370.9	56.4
G46	122	99	0.80	0.8474	0.02412	0.10046	0.0012	0.06132	0.0018	623	26.5	617	13.8	650	122.7	1.0	5.1	617.1	13.8
G47	865	311	0.36	1.7730	0.02416	0.16906	0.0017	0.07624	0.0011	1036	17.7	1007	18.8	1101	55.3	2.9	8.6	1006.9	18.8

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G48	293	84	0.29	0.1094	0.00555	0.01611	0.0002	0.04935	0.0026	105	10.2	103	2.8	164	232.7	2.3	37.3	103.0	2.8
G49	539	235	0.44	0.0986	0.00385	0.01474	0.0002	0.04861	0.0019	95	7.1	94	2.3	129	182.2	1.2	26.8	94.3	2.3
G50	282	116	0.41	3.8893	0.05817	0.27492	0.0029	0.10284	0.0016	1612	24.2	1566	28.9	1676	56.2	2.9	6.6	1676.0	56.2
G51	126	57	0.45	4.3454	0.07003	0.30187	0.0032	0.10464	0.0017	1702	26.6	1701	31.7	1708	60.3	0.1	0.4	1708.0	60.3
G52	222	134	0.60	1.8584	0.03114	0.17949	0.0019	0.07526	0.0013	1066	22.1	1064	20.6	1076	68.3	0.2	1.1	1064.2	20.6
G53	470	146	0.31	1.7100	0.02566	0.16752	0.0017	0.07420	0.0011	1012	19.2	999	19.0	1047	61.5	1.4	4.6	998.5	19.0
G54	296	231	0.78	4.1763	0.06260	0.29002	0.0030	0.10468	0.0016	1669	24.6	1642	30.1	1709	56.1	1.7	3.9	1708.7	56.1
G55	1543	610	0.40	0.0701	0.00187	0.01021	0.0001	0.04990	0.0014	69	3.5	66	1.4	191	124.1	5.0	65.6	65.5	1.4
G56	984	725	0.74	3.1342	0.04146	0.25738	0.0026	0.08852	0.0012	1441	20.4	1476	26.5	1394	51.4	-2.4	-5.9	1393.8	51.4
G57	704	674	0.96	0.6593	0.01093	0.08013	0.0008	0.05981	0.0010	514	13.4	497	9.9	597	72.8	3.5	16.7	496.9	9.9
G58	201	99	0.49	2.9697	0.05843	0.23400	0.0026	0.09225	0.0019	1400	29.9	1355	27.2	1473	76.1	3.3	8.0	1472.5	76.1
G59	112	81	0.73	4.1376	0.06899	0.29464	0.0032	0.10208	0.0018	1662	27.3	1665	31.3	1662	62.8	-0.2	-0.1	1662.3	62.8
G60	194	102	0.53	0.7301	0.02400	0.08271	0.0011	0.06417	0.0022	557	28.2	512	12.4	747	139.6	8.6	31.4	512.3	12.4
G61	65	21	0.32	1.5158	0.04273	0.15330	0.0019	0.07188	0.0021	937	34.5	920	20.6	982	115.6	1.9	6.4	919.5	20.6
G62	78	68	0.87	1.5924	0.04326	0.15797	0.0019	0.07327	0.0020	967	33.9	946	21.1	1022	110.9	2.3	7.4	945.5	21.1
G63	914	1537	1.68	3.4971	0.04856	0.26409	0.0027	0.09626	0.0014	1527	21.9	1511	27.3	1553	53.1	1.1	2.7	1552.9	53.1
G64	1248	390	0.31	0.0641	0.00205	0.01036	0.0001	0.04498	0.0015	63	3.9	66	1.5	0	40.8	-5.0	-66300.0	66.4	1.5
G65	611	4	0.01	1.2048	0.01852	0.12985	0.0013	0.06744	0.0011	803	17.1	787	15.2	851	64.9	2.0	7.6	787.0	15.2
G66	954	73	0.08	4.0636	0.05526	0.28205	0.0029	0.10473	0.0015	1647	22.2	1602	28.6	1710	51.0	2.8	6.3	1709.5	51.0
G67	175	55	0.32	1.6305	0.03712	0.15940	0.0018	0.07436	0.0017	982	28.7	953	20.1	1051	92.9	3.0	9.3	953.4	20.1
G68	325	190	0.58	10.1239	0.14505	0.43663	0.0045	0.16855	0.0025	2446	26.5	2336	40.7	2543	49.0	4.7	8.2	2543.3	49.0
G69	125	35	0.28	0.2335	0.01546	0.03177	0.0005	0.05342	0.0036	213	25.5	202	6.5	347	290.6	5.7	41.9	201.6	6.5
G70	73	46	0.64	2.0319	0.05665	0.18598	0.0023	0.07942	0.0023	1126	37.9	1100	24.9	1183	111.3	2.4	7.0	1099.5	24.9
G71	409	158	0.39	2.1771	0.03318	0.19583	0.0020	0.08081	0.0013	1174	21.2	1153	21.7	1217	61.0	1.8	5.3	1216.9	61.0
G72	602	289	0.48	0.5391	0.01052	0.06809	0.0007	0.05756	0.0012	438	13.9	425	8.7	513	87.5	3.1	17.2	424.6	8.7
G73	208	83	0.40	4.4875	0.07036	0.30738	0.0032	0.10612	0.0017	1729	26.0	1728	31.7	1734	58.6	0.1	0.4	1733.9	58.6
G74	401	127	0.32	4.2389	0.06080	0.29861	0.0030	0.10319	0.0015	1682	23.6	1684	30.2	1682	54.0	-0.2	-0.1	1682.2	54.0
G75	143	69	0.48	2.6052	0.04609	0.21989	0.0023	0.08612	0.0016	1302	26.0	1281	24.8	1341	69.6	1.6	4.4	1340.8	69.6
G76	563	137	0.24	1.8196	0.02712	0.17624	0.0018	0.07505	0.0012	1053	19.5	1046	19.7	1070	61.0	0.6	2.2	1046.4	19.7
G77	914	478	0.52	4.3574	0.05948	0.30236	0.0030	0.10476	0.0015	1704	22.5	1703	30.1	1710	51.2	0.1	0.4	1710.1	51.2
G78	264	153	0.58	4.2136	0.07061	0.30479	0.0032	0.10049	0.0017	1677	27.5	1715	32.0	1633	63.4	-2.2	-5.0	1633.2	63.4
G79	143	44	0.31	0.0709	0.00902	0.01141	0.0002	0.04518	0.0058	70	17.1	73	3.1	0	480.5	-4.8	-73000.0	73.1	3.1
G80	166	71	0.43	4.4665	0.07203	0.31051	0.0033	0.10456	0.0017	1725	26.8	1743	32.1	1707	60.5	-1.1	-2.1	1706.6	60.5
G81	1516	1106	0.73	0.1041	0.00235	0.01525	0.0002	0.04961	0.0012	101	4.3	98	2.1	177	106.2	3.1	44.9	97.5	2.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G82	252	10	0.04	1.7376	0.02963	0.17128	0.0018	0.07374	0.0013	1023	22.0	1019	19.7	1034	70.1	0.3	1.5	1019.2	19.7
G83	390	148	0.38	2.0088	0.03122	0.19328	0.0020	0.07555	0.0012	1119	21.1	1139	21.4	1083	63.4	-1.8	-5.2	1083.2	63.4
G84	385	471	1.22	0.1079	0.00457	0.01557	0.0002	0.05035	0.0022	104	8.4	100	2.5	211	194.4	4.4	52.9	99.6	2.5
G85	157	360	2.29	3.2244	0.05424	0.24989	0.0026	0.09380	0.0016	1463	26.1	1438	27.2	1504	64.8	1.7	4.4	1504.0	64.8
G86	246	194	0.79	3.8367	0.06405	0.27530	0.0029	0.10130	0.0017	1601	26.9	1568	29.4	1648	63.2	2.1	4.9	1648.1	63.2
G87	216	76	0.35	4.6229	0.07069	0.30918	0.0032	0.10869	0.0017	1753	25.5	1737	31.4	1778	57.0	1.0	2.3	1777.5	57.0
G88	796	198	0.25	3.1162	0.04792	0.26017	0.0027	0.08706	0.0014	1437	23.6	1491	27.3	1362	60.4	-3.6	-9.5	1361.9	60.4
G89	176	138	0.79	16.6867	0.23853	0.56747	0.0058	0.21375	0.0032	2917	27.4	2897	47.8	2934	47.2	0.7	1.3	2934.2	47.2
G90	183	42	0.23	8.1306	0.12083	0.39383	0.0041	0.15007	0.0023	2246	26.9	2141	37.5	2347	52.0	4.9	8.8	2346.7	52.0
G91	637	46	0.07	3.8329	0.05628	0.27806	0.0028	0.10020	0.0015	1600	23.6	1582	28.5	1628	55.7	1.1	2.8	1627.8	55.7
G92	735	279	0.38	2.8809	0.04584	0.22797	0.0024	0.09186	0.0015	1377	24.0	1324	24.7	1464	61.9	4.0	9.6	1464.4	61.9
G93	718	389	0.54	12.0871	0.17082	0.46597	0.0047	0.18855	0.0028	2611	26.5	2466	41.3	2730	47.6	5.9	9.7	2729.6	47.6
G94	1345	841	0.62	0.0677	0.00256	0.00946	0.0001	0.05208	0.0020	67	4.9	61	1.5	289	171.5	9.7	79.0	60.7	1.5
G95	506	177	0.35	0.1074	0.00396	0.01521	0.0002	0.05133	0.0019	104	7.3	97	2.4	256	168.8	6.5	61.9	97.3	2.4
G96	103	21	0.21	1.9515	0.04216	0.19061	0.0021	0.07442	0.0017	1099	29.0	1125	22.8	1053	88.3	-2.3	-6.8	1052.8	88.3
G97	325	110	0.34	0.8985	0.01733	0.10285	0.0011	0.06349	0.0013	651	18.5	631	12.7	725	83.1	3.1	12.9	631.1	12.7
G98	869	613	0.71	0.1058	0.00300	0.01539	0.0002	0.04997	0.0015	102	5.5	98	2.2	193	132.5	3.8	49.1	98.4	2.2
G99	538	289	0.54	0.0790	0.00330	0.01157	0.0002	0.04964	0.0021	77	6.2	74	1.9	178	193.0	4.2	58.4	74.1	1.9
G100	318	116	0.37	4.0247	0.06295	0.29030	0.0030	0.10078	0.0016	1639	25.4	1643	29.8	1638	59.4	-0.2	-0.3	1638.4	59.4
G101	764	393	0.51	0.0967	0.00354	0.01451	0.0002	0.04845	0.0018	94	6.6	93	2.3	121	171.9	0.9	23.3	92.9	2.3
G102	690	242	0.35	0.7861	0.01399	0.09429	0.0010	0.06061	0.0011	589	15.9	581	11.5	625	78.1	1.4	7.1	580.8	11.5
G103	132	121	0.92	5.3403	0.09003	0.33616	0.0036	0.11547	0.0020	1875	28.8	1868	34.2	1887	62.1	0.4	1.0	1887.3	62.1
G104	327	261	0.80	0.0782	0.00465	0.01122	0.0002	0.05062	0.0031	76	8.8	72	2.1	224	268.4	6.3	67.9	71.9	2.1
G105	270	172	0.64	7.2253	0.12153	0.41138	0.0044	0.12767	0.0022	2140	30.0	2221	39.9	2066	60.7	-3.7	-7.5	2066.1	60.7
G106	633	384	0.61	0.9622	0.01651	0.11135	0.0012	0.06281	0.0011	684	17.1	681	13.3	702	74.5	0.6	3.0	680.6	13.3
G107	533	233	0.44	1.7626	0.02959	0.17187	0.0018	0.07455	0.0013	1032	21.8	1022	19.5	1056	69.6	0.9	3.2	1022.4	19.5
G108	678	369	0.54	0.0789	0.00297	0.01185	0.0001	0.04837	0.0019	77	5.6	76	1.8	118	176.4	1.4	35.3	76.0	1.8
G109	207	230	1.11	4.4256	0.07323	0.30550	0.0032	0.10530	0.0018	1717	27.4	1719	31.4	1720	62.2	-0.1	0.1	1719.5	62.2
G110	190	141	0.74	2.8282	0.05204	0.22727	0.0024	0.09045	0.0017	1363	27.6	1320	25.4	1435	71.7	3.2	8.0	1435.0	71.7
G111	50	45	0.91	11.5239	0.20365	0.48072	0.0053	0.17425	0.0032	2567	33.0	2530	46.3	2599	60.4	1.4	2.6	2598.9	60.4
G112	227	33	0.15	4.9241	0.08308	0.31031	0.0033	0.11535	0.0020	1806	28.5	1742	32.0	1885	62.2	3.7	7.6	1885.3	62.2
G113	467	160	0.34	0.7982	0.01498	0.09616	0.0010	0.06034	0.0012	596	16.9	592	11.8	616	82.5	0.7	3.9	591.8	11.8
G114	451	218	0.48	0.1819	0.00546	0.02659	0.0003	0.04973	0.0015	170	9.4	169	3.8	183	140.1	0.4	7.4	169.1	3.8
G115	305	126	0.41	4.1210	0.06702	0.28369	0.0029	0.10559	0.0018	1659	26.6	1610	29.3	1725	61.2	3.0	6.7	1724.6	61.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc	%disc (7/6)	Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s			[Ma]	± 2s
G116	246	104	0.42	3.2965	0.05585	0.25464	0.0026	0.09410	0.0017	1480	26.4	1462	27.2	1510	65.5	1.2	3.2	1510.1	65.5
G117	241	35	0.14	3.2477	0.07252	0.24392	0.0029	0.09678	0.0022	1469	34.7	1407	30.3	1563	84.6	4.4	10.0	1563.0	84.6
G118	207	80	0.39	4.0611	0.06068	0.29572	0.0032	0.09982	0.0015	1647	24.3	1670	31.4	1621	55.9	-1.4	-3.0	1620.8	55.9
G119	446	234	0.52	0.1018	0.00731	0.01484	0.0003	0.04986	0.0037	98	13.5	95	3.2	188	323.5	3.7	49.6	94.9	3.2
G120	566	144	0.26	1.4893	0.03240	0.14919	0.0017	0.07256	0.0016	926	26.4	896	19.2	1002	89.0	3.3	10.5	896.4	19.2
G121	292	118	0.40	3.1400	0.04960	0.24989	0.0027	0.09134	0.0015	1443	24.3	1438	27.8	1454	60.5	0.3	1.1	1453.5	60.5
G122	429	104	0.24	4.6630	0.06467	0.31853	0.0033	0.10641	0.0015	1761	23.2	1783	32.7	1739	51.0	-1.2	-2.5	1738.8	51.0
G123	710	162	0.23	4.1733	0.05819	0.29634	0.0031	0.10237	0.0015	1669	22.8	1673	30.9	1668	51.8	-0.3	-0.3	1667.6	51.8
G124	546	55	0.10	3.1299	0.04967	0.24746	0.0027	0.09194	0.0015	1440	24.4	1425	27.5	1466	61.0	1.0	2.8	1466.1	61.0
G125	81	58	0.71	1.9309	0.04561	0.18152	0.0021	0.07733	0.0019	1092	31.6	1075	23.3	1130	94.8	1.5	4.8	1075.3	23.3
G126	163	65	0.40	1.7762	0.03410	0.16950	0.0019	0.07618	0.0015	1037	24.9	1009	20.8	1100	77.5	2.7	8.2	1009.3	20.8
G127	309	105	0.34	0.4786	0.01131	0.06305	0.0007	0.05517	0.0013	397	15.5	394	8.6	419	104.7	0.7	5.9	394.2	8.6
G128	347	144	0.41	4.1559	0.06448	0.28059	0.0030	0.10767	0.0017	1665	25.4	1594	30.4	1760	57.2	4.5	9.4	1760.3	57.2
G129	593	172	0.29	2.8624	0.04131	0.22819	0.0024	0.09118	0.0013	1372	21.7	1325	25.2	1450	55.3	3.6	8.6	1450.3	55.3
G130	1286	246	0.19	0.6051	0.00992	0.07095	0.0008	0.06200	0.0010	480	12.6	442	9.1	674	70.7	8.7	34.4	441.9	9.1
G131	638	225	0.35	4.1671	0.05835	0.29516	0.0031	0.10263	0.0015	1668	22.9	1667	30.7	1672	52.2	0.0	0.3	1672.2	52.2
G132	435	106	0.24	3.7202	0.05425	0.26781	0.0028	0.10098	0.0015	1576	23.3	1530	28.7	1642	54.6	3.0	6.9	1642.2	54.6
G133	377	190	0.50	11.8685	0.16404	0.49374	0.0052	0.17474	0.0025	2594	25.9	2587	44.6	2604	46.5	0.3	0.6	2603.6	46.5
G134	132	30	0.23	4.4082	0.07132	0.30056	0.0033	0.10662	0.0018	1714	26.8	1694	32.3	1742	59.8	1.2	2.8	1742.4	59.8
G135	267	84	0.32	3.7746	0.05994	0.27283	0.0029	0.10057	0.0016	1587	25.5	1555	29.7	1635	59.7	2.1	4.9	1634.7	59.7
Sample LA1701																			
2293A ₂	481	352	1.37	0.0280	0.00679	0.00410	0.0002	0.04955	0.0121	28	6.7	26	1.4	174	348.2	4.6	84.9	26.3	1.4
2293A ₂	528	396	1.33	0.0287	0.00744	0.00415	0.0002	0.05010	0.0131	28	7.3	27	1.5	200	399.3	5.4	86.6	26.7	1.5
2293A ₂	521	192	2.71	0.0383	0.00589	0.00535	0.0003	0.05193	0.0082	40	6.1	34	2.0	282	380.8	13.0	87.8	34.4	2.0
2293A ₂	417	337	1.24	0.0376	0.00809	0.00537	0.0005	0.05078	0.0110	37	7.9	35	3.4	231	461.7	6.9	85.0	34.6	3.4
2293A ₂	575	216	2.65	0.0389	0.00673	0.00540	0.0004	0.05229	0.0092	40	6.9	35	2.3	298	430.8	13.3	88.4	34.7	2.3
2293A ₂	234	148	1.59	0.0382	0.00967	0.00541	0.0003	0.05117	0.0132	37	9.2	35	2.2	248	496.8	5.2	86.0	34.8	2.2
2293A ₂	257	166	1.55	0.0405	0.01095	0.00550	0.0004	0.05333	0.0147	39	10.4	35	2.4	343	685.4	8.7	89.7	35.4	2.4
2293A ₂	458	383	1.19	0.0403	0.00885	0.00559	0.0006	0.05222	0.0115	40	8.7	36	3.8	295	547.8	9.4	87.8	36.0	3.8
2293A ₂	440	161	2.73	0.0595	0.00745	0.00875	0.0004	0.04930	0.0063	58	7.2	56	2.3	162	314.3	2.5	65.3	56.2	2.3
2293A ₂	403	144	2.80	0.0599	0.00601	0.00877	0.0003	0.04953	0.0051	58	5.8	56	1.9	173	249.1	3.0	67.4	56.3	1.9
2293A ₂	956	752	1.27	0.0744	0.00698	0.01090	0.0007	0.04951	0.0046	71	7.0	70	4.6	172	221.9	2.0	59.4	69.9	4.6
2293A ₂	519	389	1.34	0.0768	0.00746	0.01135	0.0004	0.04908	0.0048	76	7.5	73	2.3	152	238.8	4.6	52.0	72.8	2.3

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
2293A ₁	468	343	1.36	0.0768	0.00652	0.01142	0.0003	0.04878	0.0042	76	6.5	73	2.1	137	208.2	3.6	46.7	73.2	2.1
2293A ₂	793	124	6.40	0.0773	0.00629	0.01163	0.0003	0.04824	0.0040	75	6.1	75	2.0	111	200.8	0.7	32.9	74.5	2.0
2293A ₃	727	112	6.46	0.0777	0.00539	0.01166	0.0003	0.04833	0.0034	76	5.3	75	1.7	115	170.0	1.0	35.2	74.7	1.7
2293A ₄	1551	180	8.64	0.0827	0.00527	0.01220	0.0006	0.04914	0.0032	79	5.1	78	3.9	155	156.9	1.4	49.4	78.2	3.9
2293A ₅	221	141	1.56	0.0902	0.01595	0.01288	0.0009	0.05078	0.0092	84	14.8	82	5.4	231	448.9	1.5	64.3	82.5	5.4
2293A ₆	640	368	1.74	0.0907	0.00685	0.01338	0.0005	0.04918	0.0038	86	6.7	86	3.2	156	184.5	0.8	45.2	85.7	3.2
2293A ₇	584	328	1.78	0.0913	0.00586	0.01339	0.0004	0.04941	0.0032	88	5.8	86	2.7	168	155.8	2.1	48.8	85.8	2.7
2293A ₈	466	260	1.79	0.0969	0.01037	0.01404	0.0010	0.05002	0.0054	91	9.4	90	6.4	196	259.5	1.7	54.1	89.9	6.4
2293A ₉	424	234	1.81	0.0971	0.00892	0.01407	0.0009	0.05006	0.0046	92	8.2	90	5.4	198	220.9	2.2	54.5	90.1	5.4
2293A ₁₀	329	101	3.25	0.1004	0.01048	0.01477	0.0005	0.04928	0.0053	95	10.1	95	3.4	161	259.8	0.4	41.3	94.5	3.4
2293A ₁₁	352	178	1.97	0.1038	0.01296	0.01490	0.0005	0.05053	0.0064	95	11.6	95	3.1	219	306.8	-0.3	56.5	95.3	3.1
2293A ₁₂	303	91	3.32	0.1019	0.00928	0.01494	0.0005	0.04946	0.0046	97	9.0	96	3.0	169	224.7	1.3	43.6	95.6	3.0
2293A ₁₃	299	256	1.16	0.1081	0.01311	0.01512	0.0006	0.05189	0.0064	104	12.5	97	3.7	280	294.8	7.1	65.5	96.7	3.7
2293A ₁₄	271	226	1.20	0.1074	0.01184	0.01519	0.0005	0.05125	0.0057	105	11.4	97	3.2	252	268.2	7.1	61.4	97.2	3.2

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
2293A ₂	2260	1958	1.15	0.1055	0.00670	0.01529	0.0009	0.05007	0.0032	101	6.9	98	5.6	198	149.9	3.0	50.7	97.8	5.6
2293A ₂	194	68	2.87	0.1592	0.01830	0.02204	0.0007	0.05241	0.0061	150	17.7	141	4.5	303	276.8	6.6	53.7	140.5	4.5
2293A ₂	306	157	1.95	0.1780	0.01444	0.02512	0.0008	0.05138	0.0043	164	13.5	160	5.1	258	196.3	2.6	38.0	159.9	5.1
2293A ₂	657	392	1.68	0.1747	0.01015	0.02534	0.0009	0.05000	0.0029	162	9.1	161	5.6	195	135.9	0.6	17.3	161.3	5.6
2293A ₂	684	517	1.32	0.1811	0.00939	0.02655	0.0006	0.04947	0.0025	170	8.7	169	4.0	170	122.6	0.4	0.7	168.9	4.0
2293A ₂	749	579	1.29	0.1820	0.01106	0.02656	0.0007	0.04970	0.0030	171	10.3	169	4.5	181	143.8	1.4	6.6	169.0	4.5
2293A ₂	282	58	4.84	0.2211	0.01999	0.03065	0.0022	0.05232	0.0050	205	17.6	195	13.5	299	225.0	5.0	35.0	194.6	13.5
2293A ₂	333	107	3.10	0.2216	0.01474	0.03161	0.0010	0.05084	0.0034	207	14.0	201	6.1	234	160.1	3.0	14.1	200.6	6.1
2293A ₂	1018	210	4.85	0.4276	0.02219	0.05420	0.0029	0.05723	0.0033	368	18.5	340	17.4	500	128.2	7.6	32.0	340.2	17.4
2293A ₂	738	262	2.82	0.4588	0.02030	0.06130	0.0021	0.05428	0.0024	384	15.5	384	13.0	383	101.8	0.0	-0.2	383.5	13.0
2293A ₂	810	291	2.79	0.4617	0.02421	0.06169	0.0025	0.05428	0.0029	386	18.4	386	15.4	383	120.8	0.1	-0.9	385.9	15.4
2293A ₂	78	33	2.35	0.4992	0.04261	0.06301	0.0019	0.05746	0.0050	405	36.9	394	11.7	509	198.6	2.8	22.7	393.9	11.7
2293A ₂	428	148	2.89	0.4852	0.02269	0.06509	0.0017	0.05407	0.0025	405	18.6	407	10.3	374	105.7	-0.3	-8.8	406.5	10.3
2293A ₂	276	30	9.12	0.4931	0.02394	0.06572	0.0021	0.05441	0.0027	416	22.2	410	12.4	388	112.1	1.3	-5.8	410.3	12.4
2293A ₂	847	557	1.52	0.5537	0.02444	0.06942	0.0017	0.05785	0.0026	446	18.4	433	10.4	524	100.5	3.0	17.4	432.6	10.4
2293A ₂	523	11	46.48	0.6510	0.03176	0.07859	0.0030	0.06007	0.0030	512	22.0	488	17.8	606	110.3	4.7	19.6	487.7	17.8
2293A ₂	575	168	3.42	0.6429	0.03943	0.08004	0.0048	0.05825	0.0036	499	27.6	496	28.4	539	137.9	0.5	8.0	496.4	28.4
2293A ₂	120	51	2.37	0.7392	0.07066	0.08643	0.0047	0.06203	0.0058	559	45.8	534	27.9	675	205.8	4.5	20.8	534.4	27.9
2293A ₂	96	77	1.24	0.7454	0.03949	0.09131	0.0021	0.05921	0.0032	558	31.2	563	12.3	575	119.1	-0.9	2.0	563.3	12.3
2293A ₂	424	176	2.41	0.7546	0.03088	0.09158	0.0029	0.05976	0.0025	574	23.7	565	17.1	595	93.3	1.6	5.0	564.9	17.1
2293A ₂	105	87	1.21	0.7514	0.04584	0.09212	0.0023	0.05916	0.0037	565	36.7	568	13.5	573	137.6	-0.5	0.9	568.1	13.5
2293A ₂	625	590	1.06	0.8337	0.04512	0.09782	0.0046	0.06181	0.0033	605	27.2	602	27.1	668	116.3	0.5	9.9	601.6	27.1
2293A ₂	1215	303	4.01	1.5446	0.04606	0.15338	0.0041	0.07304	0.0021	943	22.8	920	22.9	1015	59.9	2.4	9.4	919.9	22.9
2293A ₂	553	185	2.99	1.6660	0.07121	0.15944	0.0063	0.07578	0.0032	988	34.5	954	34.9	1089	85.3	3.5	12.5	953.7	34.9
2293A ₂	116	31	3.77	1.6204	0.09585	0.16044	0.0081	0.07325	0.0045	962	47.3	959	45.3	1021	125.5	0.3	6.0	959.2	45.3
2293A ₂	653	166	3.93	1.6710	0.09846	0.16122	0.0089	0.07518	0.0044	1005	42.8	964	49.8	1073	120.5	4.2	10.2	963.5	49.8
2293A ₂	54	17	3.17	1.5928	0.09232	0.16343	0.0039	0.07068	0.0042	977	53.9	976	21.7	948	124.4	0.1	-2.9	975.8	21.7
2293A ₂	372	34	10.97	1.6393	0.04665	0.16403	0.0035	0.07248	0.0021	980	26.0	979	19.3	999	59.6	0.1	2.0	979.2	19.3
2293A ₂	122	25	4.98	1.6296	0.09414	0.16428	0.0083	0.07194	0.0040	950	43.2	981	46.1	984	114.5	-3.2	0.4	980.5	46.1
2293A ₂	421	40	10.61	1.6815	0.05462	0.16559	0.0052	0.07365	0.0025	1011	26.9	988	28.7	1032	69.7	2.3	4.3	987.8	28.7
2293A ₂	187	161	1.16	1.6924	0.07355	0.16684	0.0054	0.07357	0.0031	1001	39.4	995	29.9	1030	87.6	0.6	3.4	994.7	29.9
2293A ₂	110	28	3.89	1.7089	0.08013	0.16857	0.0065	0.07352	0.0033	1020	43.1	1004	35.9	1028	90.8	1.6	2.3	1004.2	35.9
2293A ₂	350	70	5.00	1.7777	0.10656	0.16935	0.0109	0.07613	0.0050	1036	45.3	1009	60.5	1099	133.2	2.6	8.2	1008.6	60.5
2293A ₂	165	49	3.38	1.7707	0.11461	0.17044	0.0100	0.07535	0.0049	1042	49.0	1015	55.2	1078	134.2	2.6	5.9	1014.5	55.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
2293A ₂	43	21	2.05	1.8124	0.10549	0.17233	0.0061	0.07628	0.0045	985	51.7	1025	33.4	1102	120.0	-4.1	7.0	1025.0	33.4
2293A ₂	501	261	1.92	1.9526	0.12031	0.17596	0.0072	0.08048	0.0049	1069	60.3	1045	39.7	1209	121.6	2.3	13.6	1044.9	39.7
2293A ₂	570	44	13.01	1.8477	0.05764	0.17841	0.0048	0.07511	0.0023	1072	27.2	1058	26.4	1072	62.3	1.3	1.2	1058.3	26.4
2293A ₂	45	31	1.48	1.8368	0.12550	0.17892	0.0053	0.07445	0.0051	1064	67.6	1061	28.8	1054	142.3	0.3	-0.7	1061.1	28.8
2293A ₂	266	144	1.85	2.0973	0.19193	0.18401	0.0160	0.08266	0.0049	1158	70.0	1089	87.2	1261	117.3	5.9	13.7	1088.8	87.2
2293A ₂	273	82	3.33	1.9801	0.06500	0.18810	0.0047	0.07635	0.0026	1099	28.6	1111	25.7	1104	68.5	-1.1	-0.6	1111.1	25.7
2293A ₂	621	319	1.95	2.2503	0.14627	0.19115	0.0113	0.08538	0.0051	1178	46.6	1128	61.2	1324	118.6	4.2	14.8	1127.6	61.2
2293A ₂	41	12	3.50	2.1110	0.10625	0.19284	0.0055	0.07939	0.0041	1094	65.4	1137	29.6	1182	102.7	-3.9	3.8	1136.7	29.6
2293A ₂	558	283	1.97	2.2531	0.12594	0.19368	0.0098	0.08440	0.0043	1179	40.3	1141	52.8	1301	101.5	3.2	12.3	1141.3	52.8
2293A ₂	1105	17	66.31	2.0391	0.09352	0.19399	0.0088	0.07624	0.0038	1118	34.7	1143	47.4	1101	101.3	-2.3	-3.8	1143.0	47.4
2293A ₂	145	69	2.11	2.1243	0.14524	0.19405	0.0121	0.07940	0.0054	1120	50.4	1143	65.3	1182	138.4	-2.1	3.3	1143.3	65.3
2293A ₂	209	97	2.16	2.2225	0.14861	0.19494	0.0133	0.08268	0.0053	1162	48.5	1148	72.2	1262	128.5	1.2	9.0	1148.1	72.2
2293A ₂	35	9	4.04	2.1872	0.14439	0.19741	0.0096	0.08036	0.0053	1172	72.0	1161	51.7	1206	132.3	0.9	3.7	1161.4	51.7
2293A ₂	20	12	1.67	2.5417	0.21637	0.21518	0.0080	0.08567	0.0075	1215	91.9	1256	42.3	1331	175.0	-3.4	5.6	1256.4	42.3
2293A ₂	230	81	2.85	2.5947	0.07254	0.22000	0.0047	0.08554	0.0024	1279	33.8	1282	25.1	1328	54.9	-0.2	3.5	1281.9	25.1
2293A ₂	267	271	0.98	2.7528	0.08116	0.22841	0.0054	0.08741	0.0026	1330	30.7	1326	28.3	1370	56.7	0.3	3.2	1326.2	28.3
2293A ₂	1722	736	2.34	2.8607	0.07667	0.23375	0.0059	0.08876	0.0025	1362	24.8	1354	30.9	1399	53.9	0.5	3.2	1354.1	30.9
2293A ₂	109	34	3.16	2.8319	0.18869	0.23430	0.0145	0.08766	0.0056	1358	60.5	1357	75.9	1375	126.3	0.1	1.3	1357.0	75.9
2293A ₂	278	122	2.28	2.8868	0.09878	0.23486	0.0064	0.08915	0.0029	1393	39.4	1360	33.4	1407	64.0	2.4	3.4	1359.9	33.4
2293A ₂	194	92	2.12	2.9438	0.16713	0.23499	0.0131	0.09086	0.0055	1412	46.3	1361	68.3	1444	116.8	3.7	5.7	1360.6	68.3
2293A ₂	676	122	5.54	3.1201	0.20279	0.23916	0.0128	0.09462	0.0060	1406	61.0	1382	66.8	1521	122.0	1.7	9.1	1382.3	66.8
2293A ₂	402	451	0.89	2.9993	0.07792	0.24210	0.0056	0.08985	0.0024	1397	27.9	1398	29.3	1422	50.6	-0.1	1.7	1397.6	29.3
2293A ₂	69	17	3.98	3.0650	0.11849	0.24254	0.0058	0.09165	0.0036	1399	51.4	1400	30.0	1460	75.5	-0.1	4.1	1399.9	30.0
2293A ₂	449	20	21.92	3.2028	0.21616	0.24319	0.0152	0.09552	0.0059	1427	57.2	1403	79.2	1538	117.7	1.7	8.8	1403.3	79.2
2293A ₂	101	44	2.28	3.0820	0.14698	0.24391	0.0118	0.09164	0.0050	1419	56.6	1407	61.3	1460	104.5	0.9	3.6	1407.0	61.3
2293A ₂	54	58	0.94	3.0412	0.13693	0.24519	0.0061	0.08996	0.0041	1405	62.0	1414	31.7	1425	88.7	-0.6	0.8	1413.6	31.7
2293A ₂	875	385	2.27	3.1069	0.10393	0.24545	0.0078	0.09180	0.0031	1427	31.0	1415	40.5	1463	65.5	0.8	3.3	1415.0	40.5
2293A ₂	505	287	1.76	3.1049	0.10140	0.24555	0.0073	0.09171	0.0030	1423	31.6	1416	37.8	1461	62.6	0.5	3.1	1415.5	37.8
2293A ₂	420	97	4.31	3.1399	0.07962	0.24875	0.0055	0.09155	0.0024	1430	31.7	1432	28.6	1458	49.7	-0.1	1.8	1432.0	28.6
2293A ₂	214	120	1.79	3.6399	0.10872	0.27443	0.0059	0.09620	0.0029	1538	38.8	1563	29.9	1552	56.7	-1.7	-0.7	1551.6	56.7
2293A ₂	189	34	5.58	3.8719	0.24469	0.28070	0.0166	0.10004	0.0064	1574	61.0	1595	83.7	1625	120.5	-1.3	1.8	1624.9	120.5
2293A ₂	74	36	2.04	3.7423	0.13991	0.27127	0.0068	0.10005	0.0039	1606	57.0	1547	34.6	1625	73.4	3.6	4.8	1625.1	73.4
2293A ₂	148	73	2.04	3.9759	0.12145	0.28691	0.0082	0.10050	0.0033	1622	37.3	1626	40.9	1633	62.5	-0.3	0.5	1633.4	62.5
2293A ₂	912	378	2.41	3.6959	0.21208	0.26588	0.0151	0.10082	0.0054	1586	45.9	1520	77.3	1639	101.9	4.1	7.3	1639.2	101.9

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
2293A ₂	59	29	2.00	4.0224	0.16370	0.28511	0.0075	0.10232	0.0044	1675	60.7	1617	37.8	1667	79.7	3.4	3.0	1666.7	79.7
2293A ₂	148	106	1.40	3.9755	0.23967	0.28143	0.0168	0.10245	0.0056	1624	55.4	1599	84.9	1669	102.5	1.6	4.2	1669.0	102.5
2293A ₂	109	44	2.47	4.1144	0.14991	0.29073	0.0090	0.10264	0.0038	1680	45.6	1645	45.0	1672	69.6	2.1	1.6	1672.4	69.6
2293A ₂	88	42	2.11	4.0445	0.14869	0.28498	0.0073	0.10293	0.0038	1648	50.7	1616	36.9	1678	68.1	1.9	3.7	1677.6	68.1
2293A ₂	384	221	1.74	4.2267	0.22882	0.29168	0.0154	0.10510	0.0055	1671	48.3	1650	76.9	1716	97.6	1.2	3.9	1716.0	97.6
2293A ₂	339	68	5.02	4.1059	0.25898	0.27902	0.0157	0.10673	0.0072	1641	61.0	1586	79.4	1744	127.0	3.3	9.0	1744.3	127.0
2293A ₂	215	76	2.82	4.1897	0.20417	0.28101	0.0136	0.10813	0.0052	1643	53.7	1596	68.5	1768	89.5	2.8	9.7	1768.2	89.5
2293A ₂	93	66	1.42	4.8558	0.25929	0.31917	0.0147	0.11034	0.0057	1737	55.9	1786	72.0	1805	95.5	-2.8	1.1	1805.0	95.5
2293A ₂	204	85	2.41	4.8711	0.14252	0.31812	0.0073	0.11106	0.0031	1791	38.1	1781	36.0	1817	51.7	0.6	2.0	1816.8	51.7
2293A ₂	195	96	2.03	5.0756	0.27378	0.32463	0.0169	0.11340	0.0061	1798	58.4	1812	82.5	1855	98.2	-0.8	2.3	1854.6	98.2
2293A ₂	116	97	1.19	5.3353	0.19794	0.33636	0.0110	0.11504	0.0041	1846	49.3	1869	53.3	1881	64.3	-1.3	0.6	1880.5	64.3
2293A ₂	184	41	4.48	10.4417	0.51682	0.46290	0.0220	0.16360	0.0085	2438	56.5	2452	97.4	2493	88.4	-0.6	1.6	2493.2	88.4
2293A ₂	243	351	0.69	12.3017	0.36593	0.48632	0.0125	0.18346	0.0055	2587	42.0	2555	54.5	2684	49.6	1.2	4.8	2684.4	49.6
2293A ₂	107	47	2.28	12.9470	0.34529	0.51066	0.0107	0.18388	0.0050	2683	47.5	2659	45.6	2688	45.2	0.9	1.1	2688.2	45.2
2293A ₂	242	112	2.17	11.6353	0.88142	0.44181	0.0318	0.19100	0.0131	2564	82.2	2359	143.2	2751	115.4	8.0	14.3	2750.8	115.4
2293A ₂	346	217	1.59	12.7524	2.15414	0.45028	0.0761	0.20540	0.0288	2590	167.4	2396	342.8	2870	237.7	7.5	16.5	2869.6	237.7
Sample 21022001																			
4972A ₂	257	120	2.14	0.0230	0.00409	0.00349	0.0002	0.04731	0.0084	23	4.1	22	1.2	65	129.5	2.7	65.3	22.5	1.2
4972A ₂	87	28	3.07	0.0310	0.00541	0.00419	0.0002	0.05226	0.0092	31	5.3	27	1.5	297	429.2	12.9	90.9	27.0	1.5
4972A ₂	88	29	3.05	0.0324	0.00579	0.00444	0.0003	0.05158	0.0093	32	5.7	29	1.6	267	441.1	11.9	89.3	28.6	1.6
4972A ₂	180	120	1.49	0.0363	0.00447	0.00531	0.0001	0.04987	0.0060	36	4.4	34	0.9	189	292.0	5.8	81.9	34.1	0.9
4972A ₂	48	21	2.32	0.0687	0.01159	0.01048	0.0006	0.04623	0.0072	68	11.0	67	3.5	10	19.2	0.4	-601.3	67.2	3.5
4972A ₂	142	56	2.52	0.0727	0.01012	0.01053	0.0003	0.04823	0.0065	71	9.6	67	1.7	111	221.1	5.3	38.9	67.5	1.7
4972A ₂	144	58	2.50	0.0744	0.01033	0.01085	0.0003	0.04816	0.0065	73	9.8	70	1.7	107	214.3	4.5	35.1	69.6	1.7
4972A ₂	122	47	2.57	0.0713	0.00840	0.01117	0.0004	0.04725	0.0057	70	8.0	72	2.8	62	123.6	-2.4	-15.8	71.6	2.8
4972A ₂	216	106	2.04	0.0725	0.00871	0.01129	0.0003	0.04779	0.0056	71	8.3	72	1.8	89	177.4	-1.9	18.5	72.3	1.8
4972A ₂	62	25	2.44	0.0786	0.01052	0.01138	0.0004	0.04788	0.0063	77	9.9	73	2.8	93	187.0	5.1	22.0	72.9	2.8
4972A ₂	134	80	1.66	0.0728	0.01123	0.01139	0.0004	0.04624	0.0071	71	10.7	73	2.7	10	20.0	-2.3	-631.1	73.0	2.7
4972A ₂	127	51	2.50	0.0728	0.00813	0.01151	0.0004	0.04677	0.0053	71	7.7	74	2.7	38	75.0	-3.4	-96.7	73.8	2.7
4972A ₂	135	82	1.65	0.0739	0.01138	0.01165	0.0004	0.04614	0.0070	72	10.8	75	2.8	5	10.1	-3.1	-1375.2	74.7	2.8
4972A ₂	267	154	1.73	0.0797	0.00649	0.01171	0.0003	0.04877	0.0038	78	6.1	75	2.0	137	187.9	3.6	45.2	75.1	2.0
4972A ₂	67	46	1.46	0.0827	0.01133	0.01174	0.0003	0.04827	0.0065	81	10.6	75	2.1	112	224.9	6.8	33.1	75.2	2.1
4972A ₂	179	63	2.83	0.0808	0.00829	0.01187	0.0003	0.04910	0.0050	79	7.8	76	1.8	153	248.1	3.5	50.1	76.1	1.8

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc	%disc (7/6)	Best Age [Ma]	± 2s
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s				
4972A_	150	74	2.03	0.0852	0.00831	0.01196	0.0004	0.05038	0.0044	83	7.8	77	2.7	213	207.2	7.6	64.0	76.7	2.7
4972A_	125	22	5.76	0.0825	0.00871	0.01241	0.0003	0.04890	0.0050	80	8.2	79	1.8	143	249.2	1.3	44.4	79.5	1.8
4972A_	145	36	4.06	0.0972	0.01205	0.01422	0.0006	0.04996	0.0061	94	11.2	91	3.5	193	295.5	3.3	52.9	91.0	3.5
4972A_	122	41	2.96	0.1034	0.01327	0.01456	0.0005	0.05169	0.0066	100	12.2	93	3.1	272	304.8	6.7	65.7	93.2	3.1
4972A_	151	52	2.89	0.1025	0.01016	0.01469	0.0003	0.04954	0.0047	99	9.4	94	2.1	174	231.0	5.1	45.8	94.0	2.1
4972A_	488	102	4.81	0.0982	0.00585	0.01477	0.0004	0.04778	0.0027	95	5.4	95	2.7	88	136.3	0.6	-7.0	94.5	2.7
4972A_	123	42	2.94	0.1078	0.01383	0.01510	0.0005	0.05158	0.0065	104	12.7	97	3.2	267	305.1	7.0	63.8	96.6	3.2
4972A_	124	31	3.96	0.1137	0.00946	0.01549	0.0003	0.05008	0.0036	109	8.6	99	2.2	199	172.7	9.4	50.1	99.1	2.2
4972A_	160	57	2.84	0.1149	0.00966	0.01678	0.0004	0.04950	0.0039	110	8.8	107	2.7	171	189.6	2.9	37.4	107.3	2.7
4972A_	114	113	1.01	0.1856	0.01889	0.02553	0.0006	0.05123	0.0051	173	16.2	163	3.8	251	235.3	6.0	35.2	162.5	3.8
4972A_	98	49	1.99	0.1756	0.02412	0.02555	0.0008	0.04865	0.0066	164	20.9	163	5.1	131	261.6	1.0	-24.3	162.6	5.1
4972A_	112	118	0.95	0.1848	0.01374	0.02603	0.0006	0.05027	0.0034	172	11.8	166	3.6	207	158.4	3.8	20.2	165.7	3.6
4972A_	115	115	1.00	0.1940	0.01979	0.02648	0.0006	0.05158	0.0051	180	16.9	168	3.9	267	234.9	6.4	36.8	168.5	3.9
4972A_	117	124	0.94	0.1902	0.01366	0.02686	0.0006	0.04998	0.0032	177	11.7	171	3.5	194	153.5	3.4	12.1	170.8	3.5
4972A_	52	30	1.72	0.2982	0.02942	0.03953	0.0011	0.05300	0.0044	265	23.1	250	6.8	329	192.3	5.7	24.0	249.9	6.8
4972A_	45	18	2.47	0.5389	0.04523	0.06816	0.0016	0.05540	0.0026	438	30.1	425	9.4	428	105.1	2.9	0.8	425.0	9.4
4972A_	42	26	1.59	0.6088	0.04699	0.07471	0.0013	0.05755	0.0036	483	29.9	464	8.0	513	141.2	3.8	9.4	464.5	8.0
4972A_	67	13	5.20	1.0823	0.06858	0.11512	0.0026	0.06453	0.0033	745	33.7	702	15.1	759	110.6	5.7	7.5	702.4	15.1
4972A_	25	5	5.24	1.5391	0.12673	0.15678	0.0032	0.06852	0.0038	946	51.3	939	17.8	884	117.4	0.8	-6.2	938.9	17.8
4972A_	8	4	2.07	2.0280	0.25572	0.15730	0.0060	0.07025	0.0059	1125	87.6	942	33.5	936	176.0	16.3	-0.6	941.7	33.5
4972A_	9	4	2.05	2.1001	0.25386	0.16153	0.0059	0.07080	0.0057	1149	84.9	965	33.0	952	167.9	16.0	-1.4	965.3	33.0
4972A_	37	42	0.86	1.6083	0.11751	0.16169	0.0031	0.07112	0.0031	973	46.3	966	17.4	961	90.9	0.7	-0.5	966.1	17.4
4972A_	48	13	3.63	1.7255	0.09594	0.16337	0.0028	0.07252	0.0025	1018	36.1	975	15.4	1000	70.3	4.2	2.5	975.5	15.4
4972A_	24	10	2.34	1.6332	0.10286	0.16652	0.0035	0.07251	0.0030	983	40.1	993	19.6	1000	84.1	-1.0	0.7	992.9	19.6
4972A_	29	10	3.05	1.6932	0.12934	0.16924	0.0034	0.07269	0.0037	1006	49.4	1008	18.6	1005	104.2	-0.2	-0.3	1007.9	18.6
4972A_	8	6	1.34	1.7225	0.22788	0.17008	0.0049	0.07159	0.0063	1017	86.8	1013	26.8	974	183.8	0.4	-3.9	1012.6	26.8
4972A_	47	10	4.90	1.7806	0.08554	0.17317	0.0023	0.07526	0.0024	1038	31.5	1030	12.8	1075	64.1	0.9	4.3	1029.6	12.8
4972A_	35	22	1.57	1.7591	0.15352	0.17592	0.0044	0.07456	0.0048	1031	57.3	1045	24.1	1057	132.9	-1.4	1.1	1044.6	24.1
4972A_	9	3	3.18	1.9979	0.22174	0.17689	0.0040	0.07292	0.0054	1115	76.5	1050	21.7	1012	153.6	5.8	-3.8	1050.0	21.7
4972A_	31	8	3.79	1.7679	0.09803	0.17702	0.0024	0.07306	0.0021	1034	36.3	1051	13.4	1016	59.5	-1.6	-3.5	1050.7	13.4
4972A_	7	4	1.57	2.0244	0.33584	0.17721	0.0060	0.07429	0.0070	1124	116.0	1052	32.8	1049	194.8	6.4	-0.2	1051.7	32.8
4972A_	27	21	1.29	1.8888	0.15432	0.17751	0.0028	0.07698	0.0034	1077	55.0	1053	15.5	1121	90.0	2.2	6.0	1053.3	15.5
4972A_	27	15	1.76	1.7824	0.13796	0.17856	0.0038	0.07336	0.0035	1039	51.0	1059	20.7	1024	97.6	-1.9	-3.4	1059.1	20.7
4972A_	28	24	1.15	2.0218	0.15317	0.18040	0.0028	0.07547	0.0031	1123	52.1	1069	15.2	1081	83.6	4.8	1.1	1069.2	15.2

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
4972A_	38	13	3.03	1.8863	0.09608	0.18054	0.0030	0.07458	0.0024	1076	34.1	1070	16.4	1057	65.2	0.6	-1.2	1069.9	16.4
4972A_	186	21	9.05	1.9554	0.06694	0.18224	0.0030	0.07672	0.0017	1100	23.1	1079	16.3	1114	44.5	1.9	3.1	1079.2	16.3
4972A_	13	7	1.79	1.9929	0.18768	0.18224	0.0034	0.07413	0.0033	1113	64.7	1079	18.6	1045	92.0	3.0	-3.3	1079.2	18.6
4972A_	33	18	1.87	1.9514	0.13418	0.18310	0.0030	0.07589	0.0035	1099	46.7	1084	16.6	1092	92.8	1.4	0.8	1083.9	16.6
4972A_	36	13	2.78	1.8171	0.11942	0.18315	0.0033	0.07385	0.0027	1052	43.5	1084	17.9	1037	74.0	-3.1	-4.5	1084.1	17.9
4972A_	51	10	5.25	1.9370	0.11442	0.18412	0.0039	0.07495	0.0028	1094	39.9	1089	21.4	1067	77.2	0.4	-2.1	1089.5	21.4
4972A_	17	37	0.47	1.8257	0.18353	0.18644	0.0036	0.07567	0.0046	1055	67.0	1102	19.5	1086	124.6	-4.5	-1.5	1102.1	19.5
4972A_	129	26	5.05	2.0940	0.07324	0.18667	0.0023	0.07837	0.0018	1147	24.2	1103	12.8	1156	45.4	3.8	4.6	1103.3	12.8
4972A_	129	25	5.08	2.1071	0.07643	0.18782	0.0024	0.07859	0.0019	1151	25.1	1110	13.0	1162	47.0	3.6	4.5	1109.5	13.0
4972A_	17	38	0.45	1.9194	0.19432	0.19029	0.0037	0.07683	0.0047	1088	68.7	1123	20.1	1117	124.1	-3.2	-0.6	1122.9	20.1
4972A_	9	4	2.27	2.1605	0.41372	0.19168	0.0083	0.08281	0.0087	1168	137.5	1130	45.2	1265	212.4	3.3	10.6	1130.4	45.2
4972A_	8	3	3.21	2.2916	0.49164	0.19201	0.0071	0.07861	0.0056	1210	157.6	1132	38.7	1162	143.7	6.4	2.6	1132.2	38.7
4972A_	29	18	1.59	2.2059	0.17171	0.19495	0.0057	0.08261	0.0052	1183	55.1	1148	30.5	1260	125.5	2.9	8.9	1148.1	30.5
4972A_	20	7	2.92	2.0383	0.17126	0.19852	0.0043	0.07878	0.0035	1128	58.1	1167	22.9	1167	88.3	-3.5	-0.1	1167.4	22.9
4972A_	44	10	4.45	2.0760	0.15283	0.19985	0.0031	0.07882	0.0028	1141	51.1	1175	16.8	1168	70.6	-2.9	-0.6	1174.5	16.8
4972A_	8	4	1.80	2.3140	0.27354	0.20233	0.0051	0.08331	0.0067	1217	85.6	1188	27.6	1276	161.1	2.4	6.9	1187.8	27.6
4972A_	65	17	3.84	2.3350	0.12157	0.20275	0.0033	0.07855	0.0023	1223	37.4	1190	17.7	1161	59.7	2.7	-2.5	1190.1	17.7
4972A_	46	13	3.53	2.3745	0.14309	0.20287	0.0034	0.07963	0.0026	1235	43.5	1191	18.1	1188	64.4	3.6	-0.2	1190.7	18.1
4972A_	42	19	2.24	2.6109	0.17179	0.22907	0.0040	0.08280	0.0024	1304	48.9	1330	21.2	1264	57.8	-2.0	-5.2	1329.6	21.2
4972A_	92	18	5.17	2.8038	0.10976	0.22913	0.0033	0.08557	0.0021	1357	29.5	1330	17.1	1328	48.3	2.0	-0.1	1329.9	17.1
4972A_	35	4	7.88	2.7282	0.20332	0.23113	0.0037	0.08797	0.0033	1336	56.1	1340	19.6	1382	74.0	-0.3	3.0	1340.4	19.6
4972A_	261	24	10.91	2.7945	0.10659	0.23292	0.0039	0.08887	0.0024	1354	28.7	1350	20.6	1401	51.8	0.3	3.7	1349.8	20.6
4972A_	24	7	3.42	2.7885	0.25498	0.23372	0.0055	0.08914	0.0048	1352	69.5	1354	28.7	1407	105.9	-0.1	3.8	1354.0	28.7
4972A_	90	23	3.85	2.9339	0.13237	0.23381	0.0040	0.08693	0.0019	1391	34.5	1354	21.0	1359	42.7	2.6	0.3	1354.5	21.0
4972A_	86	17	5.18	2.9604	0.12866	0.23555	0.0035	0.08630	0.0023	1398	33.3	1364	18.5	1345	51.8	2.4	-1.4	1363.5	18.5
4972A_	31	18	1.70	2.9694	0.21228	0.23731	0.0037	0.08498	0.0039	1400	55.0	1373	19.3	1315	90.1	1.9	-4.4	1372.7	19.3
4972A_	65	25	2.58	2.9571	0.13690	0.23901	0.0040	0.09084	0.0025	1397	35.4	1382	20.9	1443	52.8	1.1	4.3	1381.5	20.9
4972A_	24	7	3.38	2.9264	0.25980	0.24131	0.0055	0.08948	0.0047	1389	68.3	1393	28.7	1414	102.1	-0.3	1.5	1393.5	28.7
4972A_	30	9	3.25	3.1701	0.17106	0.24290	0.0040	0.09080	0.0030	1450	42.1	1402	21.0	1442	62.6	3.3	2.8	1401.7	21.0
4972A_	11	4	2.93	3.3866	0.37179	0.24432	0.0051	0.09200	0.0050	1501	87.9	1409	26.2	1467	105.4	6.1	4.0	1409.1	26.2
4972A_	130	43	3.03	2.9907	0.13123	0.24850	0.0055	0.09054	0.0025	1405	33.7	1431	28.5	1437	52.5	-1.8	0.4	1430.7	28.5
4972A_	55	26	2.13	3.0967	0.14649	0.24994	0.0060	0.08830	0.0032	1432	36.6	1438	30.7	1389	70.0	-0.4	-3.5	1438.2	30.7
4972A_	191	46	4.20	3.1325	0.12469	0.25109	0.0037	0.09024	0.0019	1441	30.9	1444	19.2	1431	39.5	-0.2	-0.9	1444.1	19.2
4972A_	38	18	2.12	3.3342	0.16519	0.25356	0.0049	0.09234	0.0030	1489	39.1	1457	25.2	1474	62.3	2.2	1.2	1456.8	25.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
4972A_	7	8	0.97	3.2877	0.25183	0.25432	0.0049	0.09595	0.0050	1478	60.5	1461	25.3	1547	99.7	1.2	5.6	1460.7	25.3
4972A_	67	12	5.80	3.4086	0.13439	0.25558	0.0057	0.09285	0.0027	1506	31.2	1467	29.3	1485	55.0	2.6	1.2	1467.2	29.3
4972A_	11	7	1.68	3.3438	0.47461	0.25859	0.0043	0.09248	0.0043	1491	114.1	1483	21.9	1477	90.1	0.6	-0.4	1482.7	21.9
4972A_	66	12	5.40	3.5199	0.13471	0.25909	0.0056	0.09344	0.0026	1532	30.5	1485	28.9	1497	53.6	3.0	0.8	1485.2	28.9
4972A_	77	43	1.77	4.1558	0.15471	0.29252	0.0055	0.10015	0.0026	1665	30.7	1654	27.6	1627	47.9	0.7	-1.7	1626.9	47.9
4972A_	28	11	2.65	4.0003	0.25761	0.28515	0.0043	0.10057	0.0029	1634	53.0	1617	21.8	1635	54.9	1.0	1.1	1634.6	54.9
4972A_	45	27	1.69	4.0205	0.28114	0.27920	0.0049	0.10066	0.0035	1638	57.7	1587	24.7	1636	64.4	3.1	3.0	1636.3	64.4
4972A_	159	24	6.62	4.0694	0.14014	0.29049	0.0044	0.10147	0.0022	1648	28.3	1644	21.7	1651	41.3	0.3	0.4	1651.3	41.3
4972A_	53	36	1.48	4.2276	0.19607	0.29779	0.0042	0.10287	0.0025	1679	38.4	1680	21.0	1676	44.8	-0.1	-0.2	1676.5	44.8
4972A_	35	14	2.48	4.9040	0.33350	0.31896	0.0057	0.10470	0.0048	1803	58.2	1785	27.7	1709	85.9	1.0	-4.4	1709.1	85.9
4972A_	30	10	2.95	4.5161	0.23753	0.30824	0.0054	0.10539	0.0025	1734	44.2	1732	26.5	1721	43.5	0.1	-0.6	1721.1	43.5
4972A_	102	37	2.72	4.4971	0.17739	0.30960	0.0049	0.10546	0.0025	1730	33.0	1739	23.9	1722	43.6	-0.5	-1.0	1722.3	43.6
4972A_	152	95	1.60	4.6963	0.17796	0.31451	0.0044	0.10587	0.0022	1767	32.0	1763	21.7	1729	37.7	0.2	-1.9	1729.4	37.7
4972A_	103	32	3.23	4.5674	0.16000	0.30879	0.0049	0.10592	0.0020	1743	29.4	1735	24.1	1730	35.0	0.5	-0.3	1730.3	35.0
4972A_	100	59	1.71	4.7375	0.24169	0.30716	0.0055	0.10983	0.0026	1774	43.2	1727	27.3	1797	43.9	2.7	3.9	1796.7	43.9
4972A_	30	20	1.48	4.8769	0.29227	0.33109	0.0057	0.11034	0.0026	1798	51.1	1844	27.8	1805	42.7	-2.5	-2.1	1805.0	42.7
4972A_	65	29	2.22	5.3540	0.18703	0.33100	0.0057	0.11063	0.0023	1878	30.1	1843	27.6	1810	38.4	1.8	-1.8	1809.9	38.4
4972A_	20	7	2.70	4.7940	0.33233	0.33086	0.0072	0.11104	0.0039	1784	59.1	1843	34.7	1817	64.5	-3.3	-1.4	1816.6	64.5
4972A_	19	7	2.72	4.8748	0.36684	0.33647	0.0080	0.11214	0.0043	1798	64.4	1870	38.5	1834	70.3	-4.0	-1.9	1834.5	70.3
4972A_	32	19	1.68	5.3853	0.35386	0.33232	0.0052	0.11350	0.0036	1883	57.1	1850	25.1	1856	57.7	1.7	0.4	1856.2	57.7
4972A_	3	1	3.94	9.6223	1.76198	0.43470	0.0116	0.15140	0.0080	2399	175.8	2327	52.1	2362	91.9	3.0	1.5	2361.8	91.9
4972A_	21	13	1.53	11.0399	0.66361	0.48335	0.0091	0.16535	0.0041	2527	56.8	2542	39.8	2511	41.9	-0.6	-1.2	2511.1	41.9
4972A_	23	3	6.63	12.8327	0.75563	0.50275	0.0093	0.17663	0.0048	2667	56.2	2626	39.9	2622	45.6	1.6	-0.2	2621.5	45.6
4972A_	130	86	1.52	12.9924	0.55686	0.51820	0.0098	0.17960	0.0035	2679	40.8	2692	41.7	2649	32.5	-0.5	-1.6	2649.2	32.5
4972A_	35	16	2.12	12.6762	0.96410	0.51114	0.0086	0.18672	0.0049	2656	72.9	2662	36.6	2714	43.7	-0.2	1.9	2713.5	43.7
4972A_	35	17	2.01	13.2468	0.94842	0.52288	0.0083	0.18898	0.0048	2697	68.7	2711	35.2	2733	41.8	-0.5	0.8	2733.3	41.8
Sample B3-2																			
4752A_	295	142	2.08	0.0256	0.00387	0.00390	0.0002	0.04680	0.0070	26	3.8	25	1.1	38	75.6	2.2	33.6	25.1	1.1
4752A_	499	95	5.23	0.0331	0.00384	0.00471	0.0001	0.05150	0.0060	33	3.8	30	0.9	263	279.3	8.3	88.5	30.3	0.9
4752A_	501	97	5.17	0.0352	0.00399	0.00502	0.0001	0.05174	0.0059	35	3.9	32	0.9	274	271.5	8.0	88.2	32.3	0.9
4752A_	182	122	1.49	0.0370	0.00425	0.00544	0.0001	0.04952	0.0056	37	4.2	35	0.9	173	273.5	5.1	79.7	35.0	0.9
4752A_	48	21	2.30	0.0730	0.01240	0.01100	0.0006	0.04640	0.0073	72	11.7	71	3.7	21	41.7	1.1	-239.8	70.8	3.7
4752A_	104	54	1.90	0.0771	0.01145	0.01126	0.0006	0.05141	0.0077	75	10.8	72	3.6	259	361.4	4.3	72.2	72.2	3.6

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
4752A_	102	53	1.92	0.0774	0.01150	0.01130	0.0006	0.05130	0.0076	76	10.9	72	3.7	254	361.9	4.3	71.5	72.4	3.7
4752A_	105	62	1.70	0.0901	0.01520	0.01147	0.0005	0.05610	0.0093	88	14.2	74	2.9	455	390.1	16.0	83.8	73.5	2.9
4752A_	229	115	2.00	0.0744	0.00837	0.01154	0.0003	0.04760	0.0052	73	7.9	74	1.8	81	162.1	-1.6	8.7	74.0	1.8
4752A_	62	26	2.42	0.0823	0.01100	0.01190	0.0005	0.04780	0.0063	80	10.4	76	3.0	90	180.5	5.4	15.8	76.0	3.0
4752A_	177	63	2.82	0.0824	0.00845	0.01200	0.0003	0.04950	0.0051	80	7.9	77	1.8	174	247.0	4.7	55.9	76.6	1.8
4752A_	68	47	1.44	0.0871	0.01190	0.01230	0.0003	0.04840	0.0065	85	11.2	79	2.2	117	234.8	7.1	32.9	78.8	2.2
4752A_	107	63	1.69	0.0965	0.01633	0.01233	0.0005	0.05605	0.0093	94	15.2	79	3.1	455	390.1	15.5	82.6	79.0	3.1
4752A_	48	38	1.29	0.0981	0.03520	0.01280	0.0012	0.05730	0.0203	95	32.8	82	7.5	504	892.1	13.6	83.7	82.1	7.5
4752A_	83	27	3.07	0.1138	0.02260	0.01430	0.0015	0.05790	0.0122	109	20.7	92	9.5	527	498.8	16.4	82.6	91.6	9.5
4752A_	49	38	1.28	0.1092	0.03915	0.01433	0.0013	0.05720	0.0203	105	36.2	92	8.3	499	893.0	12.8	81.6	91.7	8.3
4752A_	147	36	4.03	0.1019	0.01270	0.01470	0.0006	0.05010	0.0061	99	11.7	94	3.6	201	296.1	4.3	53.1	94.3	3.6
4752A_	519	109	4.74	0.0989	0.00565	0.01500	0.0004	0.04770	0.0026	96	5.2	96	2.6	83	130.4	-0.4	-15.1	96.1	2.6
4752A_	152	53	2.87	0.1044	0.01030	0.01510	0.0003	0.04930	0.0047	101	9.5	97	2.2	160	231.2	4.2	39.6	96.6	2.2
4752A_	298	105	2.84	0.1096	0.01520	0.01530	0.0006	0.05340	0.0072	106	13.9	98	4.0	347	320.5	7.4	71.8	97.9	4.0
4752A_	84	27	3.05	0.1236	0.02450	0.01538	0.0016	0.05810	0.0122	118	22.3	98	10.2	534	498.3	16.8	81.6	98.4	10.2
4752A_	302	107	2.82	0.1159	0.01606	0.01635	0.0007	0.05316	0.0072	111	14.7	105	4.2	336	321.2	6.1	68.8	104.5	4.2
4752A_	4	25	0.14	0.4410	0.65573	0.01890	0.0072	0.13904	0.1842	371	524.3	121	45.5	2215	#####	67.4	94.5	121.0	45.5
4752A_	25	14	1.75	0.2396	0.13393	0.02510	0.0037	0.06610	0.0360	218	112.8	160	23.6	811	#####	26.6	80.3	160.0	23.6
4752A_	99	50	1.97	0.1835	0.02530	0.02649	0.0008	0.04870	0.0066	171	21.8	169	5.2	132	264.1	1.5	-27.6	168.5	5.2
4752A_	58	53	1.10	0.2089	0.04880	0.02920	0.0019	0.05250	0.0105	193	41.4	186	11.8	305	491.2	3.6	39.1	185.7	11.8
4752A_	58	54	1.09	0.2094	0.04893	0.02934	0.0019	0.05240	0.0105	193	41.5	186	11.8	303	491.0	3.4	38.5	186.4	11.8
4752A_	21	0	50.47	0.2503	0.09400	0.03230	0.0028	0.06060	0.0205	227	77.8	205	17.5	625	826.0	9.6	67.2	205.0	17.5
4752A_	105	62	1.70	0.2509	0.02095	0.03339	0.0008	0.05329	0.0039	227	17.1	212	5.0	341	169.3	6.9	37.9	211.7	5.0
4752A_	22	0	50.05	0.2693	0.10109	0.03488	0.0030	0.06066	0.0205	242	82.5	221	18.9	627	825.8	8.7	64.8	221.0	18.9
4752A_	102	60	1.70	0.2641	0.02140	0.03490	0.0008	0.05370	0.0038	238	17.2	221	5.0	358	163.2	7.1	38.3	221.1	5.0
4752A_	52	31	1.71	0.3032	0.02980	0.04030	0.0011	0.05290	0.0043	269	23.4	254	6.9	324	192.0	5.3	21.4	254.5	6.9
4752A_	49	14	3.64	0.5099	0.04192	0.06621	0.0022	0.05659	0.0046	418	28.4	413	13.5	476	183.1	1.2	13.1	413.3	13.5
4752A_	48	13	3.66	0.5095	0.04393	0.06670	0.0024	0.05630	0.0048	418	29.8	416	14.2	466	193.0	0.5	10.7	416.0	14.2
4752A_	71	44	1.59	0.6911	0.02865	0.08470	0.0031	0.05940	0.0027	533	17.3	524	18.7	583	98.3	1.8	10.2	524.0	18.7
4752A_	70	44	1.60	0.7391	0.03003	0.08902	0.0032	0.06007	0.0026	562	17.6	550	19.2	606	96.1	2.2	9.3	549.8	19.2
4752A_	30	42	0.71	0.8466	0.06670	0.09430	0.0023	0.06150	0.0040	623	37.0	581	13.8	658	142.6	6.7	11.7	581.0	13.8
4752A_	74	40	1.84	0.8721	0.05426	0.09870	0.0022	0.06194	0.0025	637	29.6	607	12.7	672	87.0	4.7	9.7	606.8	12.7
4752A_	73	39	1.85	0.8991	0.05590	0.10081	0.0022	0.06250	0.0025	651	30.1	619	13.1	690	87.1	4.9	10.3	619.1	13.1
4752A_	30	43	0.70	0.9017	0.07104	0.10115	0.0025	0.06148	0.0040	653	38.3	621	14.7	656	142.7	4.8	5.3	621.2	14.7

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
4752A_	114	61	1.85	1.4307	0.07050	0.14568	0.0040	0.07270	0.0028	902	29.7	877	22.7	1004	79.5	2.8	12.7	876.7	22.7
4752A_	114	62	1.84	1.5426	0.07357	0.15177	0.0041	0.07352	0.0027	948	29.6	911	22.8	1028	76.2	3.9	11.4	910.9	22.8
4752A_	24	5	5.06	1.5550	0.14044	0.15947	0.0035	0.06880	0.0042	952	56.6	954	19.7	891	128.4	-0.1	-7.0	953.8	19.7
4752A_	37	43	0.85	1.6187	0.11778	0.16385	0.0032	0.07070	0.0031	977	46.2	978	17.5	949	90.5	-0.1	-3.1	978.1	17.5
4752A_	49	13	3.60	1.7937	0.10433	0.16761	0.0030	0.07290	0.0026	1043	38.3	999	16.4	1011	73.3	4.2	1.2	998.9	16.4
4752A_	25	11	2.32	1.6932	0.11077	0.17109	0.0038	0.07290	0.0031	1006	42.2	1018	20.9	1010	87.6	-1.2	-0.8	1018.1	20.9
4752A_	29	10	3.02	1.7290	0.13735	0.17242	0.0035	0.07310	0.0038	1019	51.8	1025	19.3	1018	108.2	-0.6	-0.8	1025.4	19.3
4752A_	62	26	2.33	1.8487	0.10926	0.17524	0.0041	0.07771	0.0031	1063	39.3	1041	22.4	1139	80.5	2.1	8.6	1040.9	22.4
4752A_	25	12	2.05	2.0131	0.13397	0.17527	0.0031	0.07666	0.0029	1120	45.7	1041	16.9	1112	77.6	7.0	6.4	1041.1	16.9
4752A_	25	12	2.08	2.0208	0.12939	0.17572	0.0030	0.07730	0.0029	1123	44.0	1044	16.7	1128	75.4	7.0	7.5	1043.6	16.7
4752A_	9	3	3.16	2.0289	0.23588	0.17853	0.0042	0.07330	0.0057	1125	80.7	1059	22.9	1021	160.5	5.9	-3.7	1058.9	22.9
4752A_	32	8	3.77	1.8443	0.10315	0.18067	0.0025	0.07348	0.0022	1061	37.2	1071	13.8	1027	59.8	-0.9	-4.2	1070.6	13.8
4752A_	99	33	2.97	1.8255	0.09154	0.18119	0.0035	0.07815	0.0024	1055	33.2	1073	19.0	1151	60.5	-1.8	6.7	1073.5	19.0
4752A_	61	26	2.34	1.9376	0.11171	0.18351	0.0042	0.07790	0.0031	1094	39.0	1086	22.9	1145	78.9	0.7	5.2	1086.1	22.9
4752A_	29	11	2.59	2.3630	0.29274	0.18584	0.0060	0.08380	0.0048	1231	90.4	1099	32.5	1288	113.5	10.8	14.7	1098.8	32.5
4752A_	33	18	1.85	1.9789	0.13590	0.18620	0.0030	0.07590	0.0035	1108	46.9	1101	16.5	1094	92.3	0.7	-0.6	1100.7	16.5
4752A_	98	33	2.95	1.9155	0.09010	0.18908	0.0035	0.07830	0.0022	1087	31.6	1116	18.7	1154	57.2	-2.7	3.3	1116.4	18.7
4752A_	73	28	2.61	2.3377	0.11014	0.20078	0.0047	0.08252	0.0033	1224	33.8	1179	25.3	1258	78.5	3.6	6.2	1179.5	25.3
4752A_	72	27	2.64	2.3875	0.11236	0.20437	0.0048	0.08280	0.0033	1239	34.0	1199	25.8	1266	78.8	3.2	5.3	1198.7	25.8
4752A_	46	12	3.87	2.1510	0.14845	0.20438	0.0030	0.07936	0.0026	1165	48.4	1199	16.3	1181	64.6	-2.9	-1.5	1198.8	16.3
4752A_	66	17	3.91	2.3556	0.12201	0.20476	0.0034	0.07880	0.0024	1229	37.3	1201	18.0	1167	60.3	2.3	-2.9	1200.8	18.0
4752A_	30	27	1.12	2.3401	0.18952	0.20573	0.0050	0.08056	0.0041	1225	58.4	1206	26.5	1211	102.1	1.5	0.4	1206.0	26.5
4752A_	30	27	1.12	2.3555	0.18202	0.20817	0.0049	0.08140	0.0040	1229	55.8	1219	26.1	1231	98.4	0.8	1.0	1219.1	26.1
4752A_	140	164	0.86	2.9316	0.39266	0.23010	0.0180	0.09510	0.0081	1390	104.0	1335	94.7	1529	164.9	4.0	12.7	1335.0	94.7
4752A_	36	33	1.09	3.0451	0.36157	0.23300	0.0131	0.09690	0.0075	1419	92.9	1350	68.5	1566	147.7	4.8	13.8	1350.2	68.5
4752A_	43	39	1.11	3.2905	0.26930	0.24347	0.0096	0.09879	0.0053	1479	64.8	1405	49.9	1601	102.3	5.0	12.3	1404.7	49.9
4752A_	37	28	1.32	3.0398	0.41203	0.24547	0.0140	0.09987	0.0066	1418	106.3	1415	72.7	1622	125.3	0.2	12.7	1415.1	72.7
4752A_	94	40	2.36	3.3214	0.23103	0.24800	0.0061	0.09444	0.0033	1486	55.0	1428	31.3	1517	67.0	3.9	5.9	1428.2	31.3
4752A_	29	9	3.19	3.3287	0.17323	0.24951	0.0040	0.09290	0.0029	1488	41.0	1436	20.7	1485	59.9	3.5	3.3	1436.0	20.7
4752A_	330	225	1.47	3.4193	0.22180	0.24989	0.0138	0.09900	0.0056	1509	51.6	1438	71.3	1605	107.8	4.7	10.4	1437.9	71.3
4752A_	97	40	2.42	3.4338	0.20842	0.25279	0.0055	0.09520	0.0030	1512	48.3	1453	28.2	1532	59.0	3.9	5.2	1452.8	28.2
4752A_	193	46	4.19	3.1659	0.13286	0.25480	0.0039	0.09070	0.0020	1449	32.6	1463	20.1	1441	41.8	-1.0	-1.5	1463.2	20.1
4752A_	10	6	1.55	4.1107	0.87911	0.25565	0.0096	0.10672	0.0112	1656	182.6	1468	49.5	1744	198.1	11.4	15.9	1467.6	49.5
4752A_	12	7	1.66	3.4441	0.50071	0.26438	0.0043	0.09300	0.0044	1515	117.7	1512	22.2	1488	91.5	0.2	-1.7	1512.2	22.2

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
4752A_	67	27	2.52	4.1740	0.18782	0.28505	0.0084	0.09940	0.0036	1669	37.2	1617	42.3	1613	67.4	3.1	-0.2	1613.2	67.4
4752A_	90	27	3.33	3.8134	0.22671	0.29463	0.0146	0.09986	0.0049	1596	48.4	1665	73.0	1621	92.9	-4.3	-2.7	1621.4	92.9
4752A_	68	27	2.51	4.3603	0.20320	0.29642	0.0091	0.10031	0.0037	1705	38.9	1674	45.5	1630	70.2	1.8	-2.7	1629.8	70.2
4752A_	79	45	1.76	4.1832	0.15640	0.29399	0.0056	0.10055	0.0026	1671	30.9	1661	27.7	1634	47.6	0.6	-1.7	1634.4	47.6
4752A_	44	33	1.31	3.8861	0.26600	0.28056	0.0060	0.10189	0.0035	1611	56.0	1594	30.2	1659	63.7	1.0	3.9	1658.8	63.7
4752A_	28	11	2.64	4.2127	0.26772	0.29176	0.0044	0.10192	0.0030	1676	52.8	1650	21.7	1659	54.2	1.6	0.5	1659.3	54.2
4752A_	47	25	1.88	4.3950	0.21091	0.30412	0.0088	0.10262	0.0031	1711	40.1	1712	43.4	1672	56.3	0.0	-2.4	1672.0	56.3
4752A_	101	30	3.34	4.1365	0.19989	0.30082	0.0120	0.10266	0.0042	1662	39.9	1695	59.8	1673	75.6	-2.0	-1.4	1672.8	75.6
4752A_	47	25	1.86	4.6435	0.24040	0.31869	0.0099	0.10323	0.0034	1757	43.7	1783	48.6	1683	60.7	-1.5	-6.0	1683.0	60.7
4752A_	44	33	1.32	4.1041	0.26363	0.29379	0.0060	0.10374	0.0033	1655	53.1	1660	29.9	1692	59.6	-0.3	1.9	1692.2	59.6
4752A_	12	9	1.33	3.8833	0.58233	0.26692	0.0067	0.10581	0.0086	1610	124.8	1525	34.2	1728	152.6	5.3	11.8	1728.4	152.6
4752A_	106	47	2.24	4.6165	0.39780	0.28194	0.0135	0.10592	0.0048	1752	73.2	1601	68.2	1730	84.1	8.6	7.5	1730.3	84.1
4752A_	101	42	2.43	3.9448	0.34116	0.27460	0.0106	0.10757	0.0055	1623	71.3	1564	53.7	1759	95.3	3.6	11.1	1758.7	95.3
4752A_	31	18	1.77	5.0269	0.37910	0.30521	0.0050	0.10892	0.0032	1824	64.9	1717	24.6	1781	54.4	5.9	3.6	1781.5	54.4
4752A_	101	60	1.69	4.7858	0.25319	0.31337	0.0058	0.10916	0.0026	1782	44.9	1757	28.6	1785	44.5	1.4	1.6	1785.4	44.5
4752A_	112	41	2.72	4.6185	0.22077	0.30491	0.0058	0.10928	0.0033	1753	40.3	1716	28.9	1787	55.9	2.1	4.0	1787.4	55.9
4752A_	33	18	1.77	5.3794	0.37604	0.33051	0.0051	0.10972	0.0031	1882	60.8	1841	25.0	1795	51.3	2.2	-2.6	1794.8	51.3
4752A_	132	21	6.25	5.2736	0.23198	0.32389	0.0078	0.11214	0.0027	1865	37.9	1809	38.0	1834	43.3	3.0	1.4	1834.4	43.3
4752A_	123	35	3.54	4.8531	0.25544	0.31088	0.0088	0.11364	0.0035	1794	44.8	1745	43.4	1858	56.8	2.7	6.1	1858.4	56.8
4752A_	7	5	1.48	4.0727	0.50327	0.27896	0.0278	0.11406	0.0125	1649	103.3	1586	140.8	1865	205.3	3.8	15.0	1865.2	205.3
4752A_	33	19	1.68	5.4216	0.36077	0.33663	0.0052	0.11430	0.0037	1888	57.9	1870	25.3	1869	58.2	0.9	-0.1	1868.8	58.2
4752A_	139	22	6.46	5.3919	0.18395	0.32680	0.0063	0.11467	0.0022	1884	29.4	1823	30.4	1875	35.5	3.2	2.8	1874.6	35.5
4752A_	4	3	1.52	3.8076	0.78633	0.25264	0.0423	0.11477	0.0212	1594	173.3	1452	219.8	1876	352.9	8.9	22.6	1876.3	352.9
4752A_	4	13	0.32	6.2431	0.97066	0.34679	0.0145	0.13449	0.0097	2011	140.8	1919	69.8	2157	128.1	4.5	11.0	2157.4	128.1
4752A_	4	13	0.32	6.2503	1.01034	0.34671	0.0150	0.13482	0.0100	2012	146.7	1919	72.0	2162	131.7	4.6	11.2	2161.6	131.7
4752A_	19	12	1.57	11.1770	0.75180	0.48384	0.0102	0.16648	0.0046	2538	63.7	2544	44.4	2523	46.8	-0.2	-0.8	2522.6	46.8
4752A_	24	4	6.65	13.0344	0.81758	0.51255	0.0100	0.17741	0.0052	2682	60.0	2667	42.6	2629	49.2	0.5	-1.5	2628.8	49.2
4752A_	134	89	1.51	13.2409	0.55944	0.52316	0.0097	0.18027	0.0034	2697	40.3	2713	41.0	2655	31.1	-0.6	-2.2	2655.3	31.1
4752A_	4	21	0.19	21.0818	4.49099	0.55326	0.0356	0.21633	0.0139	3142	217.8	2839	148.6	2954	105.4	9.7	3.9	2953.6	105.4

Table S2

				RATIOS						AGES									
U		Th	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/	206/		207/		%disc	%disc	Best Age	± 2s	
Grain	[ppm]	[ppm]								235	± 2s	238	± 2s	206					± 2s
Sample BL_BR_21																			
G1	43	7	0.15	1.9026	0.08160	0.17418	0.0027	0.07940	0.0035	1082	57.1	1035	29.2	1182	168.9	4.5	12.4	1035.1	29.2
G2	296	407	1.38	0.0157	0.00390	0.00225	0.0001	0.05073	0.0127	16	7.8	15	0.9	229	988.9	9.0	93.7	14.5	0.9
G3	1599	708	0.44	0.0257	0.00129	0.00373	0.0001	0.05008	0.0026	26	2.6	24	0.6	199	229.2	7.5	87.9	24.0	0.6
G4	1213	551	0.45	0.0288	0.00151	0.00435	0.0001	0.04810	0.0026	29	3.0	28	0.8	104	243.6	2.9	73.2	28.0	0.8
G5	609	386	0.63	0.0326	0.00248	0.00481	0.0001	0.04932	0.0038	33	4.9	31	1.0	163	342.2	5.5	81.1	30.9	1.0
G6	612	458	0.75	0.0351	0.00230	0.00540	0.0001	0.04727	0.0032	35	4.5	35	1.1	63	303.7	1.2	44.5	34.7	1.1
G7	1615	388	0.24	0.0352	0.00128	0.00539	0.0001	0.04751	0.0018	35	2.5	35	0.8	74	173.1	1.4	53.2	34.7	0.8
G8	600	228	0.38	0.0548	0.00316	0.00864	0.0001	0.04609	0.0027	54	6.1	56	1.5	2	270.4	-2.3	-2422.7	55.5	1.5
G9	1953	1719	0.88	0.0680	0.00198	0.00991	0.0001	0.04987	0.0015	67	3.8	64	1.5	189	135.4	5.0	66.3	63.6	1.5
G10	1438	280	0.19	0.0616	0.00185	0.00996	0.0001	0.04502	0.0014	61	3.5	64	1.4	0	35.6	-5.0	-63800.0	63.9	1.4
G11	438	185	0.42	0.0676	0.00394	0.01005	0.0001	0.04889	0.0029	66	7.5	64	1.8	143	266.5	3.1	54.8	64.4	1.8
G12	1626	252	0.15	0.0669	0.00194	0.01019	0.0001	0.04770	0.0014	66	3.7	65	1.5	84	138.9	0.5	21.8	65.4	1.5
G13	3048	739	0.24	0.0739	0.00159	0.01057	0.0001	0.05080	0.0011	72	3.0	68	1.4	232	99.6	6.8	70.8	67.8	1.4
G14	386	170	0.44	0.0689	0.00390	0.01083	0.0002	0.04629	0.0027	68	7.4	69	1.9	13	264.4	-2.4	-450.8	69.4	1.9
G15	716	413	0.58	0.0789	0.00417	0.01156	0.0002	0.04957	0.0027	77	7.8	74	2.1	175	242.0	4.0	57.7	74.1	2.1
G16	432	269	0.62	0.0773	0.00419	0.01157	0.0002	0.04855	0.0027	76	7.9	74	1.9	126	248.9	2.0	41.4	74.1	1.9
G17	1278	605	0.47	0.0784	0.00236	0.01164	0.0001	0.04893	0.0015	77	4.4	75	1.7	145	140.6	2.7	48.4	74.6	1.7
G18	294	265	0.90	0.0855	0.00555	0.01206	0.0002	0.05149	0.0034	83	10.4	77	2.4	263	289.8	7.8	70.6	77.3	2.4
G19	250	152	0.61	0.0964	0.00744	0.01379	0.0002	0.05080	0.0040	93	13.8	88	2.9	232	342.8	5.8	61.9	88.3	2.9
G20	1526	497	0.33	0.1019	0.00241	0.01495	0.0002	0.04956	0.0012	99	4.4	96	2.1	175	110.3	3.0	45.2	95.6	2.1
G21	138	85	0.62	0.1083	0.01019	0.01591	0.0003	0.04948	0.0047	104	18.7	102	3.6	171	416.5	2.6	40.4	101.8	3.6
G22	104	44	0.43	0.1513	0.01795	0.02356	0.0005	0.04670	0.0056	143	31.7	150	6.6	34	530.6	-4.7	-344.1	150.1	6.6
G23	217	91	0.42	0.1730	0.00780	0.02445	0.0003	0.05144	0.0024	162	13.5	156	4.1	261	204.4	4.0	40.2	155.7	4.1
G24	351	246	0.70	0.1676	0.00612	0.02584	0.0003	0.04716	0.0018	157	10.6	164	3.9	57	172.8	-4.3	-187.9	164.4	3.9
G25	88	48	0.54	0.1850	0.02183	0.02593	0.0006	0.05184	0.0062	172	37.4	165	7.4	279	505.3	4.4	40.8	165.0	7.4
G26	272	173	0.63	0.1831	0.00797	0.02746	0.0004	0.04846	0.0021	171	13.7	175	4.5	122	202.1	-2.3	-43.7	174.7	4.5
G27	357	183	0.51	0.1897	0.00633	0.02763	0.0003	0.04990	0.0017	176	10.8	176	4.0	191	154.2	0.4	7.8	175.7	4.0
G28	411	221	0.54	0.1974	0.00630	0.02826	0.0003	0.05078	0.0017	183	10.7	180	4.1	231	147.0	1.8	22.1	179.6	4.1
G29	867	325	0.37	0.2161	0.00483	0.03128	0.0003	0.05021	0.0012	199	8.1	199	4.2	205	104.2	0.0	3.0	198.6	4.2
G30	111	31	0.28	0.2344	0.01723	0.03373	0.0006	0.05052	0.0038	214	28.3	214	7.1	219	328.2	0.0	2.3	213.8	7.1
G31	957	648	0.68	0.2344	0.00438	0.03422	0.0004	0.04978	0.0010	214	7.2	217	4.5	185	87.4	-1.4	-17.3	216.9	4.5
G32	453	273	0.60	0.5324	0.01017	0.06900	0.0007	0.05609	0.0011	433	13.5	430	8.8	456	85.0	0.8	5.6	430.1	8.8
G33	300	158	0.53	0.7182	0.01434	0.08740	0.0010	0.05973	0.0012	550	16.9	540	11.3	594	86.7	1.8	9.1	540.1	11.3

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G34	65	68	1.04	0.7916	0.03134	0.09070	0.0012	0.06344	0.0026	592	35.5	560	14.3	723	166.8	5.8	22.6	559.6	14.3
G35	214	254	1.19	0.8062	0.01993	0.09427	0.0011	0.06217	0.0016	600	22.4	581	12.6	680	106.3	3.4	14.6	580.8	12.6
G36	241	60	0.25	1.5293	0.02622	0.15643	0.0017	0.07107	0.0013	942	21.1	937	18.4	959	70.8	0.6	2.3	936.9	18.4
G37	94	98	1.04	1.6099	0.04543	0.15858	0.0020	0.07380	0.0021	974	35.4	949	21.7	1036	114.3	2.7	8.4	948.9	21.7
G38	118	62	0.53	1.6283	0.03493	0.16103	0.0018	0.07350	0.0016	981	27.0	963	19.9	1028	87.5	1.9	6.4	962.5	19.9
G39	31	11	0.36	1.7836	0.07293	0.16348	0.0023	0.07932	0.0033	1040	53.2	976	25.8	1180	161.2	6.5	17.3	976.1	25.8
G40	195	57	0.29	1.6728	0.03189	0.16542	0.0018	0.07350	0.0014	998	24.2	987	20.0	1028	77.6	1.2	4.0	986.9	20.0
G41	102	52	0.51	1.6711	0.04040	0.16579	0.0019	0.07328	0.0018	998	30.7	989	21.2	1022	98.7	0.9	3.2	988.9	21.2
G42	301	202	0.67	1.6301	0.02506	0.16671	0.0018	0.07108	0.0011	982	19.3	994	19.5	960	62.9	-1.2	-3.6	994.0	19.5
G43	1162	21	0.02	1.7022	0.02157	0.16906	0.0017	0.07319	0.0009	1009	16.2	1007	18.8	1019	51.8	0.2	1.2	1006.9	18.8
G44	106	133	1.26	1.6939	0.04008	0.16916	0.0019	0.07281	0.0018	1006	30.2	1008	21.3	1009	96.3	-0.1	0.1	1007.5	21.3
G45	114	428	3.74	1.9067	0.04815	0.16935	0.0020	0.08184	0.0021	1083	33.6	1009	22.3	1242	99.5	7.4	18.8	1008.5	22.3
G46	882	16	0.02	1.7605	0.02403	0.17048	0.0017	0.07508	0.0011	1031	17.7	1015	19.0	1071	55.6	1.6	5.2	1014.8	19.0
G47	139	56	0.40	1.7090	0.03304	0.17071	0.0019	0.07277	0.0014	1012	24.8	1016	20.8	1008	78.8	-0.4	-0.8	1016.0	20.8
G48	75	57	0.76	1.7286	0.04169	0.17096	0.0020	0.07350	0.0018	1019	31.0	1017	22.0	1028	97.9	0.2	1.0	1017.4	22.0
G49	52	13	0.24	1.7864	0.06103	0.17119	0.0023	0.07585	0.0027	1041	44.5	1019	24.9	1091	136.9	2.2	6.6	1018.6	24.9
G50	359	91	0.25	1.9057	0.03422	0.17154	0.0018	0.08075	0.0015	1083	23.9	1021	20.3	1215	71.1	6.1	16.0	1020.6	20.3
G51	136	73	0.54	1.7113	0.03428	0.17175	0.0019	0.07243	0.0015	1013	25.7	1022	20.7	998	82.2	-0.9	-2.4	1021.8	20.7
G52	115	46	0.40	1.7149	0.03715	0.17200	0.0019	0.07249	0.0016	1014	27.8	1023	21.1	1000	88.9	-0.9	-2.3	1023.1	21.1
G53	488	93	0.19	1.7783	0.02892	0.17249	0.0018	0.07493	0.0012	1038	21.1	1026	20.0	1067	65.7	1.1	3.8	1025.8	20.0
G54	89	55	0.61	1.7843	0.04492	0.17261	0.0020	0.07513	0.0019	1040	32.8	1027	22.3	1072	101.7	1.3	4.3	1026.5	22.3
G55	33	90	2.73	1.7432	0.06784	0.17328	0.0023	0.07313	0.0029	1025	50.2	1030	25.8	1018	156.9	-0.5	-1.2	1030.2	25.8
G56	2260	364	0.16	1.9315	0.02331	0.17349	0.0017	0.08092	0.0010	1092	16.1	1031	19.2	1220	47.7	5.9	15.4	1031.3	19.2
G57	134	127	0.94	1.7891	0.03403	0.17392	0.0019	0.07479	0.0015	1042	24.8	1034	20.7	1063	77.4	0.8	2.7	1033.7	20.7
G58	108	84	0.78	1.8725	0.04246	0.17422	0.0020	0.07813	0.0018	1071	30.0	1035	21.9	1150	91.0	3.5	10.0	1035.3	21.9
G59	91	49	0.54	1.8153	0.04436	0.17454	0.0021	0.07560	0.0019	1051	32.0	1037	22.6	1084	98.9	1.3	4.4	1037.1	22.6
G60	54	13	0.24	1.7394	0.04940	0.17461	0.0021	0.07241	0.0021	1023	36.6	1038	23.5	997	115.0	-1.4	-4.0	1037.5	23.5
G61	450	273	0.61	1.8755	0.03090	0.17505	0.0019	0.07788	0.0013	1073	21.8	1040	20.5	1144	65.8	3.1	9.1	1039.9	20.5
G62	123	44	0.36	1.7669	0.03408	0.17644	0.0019	0.07278	0.0014	1033	25.0	1048	21.0	1008	78.9	-1.3	-3.9	1047.5	21.0
G63	387	111	0.29	1.7941	0.02757	0.17773	0.0019	0.07338	0.0011	1043	20.0	1055	20.6	1025	61.7	-1.1	-2.9	1054.5	20.6
G64	215	130	0.60	1.9197	0.03244	0.18632	0.0020	0.07490	0.0013	1088	22.6	1101	21.4	1066	68.7	-1.2	-3.3	1065.7	68.7
G65	302	86	0.28	1.8896	0.02880	0.17979	0.0019	0.07641	0.0012	1077	20.2	1066	20.3	1106	61.8	1.1	3.6	1065.8	20.3
G66	222	228	1.03	1.9139	0.03536	0.18023	0.0020	0.07719	0.0015	1086	24.6	1068	21.5	1126	74.1	1.7	5.1	1068.2	21.5
G67	139	85	0.61	1.9624	0.03638	0.18134	0.0020	0.07867	0.0015	1103	24.9	1074	21.4	1164	74.3	2.6	7.7	1074.3	21.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G68	109	40	0.36	1.8752	0.03915	0.18147	0.0020	0.07513	0.0016	1072	27.7	1075	21.9	1072	84.8	-0.2	-0.3	1075.0	21.9
G69	72	50	0.69	1.9324	0.05588	0.18252	0.0023	0.07695	0.0023	1092	38.7	1081	24.8	1120	115.8	1.1	3.5	1080.7	24.8
G70	43	29	0.66	1.9511	0.06159	0.18374	0.0024	0.07718	0.0025	1099	42.4	1087	25.8	1126	126.0	1.0	3.4	1087.4	25.8
G71	793	1122	1.41	2.1873	0.02952	0.18391	0.0019	0.08647	0.0012	1177	18.8	1088	20.4	1349	52.8	8.2	19.3	1088.3	20.4
G72	49	29	0.59	1.9816	0.05497	0.18411	0.0023	0.07824	0.0022	1109	37.4	1089	24.7	1153	110.6	1.8	5.5	1089.4	24.7
G73	180	69	0.38	1.9494	0.03641	0.18692	0.0021	0.07581	0.0014	1098	25.1	1105	22.4	1090	75.2	-0.6	-1.3	1090.1	75.2
G74	396	370	0.93	2.0042	0.03400	0.18465	0.0020	0.07891	0.0014	1117	23.0	1092	21.3	1170	68.1	2.3	6.6	1092.3	21.3
G75	90	26	0.29	2.0398	0.04183	0.19281	0.0021	0.07690	0.0016	1129	27.9	1137	23.1	1119	82.5	-0.7	-1.6	1118.5	82.5
G76	175	67	0.38	2.0330	0.03979	0.19191	0.0021	0.07700	0.0015	1127	26.6	1132	23.2	1121	78.5	-0.5	-0.9	1121.2	78.5
G77	305	118	0.39	1.9946	0.03632	0.18756	0.0020	0.07729	0.0014	1114	24.6	1108	21.9	1129	73.0	0.5	1.8	1128.8	73.0
G78	627	153	0.24	2.0150	0.02670	0.18925	0.0019	0.07739	0.0010	1121	18.0	1117	20.8	1131	53.3	0.3	1.2	1131.4	53.3
G79	240	222	0.92	1.9960	0.03180	0.18717	0.0020	0.07751	0.0013	1114	21.6	1106	21.7	1134	63.8	0.7	2.5	1134.3	63.8
G80	442	89	0.20	2.1254	0.02944	0.19805	0.0021	0.07801	0.0011	1157	19.1	1165	22.2	1147	55.0	-0.7	-1.5	1147.1	55.0
G81	270	116	0.43	2.0993	0.03772	0.19483	0.0021	0.07831	0.0014	1149	24.7	1148	22.6	1155	71.8	0.1	0.6	1154.8	71.8
G82	280	100	0.36	2.1551	0.03498	0.19968	0.0021	0.07845	0.0013	1167	22.5	1174	22.8	1158	64.7	-0.6	-1.3	1158.2	64.7
G83	270	85	0.31	2.1945	0.03369	0.20329	0.0022	0.07847	0.0012	1179	21.4	1193	23.1	1159	61.0	-1.1	-3.0	1158.8	61.0
G84	757	438	0.58	2.1254	0.02755	0.19646	0.0020	0.07863	0.0010	1157	17.9	1156	21.5	1163	51.8	0.1	0.6	1162.9	51.8
G85	174	50	0.29	2.1226	0.04062	0.19555	0.0021	0.07889	0.0015	1156	26.4	1151	23.1	1169	76.3	0.4	1.5	1169.4	76.3
G86	637	197	0.31	2.1233	0.02747	0.19553	0.0020	0.07893	0.0010	1156	17.9	1151	21.4	1170	51.7	0.4	1.6	1170.4	51.7
G87	404	276	0.68	2.1383	0.03020	0.19642	0.0020	0.07914	0.0011	1161	19.5	1156	21.6	1176	56.6	0.4	1.7	1175.7	56.6
G88	608	322	0.53	2.0796	0.02848	0.19060	0.0020	0.07931	0.0011	1142	18.8	1125	21.1	1180	54.8	1.6	4.7	1179.9	54.8
G89	353	167	0.47	2.1534	0.03116	0.19674	0.0020	0.07956	0.0012	1166	20.1	1158	21.9	1186	57.8	0.7	2.4	1186.1	57.8
G90	148	76	0.51	2.1047	0.03542	0.19226	0.0020	0.07956	0.0014	1150	23.2	1134	22.1	1186	67.1	1.5	4.4	1186.2	67.1
G91	199	189	0.95	2.1487	0.03441	0.19593	0.0021	0.07971	0.0013	1165	22.2	1153	22.2	1190	63.9	1.0	3.1	1189.8	63.9
G92	94	46	0.49	2.2813	0.04550	0.20711	0.0023	0.08008	0.0016	1207	28.2	1213	24.4	1199	79.6	-0.6	-1.2	1198.9	79.6
G93	279	102	0.37	2.2751	0.03360	0.20644	0.0021	0.08011	0.0012	1205	20.8	1210	22.9	1200	58.9	-0.4	-0.9	1199.6	58.9
G94	204	83	0.41	2.0736	0.04695	0.18813	0.0022	0.08013	0.0019	1140	31.0	1111	23.5	1200	90.4	2.6	7.4	1200.3	90.4
G95	48	29	0.61	2.1519	0.05599	0.19198	0.0023	0.08148	0.0022	1166	36.1	1132	25.3	1233	102.3	3.0	8.2	1233.0	102.3
G96	352	126	0.36	2.4812	0.03484	0.21998	0.0023	0.08199	0.0012	1267	20.3	1282	24.3	1245	55.0	-1.2	-2.9	1245.3	55.0
G97	241	94	0.39	2.2815	0.03643	0.20172	0.0021	0.08223	0.0014	1207	22.5	1185	22.6	1251	63.1	1.9	5.3	1251.1	63.1
G98	192	74	0.38	2.6682	0.04313	0.22818	0.0024	0.08499	0.0014	1320	23.9	1325	25.4	1315	63.5	-0.4	-0.7	1315.2	63.5
G99	105	51	0.49	2.6162	0.04846	0.22153	0.0024	0.08586	0.0016	1305	27.2	1290	25.4	1335	72.8	1.2	3.4	1335.0	72.8
G100	79	48	0.62	2.8218	0.05719	0.23789	0.0027	0.08622	0.0018	1361	30.4	1376	28.3	1343	78.9	-1.0	-2.4	1343.2	78.9
G101	113	43	0.38	2.7007	0.05589	0.22387	0.0025	0.08768	0.0019	1329	30.7	1302	26.7	1376	80.1	2.0	5.3	1375.5	80.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G102	81	99	1.23	3.1093	0.05722	0.25573	0.0029	0.08838	0.0017	1435	28.3	1468	29.3	1391	70.9	-2.2	-5.6	1390.7	70.9
G103	226	106	0.47	3.2479	0.05775	0.26698	0.0029	0.08843	0.0016	1469	27.6	1525	30.0	1392	68.5	-3.7	-9.6	1391.8	68.5
G104	62	28	0.45	2.7639	0.06141	0.22650	0.0026	0.08872	0.0020	1346	33.1	1316	27.5	1398	86.2	2.3	5.9	1398.1	86.2
G105	78	38	0.49	2.8084	0.07249	0.22843	0.0028	0.08936	0.0024	1358	38.7	1326	29.3	1412	99.5	2.4	6.1	1411.8	99.5
G106	234	123	0.53	3.1657	0.04530	0.25701	0.0027	0.08954	0.0013	1449	22.1	1475	27.8	1416	54.7	-1.7	-4.2	1415.6	54.7
G107	221	90	0.41	3.0524	0.05490	0.24768	0.0027	0.08958	0.0016	1421	27.5	1427	27.7	1416	69.2	-0.4	-0.7	1416.4	69.2
G108	98	84	0.85	3.1709	0.06865	0.25709	0.0030	0.08965	0.0020	1450	33.4	1475	30.2	1418	83.4	-1.7	-4.0	1417.9	83.4
G109	160	53	0.33	3.0240	0.04800	0.24468	0.0026	0.08985	0.0015	1414	24.2	1411	26.6	1422	61.5	0.2	0.8	1422.4	61.5
G110	144	52	0.36	2.9780	0.05906	0.24065	0.0027	0.08994	0.0018	1402	30.2	1390	27.8	1424	76.3	0.9	2.4	1424.3	76.3
G111	505	258	0.51	3.0758	0.04541	0.24565	0.0026	0.09101	0.0014	1427	22.6	1416	26.8	1447	56.4	0.8	2.1	1446.7	56.4
G112	77	124	1.62	3.2093	0.07841	0.25626	0.0031	0.09104	0.0023	1459	37.8	1471	32.0	1447	94.4	-0.8	-1.6	1447.4	94.4
G113	457	167	0.37	2.9729	0.04626	0.23723	0.0025	0.09108	0.0014	1401	23.6	1372	26.0	1448	59.5	2.1	5.2	1448.2	59.5
G114	114	51	0.45	3.1627	0.05949	0.25170	0.0028	0.09135	0.0018	1448	29.0	1447	28.7	1454	72.8	0.1	0.5	1453.8	72.8
G115	255	111	0.44	3.0692	0.04446	0.24351	0.0025	0.09164	0.0014	1425	22.2	1405	26.0	1460	56.2	1.4	3.8	1459.8	56.2
G116	77	33	0.43	3.1202	0.06914	0.24676	0.0029	0.09193	0.0021	1438	34.1	1422	29.7	1466	85.5	1.1	3.0	1465.7	85.5
G117	2487	665	0.27	3.1039	0.04947	0.24455	0.0026	0.09225	0.0015	1434	24.5	1410	26.4	1472	61.1	1.7	4.2	1472.4	61.1
G118	347	113	0.33	3.3133	0.05543	0.25765	0.0027	0.09347	0.0016	1484	26.1	1478	28.1	1497	63.7	0.4	1.3	1497.4	63.7
G119	79	28	0.35	3.2454	0.07303	0.25188	0.0030	0.09365	0.0022	1468	34.9	1448	30.7	1501	85.8	1.4	3.5	1501.1	85.8
G120	75	32	0.42	3.4606	0.07858	0.26735	0.0032	0.09409	0.0022	1518	35.8	1527	32.7	1510	86.5	-0.6	-1.2	1509.9	86.5
G121	70	31	0.45	3.9677	0.07424	0.28900	0.0033	0.09980	0.0019	1628	30.4	1637	32.7	1620	70.2	-0.5	-1.0	1620.3	70.2
G122	250	83	0.33	3.9032	0.06198	0.28373	0.0030	0.09999	0.0016	1614	25.7	1610	30.4	1624	59.4	0.3	0.8	1623.9	59.4
G123	94	108	1.15	4.1068	0.06802	0.29718	0.0032	0.10047	0.0017	1656	27.0	1677	31.7	1633	62.5	-1.3	-2.7	1632.8	62.5
G124	113	85	0.75	4.0649	0.06730	0.29183	0.0032	0.10125	0.0017	1647	27.0	1651	31.7	1647	61.8	-0.2	-0.2	1647.1	61.8
G125	324	91	0.28	4.0195	0.05238	0.28509	0.0029	0.10248	0.0014	1638	21.2	1617	29.2	1670	48.7	1.3	3.2	1669.5	48.7
G126	135	67	0.50	4.2724	0.06405	0.30129	0.0032	0.10306	0.0016	1688	24.7	1698	31.5	1680	56.0	-0.6	-1.1	1680.0	56.0
G127	307	117	0.38	4.3015	0.05705	0.30289	0.0031	0.10324	0.0014	1694	21.9	1706	30.6	1683	49.6	-0.7	-1.3	1683.1	49.6
G128	220	92	0.42	3.9814	0.06320	0.27725	0.0030	0.10437	0.0017	1630	25.8	1578	30.0	1703	59.2	3.4	7.4	1703.3	59.2
G129	315	199	0.63	4.3348	0.07073	0.29994	0.0032	0.10504	0.0017	1700	26.9	1691	31.6	1715	60.4	0.5	1.4	1715.1	60.4
G130	271	134	0.49	4.4212	0.06221	0.30571	0.0032	0.10512	0.0015	1716	23.3	1720	31.7	1716	51.8	-0.2	-0.2	1716.4	51.8
G131	694	170	0.24	4.2423	0.06100	0.29329	0.0031	0.10513	0.0015	1682	23.6	1658	30.4	1717	53.0	1.5	3.4	1716.7	53.0
G132	229	160	0.70	4.3413	0.06193	0.29953	0.0031	0.10538	0.0015	1701	23.5	1689	30.6	1721	53.3	0.7	1.9	1721.0	53.3
G133	439	56	0.13	4.2972	0.06022	0.29559	0.0031	0.10567	0.0015	1693	23.1	1669	30.7	1726	51.5	1.4	3.3	1726.0	51.5
G134	106	126	1.19	4.1046	0.08747	0.28166	0.0033	0.10592	0.0023	1655	34.8	1600	33.2	1730	78.9	3.5	7.5	1730.3	78.9
G135	153	60	0.39	4.3869	0.06594	0.30076	0.0032	0.10602	0.0016	1710	24.9	1695	31.8	1732	55.4	0.9	2.1	1732.1	55.4

Table S2

Grain	U Th		Th/U	RATIOS						207/ 235		AGES 206/ 238		207/ 206		%disc	%disc (7/6)	Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	± 2s	± 2s	± 2s	± 2s	± 2s	± 2s			[Ma]	± 2s
G136	129	89	0.69	4.4867	0.07530	0.30743	0.0033	0.10610	0.0018	1729	27.9	1728	32.9	1734	62.6	0.0	0.3	1733.5	62.6
G137	178	72	0.40	4.3820	0.06521	0.30026	0.0031	0.10611	0.0016	1709	24.6	1693	31.0	1734	55.5	1.0	2.4	1733.6	55.5
G138	1643	373	0.23	4.1540	0.05922	0.28375	0.0029	0.10641	0.0015	1665	23.3	1610	29.5	1739	52.4	3.4	7.4	1738.8	52.4
G139	384	156	0.41	4.4295	0.06865	0.29927	0.0032	0.10758	0.0017	1718	25.7	1688	31.2	1759	56.9	1.8	4.0	1758.8	56.9
G140	923	104	0.11	4.9803	0.06756	0.33466	0.0035	0.10818	0.0015	1816	22.9	1861	33.8	1769	49.6	-2.4	-5.2	1768.8	49.6
G141	434	77	0.18	4.7466	0.05881	0.31670	0.0032	0.10893	0.0014	1776	20.8	1774	31.4	1782	45.6	0.1	0.4	1781.6	45.6
G142	807	190	0.24	4.7225	0.06220	0.31405	0.0032	0.10932	0.0015	1771	22.1	1761	31.5	1788	48.7	0.6	1.5	1788.1	48.7
G143	98	62	0.64	5.0427	0.07875	0.32976	0.0036	0.11116	0.0018	1827	26.5	1837	34.7	1818	57.0	-0.6	-1.0	1818.4	57.0
G144	354	73	0.21	4.8377	0.08145	0.31615	0.0034	0.11122	0.0019	1792	28.3	1771	33.0	1819	61.6	1.2	2.7	1819.4	61.6
G145	47	27	0.56	4.4983	0.12474	0.29179	0.0039	0.11205	0.0032	1731	46.1	1650	39.0	1833	101.6	4.9	10.0	1833.0	101.6
G146	807	174	0.22	5.5241	0.06704	0.35492	0.0036	0.11312	0.0014	1904	20.9	1958	34.1	1850	44.2	-2.7	-5.8	1850.2	44.2
G147	347	309	0.89	5.4321	0.08987	0.33191	0.0035	0.11896	0.0020	1890	28.4	1848	34.2	1941	59.6	2.3	4.8	1940.6	59.6
G148	88	56	0.63	8.9051	0.17965	0.43161	0.0051	0.14996	0.0031	2328	36.8	2313	46.0	2346	69.8	0.7	1.4	2345.5	69.8
G149	180	28	0.15	8.8470	0.12814	0.41154	0.0044	0.15628	0.0023	2322	26.4	2222	40.3	2416	50.0	4.5	8.0	2415.8	50.0
G150	182	10	0.06	11.0996	0.21659	0.45949	0.0054	0.17558	0.0035	2532	36.4	2437	47.8	2612	65.8	3.9	6.7	2611.5	65.8
G151	83	151	1.81	12.6247	0.18104	0.50892	0.0055	0.18031	0.0026	2652	27.0	2652	47.2	2656	48.2	0.0	0.1	2655.7	48.2
G152	180	136	0.75	12.6062	0.20224	0.50225	0.0054	0.18243	0.0030	2651	30.2	2624	46.0	2675	53.5	1.0	1.9	2675.1	53.5
G153	278	194	0.70	13.1567	0.16098	0.52119	0.0053	0.18350	0.0023	2691	23.1	2704	45.0	2685	40.9	-0.5	-0.7	2684.7	40.9
G154	111	154	1.39	12.3297	0.17826	0.48842	0.0054	0.18350	0.0027	2630	27.2	2564	46.6	2685	48.1	2.6	4.5	2684.8	48.1
G155	75	64	0.86	12.9290	0.22915	0.51050	0.0059	0.18408	0.0033	2675	33.4	2659	50.3	2690	59.2	0.6	1.2	2690.0	59.2
G156	156	468	3.00	12.1107	0.16671	0.47507	0.0051	0.18531	0.0026	2613	25.8	2506	44.7	2701	45.6	4.3	7.2	2701.0	45.6
G157	74	83	1.13	13.1211	0.20691	0.51429	0.0057	0.18544	0.0030	2688	29.8	2675	48.2	2702	52.5	0.5	1.0	2702.1	52.5
G158	129	172	1.33	13.3425	0.20510	0.51502	0.0055	0.18830	0.0029	2704	29.0	2678	47.0	2727	50.9	1.0	1.8	2727.4	50.9
G159	227	114	0.50	12.9270	0.18426	0.49796	0.0052	0.18869	0.0027	2674	26.9	2605	45.1	2731	47.1	2.7	4.6	2730.8	47.1
G160	153	112	0.73	13.5780	0.17145	0.52235	0.0054	0.18894	0.0024	2721	23.9	2709	45.7	2733	42.0	0.4	0.9	2733.0	42.0
G161	138	128	0.92	13.4380	0.17814	0.51392	0.0053	0.19011	0.0026	2711	25.1	2673	45.3	2743	44.3	1.4	2.5	2743.1	44.3
G162	150	169	1.13	14.1004	0.23437	0.53331	0.0058	0.19217	0.0033	2757	31.5	2755	48.7	2761	55.0	0.0	0.2	2760.8	55.0
G163	172	101	0.59	12.9230	0.16983	0.47806	0.0051	0.19649	0.0026	2674	24.8	2519	44.0	2797	43.0	6.2	10.0	2797.3	43.0
G164	383	215	0.56	13.6431	0.16596	0.50453	0.0051	0.19658	0.0024	2725	23.0	2633	43.9	2798	40.3	3.5	5.9	2798.0	40.3
G165	29	37	1.26	12.9693	0.28845	0.47900	0.0065	0.19680	0.0045	2677	41.9	2523	56.3	2800	74.1	6.1	9.9	2799.8	74.1
G166	31	22	0.73	13.2310	0.27350	0.48559	0.0064	0.19806	0.0042	2696	39.0	2552	55.9	2810	69.1	5.7	9.2	2810.3	69.1
G167	106	358	3.38	13.4037	0.19883	0.48637	0.0053	0.20031	0.0030	2709	28.0	2555	46.0	2829	48.7	6.0	9.7	2828.7	48.7
G168	294	119	0.41	16.1214	0.20844	0.57129	0.0059	0.20512	0.0027	2884	24.7	2913	48.7	2867	42.0	-1.0	-1.6	2867.4	42.0
G169	45	42	0.93	15.3632	0.25059	0.53803	0.0062	0.20755	0.0035	2838	31.1	2775	52.0	2887	53.5	2.3	3.9	2886.5	53.5

Table S2

Grain	U		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	Th		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G170	209	126	0.60	16.1761	0.21667	0.55847	0.0059	0.21054	0.0028	2887	25.6	2860	48.7	2910	43.4	0.9	1.7	2909.7	43.4
G171	583	503	0.86	18.9120	0.24197	0.56097	0.0057	0.24512	0.0032	3037	24.7	2871	47.2	3154	41.3	5.8	9.0	3153.5	41.3
Sample 21100901																			
G1	1750	2400	1.37	0.1990	0.00356	0.02729	0.0003	0.04774	0.0009	184	6.0	174	3.5	86	84.8	6.2	-102.8	173.6	3.5
G2	105	75	0.72	1.8252	0.03579	0.17775	0.0019	0.06727	0.0013	1055	25.7	1055	20.8	846	80.3	0.0	-24.7	1054.7	20.8
G3	312	194	0.62	0.4961	0.01056	0.06639	0.0007	0.04898	0.0010	409	14.3	414	8.5	147	98.2	-1.3	-182.5	414.4	8.5
G4	776	152	0.20	3.0925	0.03980	0.23855	0.0024	0.08499	0.0011	1431	19.8	1379	24.7	1315	47.6	3.7	-4.9	1315.1	47.6
G5	445	217	0.49	0.6055	0.01454	0.07721	0.0009	0.05142	0.0012	481	18.4	480	10.2	260	109.1	0.3	-84.6	479.5	10.2
G6	567	334	0.59	0.5372	0.01100	0.06802	0.0007	0.05181	0.0011	437	14.5	424	8.7	277	92.2	2.9	-53.1	424.2	8.7
G7	3322	152	0.05	1.6909	0.40934	0.16197	0.0045	0.06849	0.0167	1005	308.9	968	50.3	883	870.9	3.9	-9.5	967.7	50.3
G8	439	191	0.44	0.1658	0.00563	0.02584	0.0003	0.04212	0.0014	156	9.8	164	3.7	0	0.0	-5.2	#####	164.4	3.7
G9	400	378	0.95	0.4954	0.00935	0.06481	0.0007	0.05019	0.0009	409	12.7	405	8.1	204	85.9	0.9	-98.7	404.8	8.1
G10	63	39	0.62	1.5477	0.08471	0.14946	0.0025	0.06802	0.0038	950	67.5	898	28.1	869	223.3	5.8	-3.3	897.9	28.1
G11	157	58	0.37	1.6591	0.02868	0.16809	0.0017	0.06488	0.0011	993	21.9	1002	19.3	771	71.2	-0.9	-30.0	1001.6	19.3
G12	35	55	1.54	3.9635	0.08908	0.28272	0.0033	0.09219	0.0021	1627	36.4	1605	33.1	1471	85.0	1.4	-9.1	1471.1	85.0
G13	595	299	0.50	0.3599	0.00694	0.05049	0.0005	0.04688	0.0009	312	10.4	318	6.4	43	88.9	-1.7	-638.6	317.6	6.4
G14	169	71	0.42	1.6952	0.02843	0.16952	0.0018	0.06580	0.0011	1007	21.4	1010	19.3	800	68.7	-0.3	-26.2	1009.5	19.3
G15	1155	139	0.12	1.7819	0.02204	0.17769	0.0018	0.06601	0.0008	1039	16.1	1054	19.1	807	49.0	-1.5	-30.7	1054.3	19.1
G16	320	326	1.02	0.2654	0.00731	0.03789	0.0004	0.04612	0.0013	239	11.7	240	5.2	4	129.6	-0.3	-6207.9	239.7	5.2
G17	945	35	0.04	3.7373	0.04480	0.27190	0.0027	0.09055	0.0010	1579	19.2	1550	27.1	1437	43.1	1.9	-7.9	1437.0	43.1
G18	497	304	0.61	0.0775	0.00399	0.01134	0.0002	0.04506	0.0024	76	7.5	73	2.0	0	138.2	4.3	-72600.0	72.7	2.0
G19	312	325	1.04	0.5271	0.01114	0.06881	0.0007	0.05049	0.0011	430	14.8	429	8.7	218	96.3	0.2	-97.2	429.0	8.7
G20	73	5	0.07	1.3622	0.05583	0.13726	0.0019	0.06543	0.0027	873	48.0	829	21.9	788	170.6	5.3	-5.2	829.2	21.9
G21	634	994	1.57	0.4043	0.00723	0.05079	0.0005	0.05250	0.0009	345	10.5	319	6.4	307	79.7	7.9	-3.9	319.4	6.4
G22	140	105	0.75	0.5184	0.02009	0.06776	0.0009	0.05050	0.0020	424	26.9	423	10.5	218	177.2	0.4	-93.6	422.6	10.5
G23	1261	214	0.17	1.6719	0.02089	0.15803	0.0016	0.06985	0.0008	998	15.9	946	17.3	924	48.8	5.5	-2.4	945.8	17.3
G24	4565	220	0.05	1.5911	0.01903	0.15044	0.0015	0.06984	0.0008	967	14.9	903	16.5	924	46.3	7.0	2.2	903.4	16.5
G25	475	164	0.34	0.5610	0.01231	0.07304	0.0008	0.05073	0.0011	452	16.0	454	9.4	229	100.1	-0.5	-98.8	454.4	9.4
G26	295	117	0.40	0.1666	0.00673	0.02525	0.0003	0.04360	0.0018	157	11.7	161	3.8	0	0.0	-2.6	#####	160.7	3.8
G27	89	52	0.59	6.5380	0.09568	0.37417	0.0039	0.11548	0.0017	2051	25.8	2049	36.6	1887	51.2	0.1	-8.6	1887.4	51.2
G28	524	182	0.35	0.1995	0.00633	0.02964	0.0003	0.04453	0.0014	185	10.7	188	4.3	0	0.0	-1.9	#####	188.3	4.3
G29	380	228	0.60	0.1085	0.00748	0.01660	0.0003	0.04325	0.0030	105	13.7	106	3.6	0	25.3	-1.4	#####	106.1	3.6
G30	742	541	0.73	0.1725	0.00506	0.02691	0.0003	0.04246	0.0013	162	8.8	171	3.8	0	0.0	-5.6	#####	171.2	3.8

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G31	705	417	0.59	0.5579	0.01102	0.07196	0.0008	0.05136	0.0010	450	14.4	448	9.1	257	89.4	0.5	-74.1	447.9	9.1
G32	805	233	0.29	1.6173	0.02230	0.15703	0.0016	0.06828	0.0009	977	17.3	940	17.5	877	55.0	3.9	-7.2	940.2	17.5
G33	360	176	0.49	3.7798	0.05031	0.26037	0.0026	0.09628	0.0012	1589	21.4	1492	26.7	1553	48.0	6.5	4.0	1553.3	48.0
G34	116	55	0.48	1.8955	0.03608	0.18272	0.0020	0.06885	0.0013	1080	25.3	1082	21.2	894	77.5	-0.2	-21.0	1081.8	21.2
G35	468	21	0.04	0.8103	0.01307	0.09825	0.0010	0.05476	0.0009	603	14.7	604	11.7	402	69.8	-0.3	-50.1	604.2	11.7
G36	399	109	0.27	1.8161	0.02577	0.17744	0.0018	0.06799	0.0009	1051	18.6	1053	19.5	868	56.8	-0.2	-21.3	1053.0	19.5
G37	598	409	0.68	0.0779	0.00290	0.01191	0.0001	0.04346	0.0016	76	5.5	76	1.8	0	0.0	-0.1	-76200.0	76.3	1.8
G38	77	80	1.04	3.8925	0.06731	0.27795	0.0030	0.09306	0.0016	1612	27.9	1581	30.0	1489	64.5	2.0	-6.2	1489.1	64.5
G39	248	177	0.72	13.0541	0.15853	0.51868	0.0052	0.16728	0.0019	2684	22.9	2694	43.8	2531	38.7	-0.4	-6.4	2530.6	38.7
G40	177	166	0.94	1.9660	0.03227	0.17732	0.0018	0.07371	0.0012	1104	22.1	1052	20.1	1033	65.0	4.9	-1.8	1052.3	20.1
G41	123	30	0.24	4.0816	0.06224	0.28929	0.0030	0.09383	0.0014	1651	24.9	1638	30.0	1505	56.2	0.8	-8.9	1504.7	56.2
G42	91	41	0.45	2.3136	0.05338	0.19784	0.0023	0.07782	0.0018	1217	32.7	1164	24.5	1142	91.3	4.5	-1.9	1142.2	91.3
G43	239	108	0.45	1.8668	0.03221	0.18297	0.0019	0.06791	0.0012	1069	22.8	1083	20.8	866	70.2	-1.3	-25.1	1083.2	20.8
G44	89	75	0.85	12.1395	0.16256	0.49399	0.0051	0.16362	0.0021	2615	25.1	2588	43.9	2493	43.5	1.1	-3.8	2493.4	43.5
G45	588	301	0.51	0.1922	0.00482	0.02836	0.0003	0.04514	0.0011	179	8.2	180	3.8	0	23.7	-1.0	#####	180.3	3.8
G46	282	98	0.35	0.1912	0.00766	0.02850	0.0004	0.04469	0.0018	178	13.1	181	4.4	0	47.0	-2.0	#####	181.2	4.4
G47	1932	191	0.10	0.0644	0.00161	0.01005	0.0001	0.04275	0.0011	63	3.1	64	1.4	0	0.0	-1.6	-64300.0	64.4	1.4
G48	409	163	0.40	1.8609	0.02618	0.18097	0.0018	0.06855	0.0009	1067	18.6	1072	19.8	885	56.2	-0.5	-21.2	1072.3	19.8
G49	644	273	0.42	0.2097	0.00559	0.02990	0.0003	0.04676	0.0013	193	9.4	190	4.2	37	124.3	1.8	-418.9	189.9	4.2
G50	366	215	0.59	0.0743	0.00434	0.01091	0.0002	0.04541	0.0027	73	8.2	70	1.9	0	208.3	4.1	-69800.0	69.9	1.9
G51	1074	298	0.28	0.0696	0.00221	0.01069	0.0001	0.04343	0.0014	68	4.2	69	1.5	0	0.0	-0.3	-68400.0	68.5	1.5
G52	705	52	0.07	2.7197	0.03505	0.21364	0.0021	0.08496	0.0011	1334	19.1	1248	22.5	1315	48.0	6.9	5.0	1314.5	48.0
G53	339	128	0.38	0.0261	0.00346	0.00398	0.0001	0.04373	0.0059	26	6.8	26	1.2	0	352.3	2.0	-25500.0	25.6	1.2
G54	195	192	0.98	0.8593	0.01838	0.09799	0.0011	0.05856	0.0013	630	20.1	603	12.4	551	92.4	4.5	-9.4	602.6	12.4
G55	118	71	0.60	6.4031	0.10269	0.36362	0.0039	0.11762	0.0019	2033	28.2	1999	36.9	1920	56.5	1.7	-4.1	1920.3	56.5
G56	1677	424	0.25	2.5783	0.03358	0.20321	0.0020	0.08476	0.0011	1295	19.1	1193	21.6	1310	48.6	8.6	9.0	1310.0	48.6
G57	124	133	1.08	2.3242	0.04087	0.20216	0.0021	0.07684	0.0014	1220	25.0	1187	22.9	1117	69.1	2.8	-6.3	1116.9	69.1
G58	360	176	0.49	4.2941	0.05648	0.29136	0.0029	0.09852	0.0013	1692	21.7	1648	29.1	1596	47.2	2.7	-3.3	1596.2	47.2
G59	1294	733	0.57	0.1638	0.00356	0.02341	0.0003	0.04679	0.0010	154	6.2	149	3.1	38	101.0	3.2	-290.6	149.2	3.1
G60	473	246	0.52	0.0366	0.00331	0.00523	0.0001	0.04682	0.0043	37	6.5	34	1.3	40	412.7	8.6	16.0	33.6	1.3
G61	358	79	0.22	4.1298	0.05422	0.28959	0.0029	0.09546	0.0012	1660	21.5	1640	28.9	1537	47.4	1.3	-6.7	1537.2	47.4
G62	140	57	0.41	8.1385	0.11846	0.41500	0.0043	0.13137	0.0019	2247	26.3	2238	39.5	2116	49.7	0.4	-5.7	2116.4	49.7
G63	1069	54	0.05	11.5531	0.13944	0.47411	0.0047	0.16334	0.0019	2569	22.6	2502	40.7	2491	38.6	2.7	-0.4	2490.5	38.6
G64	404	156	0.39	0.0343	0.00344	0.00521	0.0001	0.04412	0.0045	34	6.8	34	1.2	0	255.2	2.4	-33400.0	33.5	1.2

Table S2

Grain	U		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G65	225	127	0.56	3.1520	0.04955	0.24595	0.0026	0.08594	0.0013	1446	24.2	1418	26.4	1337	59.6	2.0	-6.1	1336.7	59.6
G66	544	108	0.20	2.5183	0.03366	0.20715	0.0021	0.08153	0.0011	1277	19.4	1214	22.0	1234	50.5	5.2	1.7	1234.4	50.5
G67	172	50	0.29	2.3882	0.04179	0.20524	0.0022	0.07808	0.0014	1239	25.0	1203	23.2	1149	68.5	3.0	-4.8	1148.8	68.5
G68	212	21	0.10	2.1652	0.03480	0.19428	0.0020	0.07481	0.0012	1170	22.3	1145	21.6	1063	63.3	2.2	-7.6	1063.3	63.3
G69	221	76	0.35	4.0249	0.05746	0.28897	0.0029	0.09353	0.0013	1639	23.2	1636	29.4	1499	52.4	0.2	-9.2	1498.6	52.4
G70	82	66	0.81	2.3141	0.05233	0.20332	0.0023	0.07646	0.0017	1217	32.1	1193	24.8	1107	89.9	2.0	-7.8	1107.1	89.9
G71	62	21	0.34	2.0273	0.06510	0.18568	0.0024	0.07336	0.0024	1125	43.7	1098	26.3	1024	129.6	2.4	-7.2	1097.9	26.3
G72	1798	703	0.39	3.8796	0.04837	0.26850	0.0026	0.09710	0.0012	1609	20.1	1533	26.9	1569	44.6	5.0	2.3	1569.2	44.6
G73	648	237	0.37	0.0480	0.00281	0.00712	0.0001	0.04526	0.0027	48	5.4	46	1.3	0	191.0	3.9	-45700.0	45.8	1.3
G74	201	74	0.37	4.6006	0.06962	0.30902	0.0032	0.10009	0.0015	1749	25.2	1736	31.5	1626	54.9	0.8	-6.8	1625.7	54.9
G75	55	46	0.85	4.8989	0.09171	0.31265	0.0035	0.10538	0.0020	1802	31.6	1754	34.2	1721	68.2	2.8	-1.9	1721.0	68.2
G76	144	90	0.63	1.7940	0.03288	0.17150	0.0018	0.07037	0.0013	1043	23.9	1020	20.0	939	74.1	2.2	-8.6	1020.4	20.0
G77	117	58	0.50	2.9060	0.04971	0.23605	0.0025	0.08285	0.0014	1384	25.8	1366	25.9	1266	65.5	1.3	-7.9	1265.7	65.5
G78	282	141	0.50	4.1674	0.05721	0.28939	0.0029	0.09695	0.0013	1668	22.5	1639	29.1	1566	49.7	1.8	-4.6	1566.2	49.7
G79	26	36	1.41	14.5004	0.28666	0.53799	0.0068	0.18149	0.0036	2783	37.6	2775	57.2	2667	65.3	0.3	-4.1	2666.6	65.3
G80	21	6	0.29	13.0897	0.25480	0.49737	0.0062	0.17729	0.0035	2686	36.7	2603	53.1	2628	64.5	3.2	1.0	2627.7	64.5
G81	363	225	0.62	0.1136	0.00455	0.01732	0.0002	0.04418	0.0018	109	8.3	111	2.7	0	0.0	-1.4	#####	110.7	2.7
G82	322	127	0.39	11.6501	0.15205	0.47901	0.0048	0.16394	0.0021	2577	24.4	2523	42.0	2497	42.2	2.1	-1.0	2496.7	42.2
G83	465	200	0.43	4.0301	0.05490	0.28123	0.0028	0.09661	0.0013	1640	22.2	1598	28.4	1560	49.3	2.7	-2.4	1559.7	49.3
G84	33	24	0.72	3.2768	0.08901	0.24694	0.0031	0.08952	0.0025	1476	42.3	1423	32.1	1415	103.7	3.7	-0.5	1415.1	103.7
G85	634	237	0.37	0.0217	0.00225	0.00358	0.0001	0.04080	0.0043	22	4.5	23	0.8	0	0.0	-5.7	-22900.0	23.0	0.8
G86	137	43	0.32	0.2280	0.01344	0.03163	0.0005	0.04863	0.0029	209	22.2	201	6.1	130	270.6	3.8	-54.5	200.8	6.1
G87	157	67	0.42	3.8807	0.06659	0.26133	0.0028	0.10023	0.0017	1610	27.7	1497	28.6	1628	63.0	7.5	8.1	1628.4	63.0
G88	3011	2268	0.75	0.0649	0.00144	0.00988	0.0001	0.04439	0.0010	64	2.7	63	1.3	0	0.0	0.8	-63300.0	63.4	1.3
G89	45	14	0.30	1.6711	0.05295	0.15980	0.0020	0.07064	0.0023	998	40.3	956	22.3	947	129.1	4.4	-0.9	955.7	22.3
G90	298	94	0.32	4.1021	0.05700	0.28606	0.0029	0.09689	0.0013	1655	22.7	1622	28.9	1565	50.4	2.0	-3.6	1565.1	50.4
G91	239	85	0.36	3.3871	0.05666	0.25772	0.0027	0.08882	0.0015	1501	26.2	1478	27.8	1400	62.9	1.6	-5.6	1400.2	62.9
G92	1057	152	0.14	1.8400	0.02467	0.17350	0.0017	0.07169	0.0009	1060	17.6	1031	18.9	977	52.6	2.8	-5.6	1031.4	18.9
G93	76	195	2.57	4.0281	0.07630	0.26747	0.0030	0.10182	0.0019	1640	30.8	1528	30.1	1658	69.6	7.3	7.8	1657.5	69.6
G94	459	146	0.32	2.7707	0.04017	0.22696	0.0023	0.08255	0.0012	1348	21.6	1319	24.1	1259	54.8	2.2	-4.8	1258.6	54.8
G95	579	183	0.32	0.0707	0.00313	0.01094	0.0001	0.04376	0.0020	69	5.9	70	1.7	0	0.0	-1.0	-70000.0	70.1	1.7
G96	172	184	1.07	0.1638	0.01043	0.02226	0.0004	0.04979	0.0032	154	18.2	142	4.5	185	288.6	8.5	23.4	141.9	4.5
G97	406	242	0.60	2.6899	0.03825	0.21473	0.0022	0.08479	0.0012	1326	21.1	1254	22.9	1311	53.6	5.7	4.3	1310.7	53.6
G98	346	225	0.65	0.0312	0.00356	0.00459	0.0001	0.04592	0.0053	31	7.0	30	1.1	0	499.6	5.4	-29400.0	29.5	1.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G99	46	118	2.54	0.7111	0.03936	0.08957	0.0014	0.05376	0.0030	545	46.7	553	16.0	361	243.1	-1.4	-53.3	553.0	16.0
G100	243	164	0.67	2.0873	0.03539	0.19125	0.0020	0.07392	0.0013	1145	23.3	1128	21.6	1039	67.3	1.5	-8.6	1039.3	67.3
G101	178	54	0.30	4.9425	0.07171	0.31982	0.0033	0.10471	0.0015	1810	24.5	1789	31.8	1709	51.9	1.2	-4.7	1709.2	51.9
G102	123	82	0.67	1.8870	0.03675	0.17003	0.0018	0.07523	0.0015	1077	25.8	1012	20.2	1075	77.4	6.3	5.8	1012.3	20.2
G103	816	774	0.95	0.0945	0.00326	0.01447	0.0002	0.04428	0.0016	92	6.1	93	2.2	0	0.0	-1.0	-92500.0	92.6	2.2
G104	163	27	0.16	4.2798	0.07151	0.29366	0.0031	0.09883	0.0016	1690	27.5	1660	31.0	1602	61.4	1.8	-3.6	1602.1	61.4
G105	580	280	0.48	0.0757	0.00292	0.01104	0.0001	0.04653	0.0018	74	5.5	71	1.7	25	182.5	4.7	-182.1	70.8	1.7
G106	99	30	0.30	16.7815	0.23469	0.57817	0.0060	0.19702	0.0027	2922	26.8	2941	48.8	2802	44.4	-0.6	-5.0	2801.7	44.4
G107	71	37	0.53	13.2995	0.21698	0.51930	0.0058	0.17391	0.0028	2701	30.8	2696	49.0	2596	53.6	0.2	-3.9	2595.7	53.6
G108	475	182	0.38	3.2591	0.04869	0.25379	0.0026	0.08726	0.0013	1471	23.2	1458	26.6	1366	56.0	0.9	-6.7	1366.2	56.0
G109	317	246	0.77	0.1830	0.00597	0.02685	0.0003	0.04633	0.0015	171	10.2	171	3.9	15	153.0	-0.1	-1061.9	170.8	3.9
G110	234	44	0.19	4.1710	0.06384	0.29433	0.0030	0.09637	0.0015	1668	25.1	1663	30.2	1555	56.1	0.3	-7.0	1554.9	56.1
G111	205	66	0.32	2.1442	0.03494	0.19384	0.0020	0.07524	0.0012	1163	22.6	1142	21.6	1075	64.2	1.8	-6.3	1074.9	64.2
G112	744	101	0.14	1.3090	0.01905	0.13283	0.0013	0.06704	0.0010	850	16.8	804	15.2	839	58.8	5.7	4.2	804.0	15.2
G113	97	60	0.62	5.4125	0.08596	0.33138	0.0035	0.11116	0.0018	1887	27.2	1845	33.6	1819	56.6	2.3	-1.5	1818.5	56.6
G114	380	73	0.19	0.1206	0.00517	0.01785	0.0002	0.04596	0.0020	116	9.4	114	2.9	0	192.5	1.3	#####	114.1	2.9
G115	143	88	0.62	3.9826	0.06828	0.27824	0.0030	0.09745	0.0017	1631	27.8	1583	29.8	1576	63.3	3.0	-0.4	1575.9	63.3
G116	172	37	0.22	1.9298	0.03469	0.18291	0.0019	0.07187	0.0013	1092	24.0	1083	21.0	982	72.2	0.8	-10.3	1082.8	21.0
G117	64	33	0.51	1.9228	0.05994	0.18248	0.0023	0.07182	0.0023	1089	41.6	1081	25.5	981	126.6	0.8	-10.2	1080.5	25.5
G118	491	297	0.61	0.1632	0.00468	0.02414	0.0003	0.04608	0.0013	154	8.2	154	3.4	2	135.5	-0.2	-7994.7	153.8	3.4
G119	311	82	0.26	0.0696	0.00407	0.01070	0.0002	0.04438	0.0026	68	7.7	69	1.9	0	97.6	-0.4	-68500.0	68.6	1.9
G120	61	23	0.38	0.8983	0.03148	0.10485	0.0013	0.05844	0.0021	651	33.7	643	15.3	546	151.7	1.2	-17.7	642.8	15.3
G121	338	241	0.71	0.0314	0.00339	0.00473	0.0001	0.04527	0.0049	31	6.7	30	1.2	0	409.3	3.3	-30300.0	30.4	1.2
G122	264	128	0.48	2.2579	0.04042	0.18586	0.0020	0.08290	0.0015	1199	25.2	1099	21.4	1267	68.9	9.1	13.3	1098.9	21.4
G123	151	42	0.28	2.2689	0.03989	0.20244	0.0021	0.07651	0.0013	1203	24.8	1188	22.8	1108	69.2	1.2	-7.2	1108.4	69.2
G124	666	339	0.51	0.2028	0.00565	0.02869	0.0003	0.04826	0.0014	188	9.5	182	4.1	112	130.3	2.8	-63.1	182.4	4.1
G125	137	64	0.46	1.5786	0.03998	0.15914	0.0019	0.06775	0.0017	962	31.5	952	20.5	861	104.7	1.0	-10.6	952.0	20.5
G126	266	71	0.27	1.2843	0.02256	0.13078	0.0014	0.06708	0.0012	839	20.1	792	15.5	840	72.0	5.9	5.7	792.3	15.5
G127	135	71	0.53	1.8895	0.03692	0.17761	0.0019	0.07268	0.0014	1077	25.9	1054	20.9	1005	78.5	2.2	-4.9	1053.9	20.9
G128	55	18	0.33	1.7467	0.07122	0.16753	0.0025	0.07126	0.0030	1026	52.7	999	27.6	965	165.8	2.7	-3.5	998.5	27.6
G129	130	51	0.39	0.0523	0.00777	0.00859	0.0002	0.04157	0.0062	52	15.0	55	2.3	0	176.1	-6.3	-55100.0	55.2	2.3
G130	1843	36	0.02	3.6408	0.04952	0.25747	0.0026	0.09669	0.0013	1559	21.7	1477	26.2	1561	49.3	5.5	5.4	1561.2	49.3
G131	55	51	0.94	0.2277	0.02189	0.03328	0.0006	0.04680	0.0045	208	36.2	211	7.2	39	434.8	-1.3	-446.6	211.0	7.2
G132	105	67	0.63	1.8425	0.04096	0.17693	0.0020	0.07125	0.0016	1061	29.3	1050	21.6	965	90.2	1.0	-8.9	1050.2	21.6

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G133	91	36	0.40	1.7810	0.04281	0.17333	0.0020	0.07033	0.0017	1039	31.3	1030	21.7	938	98.6	0.8	-9.9	1030.4	21.7
G134	96	69	0.72	0.5638	0.02187	0.07043	0.0009	0.05483	0.0022	454	28.4	439	11.0	405	170.8	3.5	-8.3	438.7	11.0
G135	679	135	0.20	0.0659	0.00266	0.00996	0.0001	0.04531	0.0019	65	5.1	64	1.6	0	113.2	1.4	-63800.0	63.9	1.6
G136	201	71	0.35	1.8335	0.03242	0.17537	0.0018	0.07164	0.0013	1058	23.2	1042	20.1	976	71.1	1.5	-6.8	1041.6	20.1
G137	100	27	0.27	2.5087	0.04876	0.21564	0.0023	0.07975	0.0016	1275	28.2	1259	24.7	1191	76.0	1.3	-5.7	1190.7	76.0
G138	185	45	0.25	2.0669	0.03890	0.19143	0.0020	0.07404	0.0014	1138	25.8	1129	22.1	1043	75.1	0.8	-8.3	1042.5	75.1
G139	69	24	0.35	2.0052	0.04679	0.18778	0.0021	0.07324	0.0017	1117	31.6	1109	23.1	1021	94.0	0.7	-8.7	1020.6	94.0
G140	96	63	0.66	1.8351	0.03879	0.17777	0.0020	0.07082	0.0015	1058	27.8	1055	21.3	952	85.8	0.3	-10.8	1054.8	21.3
G141	109	55	0.50	3.9349	0.07864	0.28791	0.0032	0.09378	0.0019	1621	32.4	1631	32.1	1504	75.0	-0.6	-8.5	1503.6	75.0
G142	275	73	0.27	0.1716	0.00727	0.02540	0.0003	0.04637	0.0020	161	12.6	162	4.1	17	200.5	-0.6	-862.5	161.7	4.1
G143	15	11	0.72	4.1002	0.13408	0.29205	0.0041	0.09639	0.0032	1654	53.4	1652	40.9	1555	122.7	0.2	-6.2	1555.4	122.7
G144	281	82	0.29	0.0967	0.00492	0.01430	0.0002	0.04643	0.0024	94	9.1	92	2.5	20	239.1	2.3	-358.0	91.6	2.5
G145	175	80	0.46	0.0722	0.00695	0.01098	0.0002	0.04514	0.0044	71	13.2	70	2.4	0	345.5	0.6	-70300.0	70.4	2.4
G146	113	42	0.37	1.7990	0.03730	0.17521	0.0019	0.07054	0.0015	1045	27.1	1041	20.9	944	84.3	0.4	-10.3	1040.8	20.9
G147	47	65	1.37	4.6788	0.10561	0.31363	0.0037	0.10253	0.0023	1763	37.8	1759	36.6	1670	83.3	0.3	-5.3	1670.3	83.3
G148	607	228	0.38	0.0852	0.00309	0.01239	0.0002	0.04726	0.0017	83	5.8	79	1.9	62	171.8	4.5	-27.9	79.4	1.9
G149	74	158	2.13	0.2336	0.01782	0.03319	0.0005	0.04839	0.0037	213	29.3	211	6.6	118	345.1	1.3	-77.9	210.5	6.6
G150	358	86	0.24	4.3393	0.06879	0.29677	0.0031	0.10055	0.0016	1701	26.2	1675	30.5	1634	57.8	1.5	-2.5	1634.3	57.8
G151	437	151	0.35	0.0236	0.00253	0.00385	0.0001	0.04227	0.0046	24	5.0	25	0.9	0	79.8	-4.4	-24700.0	24.8	0.9
G152	164	53	0.32	10.0305	0.14921	0.44858	0.0046	0.15396	0.0023	2438	27.5	2389	40.8	2390	49.5	2.0	0.1	2390.4	49.5
G153	1763	99	0.06	3.8740	0.05487	0.27422	0.0027	0.09729	0.0014	1608	22.9	1562	27.7	1573	51.5	3.0	0.7	1572.8	51.5
G154	272	192	0.71	0.0708	0.00543	0.01068	0.0002	0.04563	0.0036	69	10.3	69	2.4	0	313.5	1.3	-68400.0	68.5	2.4
G155	69	53	0.78	2.0413	0.04747	0.18767	0.0021	0.07495	0.0018	1129	31.7	1109	23.1	1067	93.1	1.9	-3.9	1067.2	93.1
G156	125	92	0.74	0.1777	0.01074	0.02679	0.0004	0.04573	0.0028	166	18.5	170	4.8	0	250.0	-2.5	#####	170.4	4.8
G157	106	34	0.32	1.5059	0.03370	0.15464	0.0017	0.06715	0.0015	933	27.3	927	19.1	842	92.6	0.6	-10.0	926.9	19.1
G158	484	15	0.03	4.9654	0.07339	0.32521	0.0033	0.10530	0.0015	1813	25.0	1815	31.9	1720	53.0	-0.1	-5.6	1719.6	53.0
G159	99	33	0.33	12.4091	0.19124	0.48077	0.0050	0.17805	0.0027	2636	29.0	2531	43.7	2635	50.2	4.2	4.0	2634.8	50.2
G160	179	51	0.28	4.3798	0.07512	0.30359	0.0032	0.09954	0.0017	1709	28.4	1709	31.7	1615	63.0	0.0	-5.8	1615.4	63.0
G161	156	48	0.31	4.2719	0.07019	0.30044	0.0031	0.09812	0.0016	1688	27.0	1694	30.9	1589	60.4	-0.3	-6.6	1588.8	60.4
G162	17	6	0.35	14.9007	0.32866	0.51280	0.0069	0.20057	0.0045	2809	42.0	2669	58.5	2831	72.3	5.3	5.7	2830.8	72.3
G163	144	36	0.25	3.0671	0.05442	0.24657	0.0026	0.08590	0.0015	1425	27.2	1421	26.9	1336	67.6	0.3	-6.4	1335.8	67.6
G164	203	120	0.59	0.5914	0.01703	0.07599	0.0009	0.05375	0.0016	472	21.7	472	10.6	361	129.2	-0.1	-31.0	472.1	10.6
G165	253	104	0.41	2.5392	0.04605	0.21762	0.0023	0.08062	0.0015	1283	26.4	1269	24.3	1212	70.6	1.1	-4.7	1212.2	70.6
G166	816	396	0.49	3.7352	0.05572	0.26245	0.0026	0.09836	0.0015	1579	23.9	1502	27.0	1593	54.4	5.1	5.7	1593.2	54.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G167	204	107	0.52	5.7132	0.08940	0.33847	0.0035	0.11668	0.0018	1933	27.0	1879	33.5	1906	55.2	2.9	1.4	1906.0	55.2
G168	134	58	0.43	2.9364	0.05935	0.24104	0.0027	0.08424	0.0017	1391	30.6	1392	27.5	1298	78.2	-0.1	-7.2	1298.0	78.2
G169	239	82	0.34	4.5021	0.07125	0.29777	0.0031	0.10458	0.0016	1731	26.3	1680	30.4	1707	57.2	3.0	1.6	1706.9	57.2
G170	166	43	0.26	0.0561	0.00764	0.00899	0.0002	0.04320	0.0059	56	14.7	58	2.6	0	309.1	-3.8	-57600.0	57.7	2.6
G171	145	74	0.51	4.2394	0.07150	0.28366	0.0030	0.10341	0.0017	1682	27.7	1610	29.8	1686	61.4	4.5	4.5	1686.3	61.4
G172	77	44	0.56	14.1563	0.22579	0.52915	0.0056	0.18516	0.0029	2760	30.3	2738	47.2	2700	51.8	0.8	-1.4	2699.6	51.8
G173	246	67	0.27	0.0805	0.00484	0.01197	0.0002	0.04653	0.0028	79	9.1	77	2.2	25	280.6	2.5	-203.2	76.7	2.2
G174	300	203	0.68	4.6171	0.07194	0.30785	0.0031	0.10384	0.0016	1752	26.0	1730	31.0	1694	56.3	1.3	-2.1	1693.9	56.3
G175	240	75	0.31	1.9900	0.03473	0.18820	0.0020	0.07324	0.0013	1112	23.6	1112	21.2	1021	69.2	0.0	-8.9	1020.6	69.2
G176	99	32	0.33	0.8025	0.03162	0.09901	0.0013	0.05616	0.0023	598	35.6	609	15.4	458	173.8	-1.7	-32.8	608.6	15.4
G177	95	61	0.65	12.6007	0.19964	0.50422	0.0053	0.17318	0.0027	2650	29.8	2632	45.2	2589	52.0	0.7	-1.7	2588.6	52.0
G178	65	26	0.41	2.4040	0.06386	0.21173	0.0026	0.07870	0.0021	1244	38.1	1238	27.1	1165	105.1	0.5	-6.3	1164.5	105.1
G179	287	53	0.19	0.5115	0.01240	0.06633	0.0007	0.05346	0.0013	420	16.7	414	8.8	348	109.0	1.3	-18.9	414.0	8.8
G180	30	15	0.49	1.9080	0.06389	0.18303	0.0024	0.07230	0.0025	1084	44.6	1084	25.9	994	135.6	0.0	-9.0	1083.5	25.9
G181	9	7	0.81	14.7642	0.47090	0.49883	0.0089	0.20531	0.0068	2800	60.7	2609	76.7	2869	105.0	7.3	9.1	2868.9	105.0
G182	152	104	0.68	12.7717	0.20015	0.52453	0.0054	0.16897	0.0026	2663	29.5	2718	46.0	2548	51.6	-2.0	-6.7	2547.5	51.6
G183	628	151	0.24	3.0100	0.04661	0.24071	0.0024	0.08680	0.0013	1410	23.6	1390	25.3	1356	58.5	1.4	-2.5	1356.0	58.5
G184	176	217	1.24	0.2120	0.01302	0.03212	0.0005	0.04582	0.0029	195	21.8	204	6.2	0	264.7	-4.2	#####	203.8	6.2
G185	115	133	1.16	0.5817	0.02013	0.07396	0.0009	0.05463	0.0019	466	25.9	460	11.0	397	152.5	1.2	-15.8	460.0	11.0
G186	338	95	0.28	3.6717	0.05877	0.25757	0.0026	0.09907	0.0016	1565	25.5	1477	27.0	1607	58.7	5.9	8.0	1606.7	58.7
G187	109	28	0.26	0.4545	0.01686	0.05998	0.0007	0.05267	0.0020	380	23.5	376	9.0	315	166.9	1.3	-19.4	375.5	9.0
G188	687	442	0.64	0.1605	0.00412	0.02381	0.0003	0.04687	0.0012	151	7.2	152	3.3	42	122.2	-0.4	-260.3	151.7	3.3
G189	298	168	0.56	0.5523	0.01275	0.07245	0.0008	0.05301	0.0012	447	16.7	451	9.4	329	103.7	-1.0	-36.9	450.9	9.4
G190	66	55	0.83	0.2147	0.02011	0.02869	0.0006	0.05205	0.0050	198	33.6	182	7.0	288	406.4	8.3	36.6	182.3	7.0
G191	371	186	0.50	0.0745	0.00394	0.01215	0.0002	0.04270	0.0023	73	7.4	78	2.1	0	0.0	-6.2	-77700.0	77.8	2.1
G192	176	52	0.30	1.8252	0.03561	0.18024	0.0019	0.07047	0.0014	1055	25.6	1068	21.0	942	79.3	-1.3	-13.4	1068.3	21.0
G193	189	102	0.54	0.8099	0.01857	0.09904	0.0011	0.05693	0.0013	602	20.8	609	12.6	488	100.5	-1.1	-24.7	608.8	12.6
G194	813	86	0.11	1.8719	0.03025	0.18131	0.0018	0.07189	0.0012	1071	21.4	1074	20.1	983	64.7	-0.3	-9.3	1074.1	20.1
G195	187	58	0.31	11.4941	0.18234	0.48193	0.0050	0.16610	0.0026	2564	29.6	2536	43.3	2519	52.5	1.1	-0.7	2518.7	52.5
G196	224	83	0.37	1.8687	0.03408	0.17946	0.0019	0.07254	0.0013	1070	24.1	1064	20.5	1001	73.3	0.6	-6.3	1064.0	20.5
G197	148	57	0.38	4.2562	0.07407	0.29537	0.0031	0.10044	0.0018	1685	28.6	1668	30.9	1632	64.0	1.0	-2.2	1632.2	64.0

Table S2

				RATIOS						AGES									
U		Th	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/	206/		207/			%disc	Best Age		
Grain	[ppm]	[ppm]								235	± 2s	238	± 2s	206	± 2s	%disc	(7/6)	[Ma]	± 2s
BL_BR_21																			
G1	43	7	0.15	1.9026	0.08160	0.17418	0.0027	0.07940	0.0035	1082	57.1	1035	29.2	1182	168.9	4.5	12.4	1035.1	29.2
G2	296	407	1.38	0.0157	0.00390	0.00225	0.0001	0.05073	0.0127	16	7.8	15	0.9	229	988.9	9.0	93.7	14.5	0.9
G3	1599	708	0.44	0.0257	0.00129	0.00373	0.0001	0.05008	0.0026	26	2.6	24	0.6	199	229.2	7.5	87.9	24.0	0.6
G4	1213	551	0.45	0.0288	0.00151	0.00435	0.0001	0.04810	0.0026	29	3.0	28	0.8	104	243.6	2.9	73.2	28.0	0.8
G5	609	386	0.63	0.0326	0.00248	0.00481	0.0001	0.04932	0.0038	33	4.9	31	1.0	163	342.2	5.5	81.1	30.9	1.0
G6	612	458	0.75	0.0351	0.00230	0.00540	0.0001	0.04727	0.0032	35	4.5	35	1.1	63	303.7	1.2	44.5	34.7	1.1
G7	1615	388	0.24	0.0352	0.00128	0.00539	0.0001	0.04751	0.0018	35	2.5	35	0.8	74	173.1	1.4	53.2	34.7	0.8
G8	600	228	0.38	0.0548	0.00316	0.00864	0.0001	0.04609	0.0027	54	6.1	56	1.5	2	270.4	-2.3	-2422.7	55.5	1.5
G9	1953	1719	0.88	0.0680	0.00198	0.00991	0.0001	0.04987	0.0015	67	3.8	64	1.5	189	135.4	5.0	66.3	63.6	1.5
G10	1438	280	0.19	0.0616	0.00185	0.00996	0.0001	0.04502	0.0014	61	3.5	64	1.4	0	35.6	-5.0	-63800.0	63.9	1.4
G11	438	185	0.42	0.0676	0.00394	0.01005	0.0001	0.04889	0.0029	66	7.5	64	1.8	143	266.5	3.1	54.8	64.4	1.8
G12	1626	252	0.15	0.0669	0.00194	0.01019	0.0001	0.04770	0.0014	66	3.7	65	1.5	84	138.9	0.5	21.8	65.4	1.5
G13	3048	739	0.24	0.0739	0.00159	0.01057	0.0001	0.05080	0.0011	72	3.0	68	1.4	232	99.6	6.8	70.8	67.8	1.4
G14	386	170	0.44	0.0689	0.00390	0.01083	0.0002	0.04629	0.0027	68	7.4	69	1.9	13	264.4	-2.4	-450.8	69.4	1.9
G15	716	413	0.58	0.0789	0.00417	0.01156	0.0002	0.04957	0.0027	77	7.8	74	2.1	175	242.0	4.0	57.7	74.1	2.1
G16	432	269	0.62	0.0773	0.00419	0.01157	0.0002	0.04855	0.0027	76	7.9	74	1.9	126	248.9	2.0	41.4	74.1	1.9
G17	1278	605	0.47	0.0784	0.00236	0.01164	0.0001	0.04893	0.0015	77	4.4	75	1.7	145	140.6	2.7	48.4	74.6	1.7
G18	294	265	0.90	0.0855	0.00555	0.01206	0.0002	0.05149	0.0034	83	10.4	77	2.4	263	289.8	7.8	70.6	77.3	2.4
G19	250	152	0.61	0.0964	0.00744	0.01379	0.0002	0.05080	0.0040	93	13.8	88	2.9	232	342.8	5.8	61.9	88.3	2.9
G20	1526	497	0.33	0.1019	0.00241	0.01495	0.0002	0.04956	0.0012	99	4.4	96	2.1	175	110.3	3.0	45.2	95.6	2.1
G21	138	85	0.62	0.1083	0.01019	0.01591	0.0003	0.04948	0.0047	104	18.7	102	3.6	171	416.5	2.6	40.4	101.8	3.6
G22	104	44	0.43	0.1513	0.01795	0.02356	0.0005	0.04670	0.0056	143	31.7	150	6.6	34	530.6	-4.7	-344.1	150.1	6.6
G23	217	91	0.42	0.1730	0.00780	0.02445	0.0003	0.05144	0.0024	162	13.5	156	4.1	261	204.4	4.0	40.2	155.7	4.1
G24	351	246	0.70	0.1676	0.00612	0.02584	0.0003	0.04716	0.0018	157	10.6	164	3.9	57	172.8	-4.3	-187.9	164.4	3.9
G25	88	48	0.54	0.1850	0.02183	0.02593	0.0006	0.05184	0.0062	172	37.4	165	7.4	279	505.3	4.4	40.8	165.0	7.4
G26	272	173	0.63	0.1831	0.00797	0.02746	0.0004	0.04846	0.0021	171	13.7	175	4.5	122	202.1	-2.3	-43.7	174.7	4.5
G27	357	183	0.51	0.1897	0.00633	0.02763	0.0003	0.04990	0.0017	176	10.8	176	4.0	191	154.2	0.4	7.8	175.7	4.0
G28	411	221	0.54	0.1974	0.00630	0.02826	0.0003	0.05078	0.0017	183	10.7	180	4.1	231	147.0	1.8	22.1	179.6	4.1
G29	867	325	0.37	0.2161	0.00483	0.03128	0.0003	0.05021	0.0012	199	8.1	199	4.2	205	104.2	0.0	3.0	198.6	4.2
G30	111	31	0.28	0.2344	0.01723	0.03373	0.0006	0.05052	0.0038	214	28.3	214	7.1	219	328.2	0.0	2.3	213.8	7.1
G31	957	648	0.68	0.2344	0.00438	0.03422	0.0004	0.04978	0.0010	214	7.2	217	4.5	185	87.4	-1.4	-17.3	216.9	4.5
G32	453	273	0.60	0.5324	0.01017	0.06900	0.0007	0.05609	0.0011	433	13.5	430	8.8	456	85.0	0.8	5.6	430.1	8.8
G33	300	158	0.53	0.7182	0.01434	0.08740	0.0010	0.05973	0.0012	550	16.9	540	11.3	594	86.7	1.8	9.1	540.1	11.3

Table S2

Grain	U Th			RATIOS						AGES									
	[ppm]	[ppm]	Th/U	207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G34	65	68	1.04	0.7916	0.03134	0.09070	0.0012	0.06344	0.0026	592	35.5	560	14.3	723	166.8	5.8	22.6	559.6	14.3
G35	214	254	1.19	0.8062	0.01993	0.09427	0.0011	0.06217	0.0016	600	22.4	581	12.6	680	106.3	3.4	14.6	580.8	12.6
G36	241	60	0.25	1.5293	0.02622	0.15643	0.0017	0.07107	0.0013	942	21.1	937	18.4	959	70.8	0.6	2.3	936.9	18.4
G37	94	98	1.04	1.6099	0.04543	0.15858	0.0020	0.07380	0.0021	974	35.4	949	21.7	1036	114.3	2.7	8.4	948.9	21.7
G38	118	62	0.53	1.6283	0.03493	0.16103	0.0018	0.07350	0.0016	981	27.0	963	19.9	1028	87.5	1.9	6.4	962.5	19.9
G39	31	11	0.36	1.7836	0.07293	0.16348	0.0023	0.07932	0.0033	1040	53.2	976	25.8	1180	161.2	6.5	17.3	976.1	25.8
G40	195	57	0.29	1.6728	0.03189	0.16542	0.0018	0.07350	0.0014	998	24.2	987	20.0	1028	77.6	1.2	4.0	986.9	20.0
G41	102	52	0.51	1.6711	0.04040	0.16579	0.0019	0.07328	0.0018	998	30.7	989	21.2	1022	98.7	0.9	3.2	988.9	21.2
G42	301	202	0.67	1.6301	0.02506	0.16671	0.0018	0.07108	0.0011	982	19.3	994	19.5	960	62.9	-1.2	-3.6	994.0	19.5
G43	1162	21	0.02	1.7022	0.02157	0.16906	0.0017	0.07319	0.0009	1009	16.2	1007	18.8	1019	51.8	0.2	1.2	1006.9	18.8
G44	106	133	1.26	1.6939	0.04008	0.16916	0.0019	0.07281	0.0018	1006	30.2	1008	21.3	1009	96.3	-0.1	0.1	1007.5	21.3
G45	114	428	3.74	1.9067	0.04815	0.16935	0.0020	0.08184	0.0021	1083	33.6	1009	22.3	1242	99.5	7.4	18.8	1008.5	22.3
G46	882	16	0.02	1.7605	0.02403	0.17048	0.0017	0.07508	0.0011	1031	17.7	1015	19.0	1071	55.6	1.6	5.2	1014.8	19.0
G47	139	56	0.40	1.7090	0.03304	0.17071	0.0019	0.07277	0.0014	1012	24.8	1016	20.8	1008	78.8	-0.4	-0.8	1016.0	20.8
G48	75	57	0.76	1.7286	0.04169	0.17096	0.0020	0.07350	0.0018	1019	31.0	1017	22.0	1028	97.9	0.2	1.0	1017.4	22.0
G49	52	13	0.24	1.7864	0.06103	0.17119	0.0023	0.07585	0.0027	1041	44.5	1019	24.9	1091	136.9	2.2	6.6	1018.6	24.9
G50	359	91	0.25	1.9057	0.03422	0.17154	0.0018	0.08075	0.0015	1083	23.9	1021	20.3	1215	71.1	6.1	16.0	1020.6	20.3
G51	136	73	0.54	1.7113	0.03428	0.17175	0.0019	0.07243	0.0015	1013	25.7	1022	20.7	998	82.2	-0.9	-2.4	1021.8	20.7
G52	115	46	0.40	1.7149	0.03715	0.17200	0.0019	0.07249	0.0016	1014	27.8	1023	21.1	1000	88.9	-0.9	-2.3	1023.1	21.1
G53	488	93	0.19	1.7783	0.02892	0.17249	0.0018	0.07493	0.0012	1038	21.1	1026	20.0	1067	65.7	1.1	3.8	1025.8	20.0
G54	89	55	0.61	1.7843	0.04492	0.17261	0.0020	0.07513	0.0019	1040	32.8	1027	22.3	1072	101.7	1.3	4.3	1026.5	22.3
G55	33	90	2.73	1.7432	0.06784	0.17328	0.0023	0.07313	0.0029	1025	50.2	1030	25.8	1018	156.9	-0.5	-1.2	1030.2	25.8
G56	2260	364	0.16	1.9315	0.02331	0.17349	0.0017	0.08092	0.0010	1092	16.1	1031	19.2	1220	47.7	5.9	15.4	1031.3	19.2
G57	134	127	0.94	1.7891	0.03403	0.17392	0.0019	0.07479	0.0015	1042	24.8	1034	20.7	1063	77.4	0.8	2.7	1033.7	20.7
G58	108	84	0.78	1.8725	0.04246	0.17422	0.0020	0.07813	0.0018	1071	30.0	1035	21.9	1150	91.0	3.5	10.0	1035.3	21.9
G59	91	49	0.54	1.8153	0.04436	0.17454	0.0021	0.07560	0.0019	1051	32.0	1037	22.6	1084	98.9	1.3	4.4	1037.1	22.6
G60	54	13	0.24	1.7394	0.04940	0.17461	0.0021	0.07241	0.0021	1023	36.6	1038	23.5	997	115.0	-1.4	-4.0	1037.5	23.5
G61	450	273	0.61	1.8755	0.03090	0.17505	0.0019	0.07788	0.0013	1073	21.8	1040	20.5	1144	65.8	3.1	9.1	1039.9	20.5
G62	123	44	0.36	1.7669	0.03408	0.17644	0.0019	0.07278	0.0014	1033	25.0	1048	21.0	1008	78.9	-1.3	-3.9	1047.5	21.0
G63	387	111	0.29	1.7941	0.02757	0.17773	0.0019	0.07338	0.0011	1043	20.0	1055	20.6	1025	61.7	-1.1	-2.9	1054.5	20.6
G64	215	130	0.60	1.9197	0.03244	0.18632	0.0020	0.07490	0.0013	1088	22.6	1101	21.4	1066	68.7	-1.2	-3.3	1065.7	68.7
G65	302	86	0.28	1.8896	0.02880	0.17979	0.0019	0.07641	0.0012	1077	20.2	1066	20.3	1106	61.8	1.1	3.6	1065.8	20.3
G66	222	228	1.03	1.9139	0.03536	0.18023	0.0020	0.07719	0.0015	1086	24.6	1068	21.5	1126	74.1	1.7	5.1	1068.2	21.5
G67	139	85	0.61	1.9624	0.03638	0.18134	0.0020	0.07867	0.0015	1103	24.9	1074	21.4	1164	74.3	2.6	7.7	1074.3	21.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES									
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	%disc (7/6)	Best Age [Ma]	± 2s
G68	109	40	0.36	1.8752	0.03915	0.18147	0.0020	0.07513	0.0016	1072	27.7	1075	21.9	1072	84.8	-0.2	-0.3	1075.0	21.9
G69	72	50	0.69	1.9324	0.05588	0.18252	0.0023	0.07695	0.0023	1092	38.7	1081	24.8	1120	115.8	1.1	3.5	1080.7	24.8
G70	43	29	0.66	1.9511	0.06159	0.18374	0.0024	0.07718	0.0025	1099	42.4	1087	25.8	1126	126.0	1.0	3.4	1087.4	25.8
G71	793	1122	1.41	2.1873	0.02952	0.18391	0.0019	0.08647	0.0012	1177	18.8	1088	20.4	1349	52.8	8.2	19.3	1088.3	20.4
G72	49	29	0.59	1.9816	0.05497	0.18411	0.0023	0.07824	0.0022	1109	37.4	1089	24.7	1153	110.6	1.8	5.5	1089.4	24.7
G73	180	69	0.38	1.9494	0.03641	0.18692	0.0021	0.07581	0.0014	1098	25.1	1105	22.4	1090	75.2	-0.6	-1.3	1090.1	75.2
G74	396	370	0.93	2.0042	0.03400	0.18465	0.0020	0.07891	0.0014	1117	23.0	1092	21.3	1170	68.1	2.3	6.6	1092.3	21.3
G75	90	26	0.29	2.0398	0.04183	0.19281	0.0021	0.07690	0.0016	1129	27.9	1137	23.1	1119	82.5	-0.7	-1.6	1118.5	82.5
G76	175	67	0.38	2.0330	0.03979	0.19191	0.0021	0.07700	0.0015	1127	26.6	1132	23.2	1121	78.5	-0.5	-0.9	1121.2	78.5
G77	305	118	0.39	1.9946	0.03632	0.18756	0.0020	0.07729	0.0014	1114	24.6	1108	21.9	1129	73.0	0.5	1.8	1128.8	73.0
G78	627	153	0.24	2.0150	0.02670	0.18925	0.0019	0.07739	0.0010	1121	18.0	1117	20.8	1131	53.3	0.3	1.2	1131.4	53.3
G79	240	222	0.92	1.9960	0.03180	0.18717	0.0020	0.07751	0.0013	1114	21.6	1106	21.7	1134	63.8	0.7	2.5	1134.3	63.8
G80	442	89	0.20	2.1254	0.02944	0.19805	0.0021	0.07801	0.0011	1157	19.1	1165	22.2	1147	55.0	-0.7	-1.5	1147.1	55.0
G81	270	116	0.43	2.0993	0.03772	0.19483	0.0021	0.07831	0.0014	1149	24.7	1148	22.6	1155	71.8	0.1	0.6	1154.8	71.8
G82	280	100	0.36	2.1551	0.03498	0.19968	0.0021	0.07845	0.0013	1167	22.5	1174	22.8	1158	64.7	-0.6	-1.3	1158.2	64.7
G83	270	85	0.31	2.1945	0.03369	0.20329	0.0022	0.07847	0.0012	1179	21.4	1193	23.1	1159	61.0	-1.1	-3.0	1158.8	61.0
G84	757	438	0.58	2.1254	0.02755	0.19646	0.0020	0.07863	0.0010	1157	17.9	1156	21.5	1163	51.8	0.1	0.6	1162.9	51.8
G85	174	50	0.29	2.1226	0.04062	0.19555	0.0021	0.07889	0.0015	1156	26.4	1151	23.1	1169	76.3	0.4	1.5	1169.4	76.3
G86	637	197	0.31	2.1233	0.02747	0.19553	0.0020	0.07893	0.0010	1156	17.9	1151	21.4	1170	51.7	0.4	1.6	1170.4	51.7
G87	404	276	0.68	2.1383	0.03020	0.19642	0.0020	0.07914	0.0011	1161	19.5	1156	21.6	1176	56.6	0.4	1.7	1175.7	56.6
G88	608	322	0.53	2.0796	0.02848	0.19060	0.0020	0.07931	0.0011	1142	18.8	1125	21.1	1180	54.8	1.6	4.7	1179.9	54.8
G89	353	167	0.47	2.1534	0.03116	0.19674	0.0020	0.07956	0.0012	1166	20.1	1158	21.9	1186	57.8	0.7	2.4	1186.1	57.8
G90	148	76	0.51	2.1047	0.03542	0.19226	0.0020	0.07956	0.0014	1150	23.2	1134	22.1	1186	67.1	1.5	4.4	1186.2	67.1
G91	199	189	0.95	2.1487	0.03441	0.19593	0.0021	0.07971	0.0013	1165	22.2	1153	22.2	1190	63.9	1.0	3.1	1189.8	63.9
G92	94	46	0.49	2.2813	0.04550	0.20711	0.0023	0.08008	0.0016	1207	28.2	1213	24.4	1199	79.6	-0.6	-1.2	1198.9	79.6
G93	279	102	0.37	2.2751	0.03360	0.20644	0.0021	0.08011	0.0012	1205	20.8	1210	22.9	1200	58.9	-0.4	-0.9	1199.6	58.9
G94	204	83	0.41	2.0736	0.04695	0.18813	0.0022	0.08013	0.0019	1140	31.0	1111	23.5	1200	90.4	2.6	7.4	1200.3	90.4
G95	48	29	0.61	2.1519	0.05599	0.19198	0.0023	0.08148	0.0022	1166	36.1	1132	25.3	1233	102.3	3.0	8.2	1233.0	102.3
G96	352	126	0.36	2.4812	0.03484	0.21998	0.0023	0.08199	0.0012	1267	20.3	1282	24.3	1245	55.0	-1.2	-2.9	1245.3	55.0
G97	241	94	0.39	2.2815	0.03643	0.20172	0.0021	0.08223	0.0014	1207	22.5	1185	22.6	1251	63.1	1.9	5.3	1251.1	63.1
G98	192	74	0.38	2.6682	0.04313	0.22818	0.0024	0.08499	0.0014	1320	23.9	1325	25.4	1315	63.5	-0.4	-0.7	1315.2	63.5
G99	105	51	0.49	2.6162	0.04846	0.22153	0.0024	0.08586	0.0016	1305	27.2	1290	25.4	1335	72.8	1.2	3.4	1335.0	72.8
G100	79	48	0.62	2.8218	0.05719	0.23789	0.0027	0.08622	0.0018	1361	30.4	1376	28.3	1343	78.9	-1.0	-2.4	1343.2	78.9
G101	113	43	0.38	2.7007	0.05589	0.22387	0.0025	0.08768	0.0019	1329	30.7	1302	26.7	1376	80.1	2.0	5.3	1375.5	80.1

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G102	81	99	1.23	3.1093	0.05722	0.25573	0.0029	0.08838	0.0017	1435	28.3	1468	29.3	1391	70.9	-2.2	-5.6	1390.7	70.9
G103	226	106	0.47	3.2479	0.05775	0.26698	0.0029	0.08843	0.0016	1469	27.6	1525	30.0	1392	68.5	-3.7	-9.6	1391.8	68.5
G104	62	28	0.45	2.7639	0.06141	0.22650	0.0026	0.08872	0.0020	1346	33.1	1316	27.5	1398	86.2	2.3	5.9	1398.1	86.2
G105	78	38	0.49	2.8084	0.07249	0.22843	0.0028	0.08936	0.0024	1358	38.7	1326	29.3	1412	99.5	2.4	6.1	1411.8	99.5
G106	234	123	0.53	3.1657	0.04530	0.25701	0.0027	0.08954	0.0013	1449	22.1	1475	27.8	1416	54.7	-1.7	-4.2	1415.6	54.7
G107	221	90	0.41	3.0524	0.05490	0.24768	0.0027	0.08958	0.0016	1421	27.5	1427	27.7	1416	69.2	-0.4	-0.7	1416.4	69.2
G108	98	84	0.85	3.1709	0.06865	0.25709	0.0030	0.08965	0.0020	1450	33.4	1475	30.2	1418	83.4	-1.7	-4.0	1417.9	83.4
G109	160	53	0.33	3.0240	0.04800	0.24468	0.0026	0.08985	0.0015	1414	24.2	1411	26.6	1422	61.5	0.2	0.8	1422.4	61.5
G110	144	52	0.36	2.9780	0.05906	0.24065	0.0027	0.08994	0.0018	1402	30.2	1390	27.8	1424	76.3	0.9	2.4	1424.3	76.3
G111	505	258	0.51	3.0758	0.04541	0.24565	0.0026	0.09101	0.0014	1427	22.6	1416	26.8	1447	56.4	0.8	2.1	1446.7	56.4
G112	77	124	1.62	3.2093	0.07841	0.25626	0.0031	0.09104	0.0023	1459	37.8	1471	32.0	1447	94.4	-0.8	-1.6	1447.4	94.4
G113	457	167	0.37	2.9729	0.04626	0.23723	0.0025	0.09108	0.0014	1401	23.6	1372	26.0	1448	59.5	2.1	5.2	1448.2	59.5
G114	114	51	0.45	3.1627	0.05949	0.25170	0.0028	0.09135	0.0018	1448	29.0	1447	28.7	1454	72.8	0.1	0.5	1453.8	72.8
G115	255	111	0.44	3.0692	0.04446	0.24351	0.0025	0.09164	0.0014	1425	22.2	1405	26.0	1460	56.2	1.4	3.8	1459.8	56.2
G116	77	33	0.43	3.1202	0.06914	0.24676	0.0029	0.09193	0.0021	1438	34.1	1422	29.7	1466	85.5	1.1	3.0	1465.7	85.5
G117	2487	665	0.27	3.1039	0.04947	0.24455	0.0026	0.09225	0.0015	1434	24.5	1410	26.4	1472	61.1	1.7	4.2	1472.4	61.1
G118	347	113	0.33	3.3133	0.05543	0.25765	0.0027	0.09347	0.0016	1484	26.1	1478	28.1	1497	63.7	0.4	1.3	1497.4	63.7
G119	79	28	0.35	3.2454	0.07303	0.25188	0.0030	0.09365	0.0022	1468	34.9	1448	30.7	1501	85.8	1.4	3.5	1501.1	85.8
G120	75	32	0.42	3.4606	0.07858	0.26735	0.0032	0.09409	0.0022	1518	35.8	1527	32.7	1510	86.5	-0.6	-1.2	1509.9	86.5
G121	70	31	0.45	3.9677	0.07424	0.28900	0.0033	0.09980	0.0019	1628	30.4	1637	32.7	1620	70.2	-0.5	-1.0	1620.3	70.2
G122	250	83	0.33	3.9032	0.06198	0.28373	0.0030	0.09999	0.0016	1614	25.7	1610	30.4	1624	59.4	0.3	0.8	1623.9	59.4
G123	94	108	1.15	4.1068	0.06802	0.29718	0.0032	0.10047	0.0017	1656	27.0	1677	31.7	1633	62.5	-1.3	-2.7	1632.8	62.5
G124	113	85	0.75	4.0649	0.06730	0.29183	0.0032	0.10125	0.0017	1647	27.0	1651	31.7	1647	61.8	-0.2	-0.2	1647.1	61.8
G125	324	91	0.28	4.0195	0.05238	0.28509	0.0029	0.10248	0.0014	1638	21.2	1617	29.2	1670	48.7	1.3	3.2	1669.5	48.7
G126	135	67	0.50	4.2724	0.06405	0.30129	0.0032	0.10306	0.0016	1688	24.7	1698	31.5	1680	56.0	-0.6	-1.1	1680.0	56.0
G127	307	117	0.38	4.3015	0.05705	0.30289	0.0031	0.10324	0.0014	1694	21.9	1706	30.6	1683	49.6	-0.7	-1.3	1683.1	49.6
G128	220	92	0.42	3.9814	0.06320	0.27725	0.0030	0.10437	0.0017	1630	25.8	1578	30.0	1703	59.2	3.4	7.4	1703.3	59.2
G129	315	199	0.63	4.3348	0.07073	0.29994	0.0032	0.10504	0.0017	1700	26.9	1691	31.6	1715	60.4	0.5	1.4	1715.1	60.4
G130	271	134	0.49	4.4212	0.06221	0.30571	0.0032	0.10512	0.0015	1716	23.3	1720	31.7	1716	51.8	-0.2	-0.2	1716.4	51.8
G131	694	170	0.24	4.2423	0.06100	0.29329	0.0031	0.10513	0.0015	1682	23.6	1658	30.4	1717	53.0	1.5	3.4	1716.7	53.0
G132	229	160	0.70	4.3413	0.06193	0.29953	0.0031	0.10538	0.0015	1701	23.5	1689	30.6	1721	53.3	0.7	1.9	1721.0	53.3
G133	439	56	0.13	4.2972	0.06022	0.29559	0.0031	0.10567	0.0015	1693	23.1	1669	30.7	1726	51.5	1.4	3.3	1726.0	51.5
G134	106	126	1.19	4.1046	0.08747	0.28166	0.0033	0.10592	0.0023	1655	34.8	1600	33.2	1730	78.9	3.5	7.5	1730.3	78.9
G135	153	60	0.39	4.3869	0.06594	0.30076	0.0032	0.10602	0.0016	1710	24.9	1695	31.8	1732	55.4	0.9	2.1	1732.1	55.4

Table S2

Grain	U Th		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	[ppm]		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/235	± 2s	206/238	± 2s	207/206	± 2s	%disc	(7/6)	[Ma]	± 2s
G136	129	89	0.69	4.4867	0.07530	0.30743	0.0033	0.10610	0.0018	1729	27.9	1728	32.9	1734	62.6	0.0	0.3	1733.5	62.6
G137	178	72	0.40	4.3820	0.06521	0.30026	0.0031	0.10611	0.0016	1709	24.6	1693	31.0	1734	55.5	1.0	2.4	1733.6	55.5
G138	1643	373	0.23	4.1540	0.05922	0.28375	0.0029	0.10641	0.0015	1665	23.3	1610	29.5	1739	52.4	3.4	7.4	1738.8	52.4
G139	384	156	0.41	4.4295	0.06865	0.29927	0.0032	0.10758	0.0017	1718	25.7	1688	31.2	1759	56.9	1.8	4.0	1758.8	56.9
G140	923	104	0.11	4.9803	0.06756	0.33466	0.0035	0.10818	0.0015	1816	22.9	1861	33.8	1769	49.6	-2.4	-5.2	1768.8	49.6
G141	434	77	0.18	4.7466	0.05881	0.31670	0.0032	0.10893	0.0014	1776	20.8	1774	31.4	1782	45.6	0.1	0.4	1781.6	45.6
G142	807	190	0.24	4.7225	0.06220	0.31405	0.0032	0.10932	0.0015	1771	22.1	1761	31.5	1788	48.7	0.6	1.5	1788.1	48.7
G143	98	62	0.64	5.0427	0.07875	0.32976	0.0036	0.11116	0.0018	1827	26.5	1837	34.7	1818	57.0	-0.6	-1.0	1818.4	57.0
G144	354	73	0.21	4.8377	0.08145	0.31615	0.0034	0.11122	0.0019	1792	28.3	1771	33.0	1819	61.6	1.2	2.7	1819.4	61.6
G145	47	27	0.56	4.4983	0.12474	0.29179	0.0039	0.11205	0.0032	1731	46.1	1650	39.0	1833	101.6	4.9	10.0	1833.0	101.6
G146	807	174	0.22	5.5241	0.06704	0.35492	0.0036	0.11312	0.0014	1904	20.9	1958	34.1	1850	44.2	-2.7	-5.8	1850.2	44.2
G147	347	309	0.89	5.4321	0.08987	0.33191	0.0035	0.11896	0.0020	1890	28.4	1848	34.2	1941	59.6	2.3	4.8	1940.6	59.6
G148	88	56	0.63	8.9051	0.17965	0.43161	0.0051	0.14996	0.0031	2328	36.8	2313	46.0	2346	69.8	0.7	1.4	2345.5	69.8
G149	180	28	0.15	8.8470	0.12814	0.41154	0.0044	0.15628	0.0023	2322	26.4	2222	40.3	2416	50.0	4.5	8.0	2415.8	50.0
G150	182	10	0.06	11.0996	0.21659	0.45949	0.0054	0.17558	0.0035	2532	36.4	2437	47.8	2612	65.8	3.9	6.7	2611.5	65.8
G151	83	151	1.81	12.6247	0.18104	0.50892	0.0055	0.18031	0.0026	2652	27.0	2652	47.2	2656	48.2	0.0	0.1	2655.7	48.2
G152	180	136	0.75	12.6062	0.20224	0.50225	0.0054	0.18243	0.0030	2651	30.2	2624	46.0	2675	53.5	1.0	1.9	2675.1	53.5
G153	278	194	0.70	13.1567	0.16098	0.52119	0.0053	0.18350	0.0023	2691	23.1	2704	45.0	2685	40.9	-0.5	-0.7	2684.7	40.9
G154	111	154	1.39	12.3297	0.17826	0.48842	0.0054	0.18350	0.0027	2630	27.2	2564	46.6	2685	48.1	2.6	4.5	2684.8	48.1
G155	75	64	0.86	12.9290	0.22915	0.51050	0.0059	0.18408	0.0033	2675	33.4	2659	50.3	2690	59.2	0.6	1.2	2690.0	59.2
G156	156	468	3.00	12.1107	0.16671	0.47507	0.0051	0.18531	0.0026	2613	25.8	2506	44.7	2701	45.6	4.3	7.2	2701.0	45.6
G157	74	83	1.13	13.1211	0.20691	0.51429	0.0057	0.18544	0.0030	2688	29.8	2675	48.2	2702	52.5	0.5	1.0	2702.1	52.5
G158	129	172	1.33	13.3425	0.20510	0.51502	0.0055	0.18830	0.0029	2704	29.0	2678	47.0	2727	50.9	1.0	1.8	2727.4	50.9
G159	227	114	0.50	12.9270	0.18426	0.49796	0.0052	0.18869	0.0027	2674	26.9	2605	45.1	2731	47.1	2.7	4.6	2730.8	47.1
G160	153	112	0.73	13.5780	0.17145	0.52235	0.0054	0.18894	0.0024	2721	23.9	2709	45.7	2733	42.0	0.4	0.9	2733.0	42.0
G161	138	128	0.92	13.4380	0.17814	0.51392	0.0053	0.19011	0.0026	2711	25.1	2673	45.3	2743	44.3	1.4	2.5	2743.1	44.3
G162	150	169	1.13	14.1004	0.23437	0.53331	0.0058	0.19217	0.0033	2757	31.5	2755	48.7	2761	55.0	0.0	0.2	2760.8	55.0
G163	172	101	0.59	12.9230	0.16983	0.47806	0.0051	0.19649	0.0026	2674	24.8	2519	44.0	2797	43.0	6.2	10.0	2797.3	43.0
G164	383	215	0.56	13.6431	0.16596	0.50453	0.0051	0.19658	0.0024	2725	23.0	2633	43.9	2798	40.3	3.5	5.9	2798.0	40.3
G165	29	37	1.26	12.9693	0.28845	0.47900	0.0065	0.19680	0.0045	2677	41.9	2523	56.3	2800	74.1	6.1	9.9	2799.8	74.1
G166	31	22	0.73	13.2310	0.27350	0.48559	0.0064	0.19806	0.0042	2696	39.0	2552	55.9	2810	69.1	5.7	9.2	2810.3	69.1
G167	106	358	3.38	13.4037	0.19883	0.48637	0.0053	0.20031	0.0030	2709	28.0	2555	46.0	2829	48.7	6.0	9.7	2828.7	48.7
G168	294	119	0.41	16.1214	0.20844	0.57129	0.0059	0.20512	0.0027	2884	24.7	2913	48.7	2867	42.0	-1.0	-1.6	2867.4	42.0
G169	45	42	0.93	15.3632	0.25059	0.53803	0.0062	0.20755	0.0035	2838	31.1	2775	52.0	2887	53.5	2.3	3.9	2886.5	53.5

Table S2

Grain	U		Th/U	RATIOS						AGES						%disc		Best Age	
	[ppm]	Th		207/235	± s.e.	206/238	± s.e.	207/206	± s.e.	207/ 235	± 2s	206/ 238	± 2s	207/ 206	± 2s	%disc	(7/6)	[Ma]	± 2s
G170	209	126	0.60	16.1761	0.21667	0.55847	0.0059	0.21054	0.0028	2887	25.6	2860	48.7	2910	43.4	0.9	1.7	2909.7	43.4
G171	583	503	0.86	18.9120	0.24197	0.56097	0.0057	0.24512	0.0032	3037	24.7	2871	47.2	3154	41.3	5.8	9.0	3153.5	41.3

Table S3

	W11		B1-2		20092401		W3-18		J6-2		J4-2	
Cross-correlation	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.
Peri-Gondawa	0.021	0.029	0.026	0.034	0.031	0.039	0.036	0.047	0.048	0.057	0.026	0.036
Yavapai	0.704	0.166	0.675	0.164	0.055	0.079	0.066	0.086	0.097	0.105	0.083	0.095
Appalachian	0.031	0.037	0.032	0.035	0.011	0.012	0.024	0.031	0.030	0.027	0.043	0.049
Rocky foreland	0.070	0.088	0.115	0.134	0.790	0.111	0.777	0.131	0.466	0.175	0.738	0.155
TransHudson	0.025	0.032	0.022	0.028	0.015	0.018	0.020	0.023	0.044	0.044	0.022	0.028
Grenville	0.013	0.018	0.019	0.022	0.018	0.024	0.011	0.015	0.025	0.028	0.012	0.014
Granite-Rhyolite	0.081	0.087	0.048	0.051	0.032	0.036	0.022	0.031	0.079	0.074	0.032	0.041
Superior	0.031	0.038	0.017	0.021	0.021	0.024	0.017	0.021	0.023	0.025	0.015	0.019
Cordillera	0.024	0.030	0.046	0.041	0.027	0.029	0.027	0.031	0.189	0.063	0.028	0.031
Kuiper V value	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.
Peri-Gondawa	0.047	0.058	0.048	0.049	0.117	0.108	0.090	0.083	0.097	0.091	0.127	0.105
Yavapai	0.369	0.137	0.444	0.110	0.142	0.124	0.288	0.114	0.132	0.098	0.105	0.090
Appalachian	0.061	0.053	0.075	0.058	0.059	0.044	0.110	0.069	0.090	0.053	0.136	0.072
Rocky foreland	0.075	0.077	0.078	0.085	0.277	0.209	0.171	0.150	0.143	0.132	0.204	0.165
TransHudson	0.125	0.077	0.101	0.070	0.065	0.049	0.058	0.048	0.133	0.065	0.078	0.055
Grenville	0.027	0.025	0.031	0.031	0.052	0.052	0.037	0.035	0.044	0.038	0.045	0.036
Granite-Rhyolite	0.110	0.072	0.060	0.044	0.089	0.057	0.091	0.055	0.086	0.061	0.074	0.049
Superior	0.111	0.076	0.067	0.053	0.106	0.045	0.057	0.045	0.113	0.055	0.095	0.060
Cordillera	0.075	0.057	0.096	0.064	0.092	0.055	0.097	0.061	0.163	0.049	0.137	0.061
KS D value	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.	Relative Contribution	St. Dev.
Peri-Gondawa	0.059	0.066	0.070	0.080	0.041	0.052	0.108	0.110	0.063	0.072	0.059	0.076
Yavapai	0.325	0.151	0.355	0.140	0.041	0.050	0.218	0.117	0.073	0.079	0.052	0.061
Appalachian	0.080	0.065	0.064	0.049	0.021	0.034	0.105	0.071	0.053	0.050	0.095	0.075
Rocky foreland	0.083	0.093	0.137	0.143	0.696	0.153	0.218	0.215	0.392	0.146	0.476	0.174
TransHudson	0.126	0.075	0.075	0.053	0.034	0.040	0.052	0.039	0.083	0.066	0.039	0.045
Grenville	0.032	0.032	0.037	0.034	0.027	0.039	0.048	0.047	0.035	0.039	0.033	0.040
Granite-Rhyolite	0.122	0.080	0.071	0.057	0.038	0.045	0.086	0.066	0.055	0.051	0.041	0.043
Superior	0.086	0.060	0.062	0.045	0.033	0.033	0.043	0.035	0.059	0.049	0.045	0.042
Cordillera	0.087	0.066	0.129	0.076	0.067	0.062	0.122	0.076	0.186	0.079	0.160	0.092

Table S3

	W2-5		LA1701		17093001		18020401		B2		W1	
	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
Cross-correlation	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.025	0.034	0.028	0.039	0.023	0.029	0.036	0.044	0.040	0.049	0.038	0.048
Yavapai	0.152	0.173	0.028	0.043	0.072	0.083	0.352	0.156	0.113	0.136	0.047	0.067
Appalachian	0.023	0.026	0.021	0.023	0.019	0.023	0.019	0.021	0.012	0.014	0.013	0.013
Rocky foreland	0.705	0.208	0.789	0.105	0.767	0.131	0.377	0.198	0.718	0.173	0.783	0.122
TransHudson	0.018	0.023	0.024	0.029	0.025	0.029	0.036	0.036	0.018	0.021	0.023	0.027
Grenville	0.008	0.012	0.020	0.025	0.021	0.024	0.023	0.026	0.019	0.028	0.019	0.032
Granite-Rhyolite	0.028	0.036	0.032	0.037	0.031	0.039	0.068	0.062	0.027	0.033	0.017	0.024
Superior	0.021	0.027	0.022	0.027	0.017	0.022	0.054	0.050	0.028	0.033	0.035	0.042
Cordillera	0.020	0.024	0.036	0.046	0.026	0.028	0.034	0.028	0.025	0.027	0.026	0.029
Kuiper V value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.064	0.074	0.072	0.080	0.096	0.088	0.087	0.073	0.102	0.104	0.094	0.086
Yavapai	0.362	0.111	0.055	0.058	0.136	0.100	0.241	0.139	0.147	0.120	0.084	0.079
Appalachian	0.102	0.068	0.065	0.060	0.063	0.050	0.056	0.047	0.038	0.034	0.042	0.038
Rocky foreland	0.102	0.110	0.415	0.160	0.205	0.169	0.133	0.128	0.214	0.177	0.263	0.165
TransHudson	0.092	0.062	0.058	0.048	0.068	0.045	0.095	0.058	0.042	0.037	0.056	0.048
Grenville	0.035	0.036	0.038	0.045	0.061	0.057	0.045	0.043	0.078	0.063	0.077	0.067
Granite-Rhyolite	0.074	0.058	0.056	0.056	0.070	0.056	0.102	0.060	0.087	0.060	0.065	0.052
Superior	0.080	0.058	0.096	0.058	0.163	0.041	0.142	0.051	0.173	0.044	0.192	0.047
Cordillera	0.087	0.066	0.145	0.066	0.137	0.048	0.099	0.042	0.118	0.064	0.128	0.060
KS D value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.086	0.084	0.032	0.039	0.048	0.062	0.051	0.055	0.066	0.070	0.062	0.070
Yavapai	0.259	0.121	0.020	0.028	0.057	0.063	0.145	0.122	0.145	0.131	0.060	0.070
Appalachian	0.101	0.072	0.044	0.050	0.035	0.034	0.036	0.038	0.025	0.023	0.034	0.039
Rocky foreland	0.185	0.152	0.625	0.143	0.508	0.124	0.310	0.128	0.246	0.181	0.530	0.116
TransHudson	0.065	0.050	0.028	0.040	0.063	0.063	0.116	0.074	0.081	0.068	0.054	0.057
Grenville	0.044	0.040	0.029	0.043	0.038	0.040	0.044	0.048	0.055	0.050	0.039	0.052
Granite-Rhyolite	0.075	0.059	0.028	0.034	0.052	0.051	0.082	0.059	0.093	0.075	0.040	0.050
Superior	0.061	0.044	0.031	0.043	0.073	0.052	0.075	0.056	0.064	0.054	0.048	0.048
Cordillera	0.124	0.084	0.163	0.110	0.126	0.067	0.140	0.062	0.226	0.075	0.133	0.072

Table S3

	W3		BR_BL		S_RR		621-9		614-1		PC-29	
	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
Cross-correlation	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.028	0.040	0.035	0.043	0.032	0.040	0.020	0.026	0.034	0.043	0.023	0.028
Yavapai	0.039	0.056	0.478	0.161	0.092	0.116	0.052	0.062	0.126	0.136	0.041	0.060
Appalachian	0.010	0.012	0.028	0.031	0.011	0.012	0.015	0.019	0.023	0.027	0.016	0.017
Rocky foreland	0.805	0.113	0.264	0.196	0.696	0.186	0.789	0.101	0.428	0.190	0.741	0.139
TransHudson	0.025	0.030	0.019	0.021	0.018	0.022	0.027	0.037	0.034	0.036	0.027	0.030
Grenville	0.019	0.024	0.023	0.027	0.033	0.044	0.019	0.023	0.021	0.024	0.017	0.021
Granite-Rhyolite	0.018	0.023	0.060	0.050	0.039	0.043	0.032	0.043	0.062	0.064	0.054	0.055
Superior	0.036	0.045	0.061	0.055	0.028	0.030	0.023	0.033	0.250	0.109	0.044	0.052
Cordillera	0.021	0.025	0.033	0.030	0.050	0.041	0.023	0.028	0.022	0.025	0.036	0.045
Kuiper V value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.094	0.083	0.088	0.081	0.087	0.086	0.053	0.063	0.066	0.064	0.094	0.083
Yavapai	0.088	0.076	0.340	0.143	0.117	0.113	0.076	0.081	0.104	0.090	0.171	0.115
Appalachian	0.037	0.034	0.058	0.045	0.037	0.033	0.032	0.031	0.043	0.044	0.047	0.039
Rocky foreland	0.278	0.162	0.153	0.141	0.303	0.177	0.378	0.133	0.141	0.120	0.110	0.098
TransHudson	0.057	0.048	0.051	0.039	0.064	0.057	0.083	0.078	0.106	0.073	0.087	0.064
Grenville	0.072	0.067	0.043	0.043	0.065	0.052	0.037	0.041	0.037	0.036	0.043	0.043
Granite-Rhyolite	0.056	0.046	0.085	0.063	0.078	0.054	0.043	0.040	0.086	0.070	0.133	0.070
Superior	0.187	0.051	0.095	0.034	0.114	0.054	0.142	0.075	0.312	0.066	0.184	0.051
Cordillera	0.129	0.057	0.088	0.051	0.135	0.062	0.156	0.072	0.105	0.064	0.131	0.052
KS D value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.063	0.064	0.057	0.072	0.039	0.044	0.029	0.041	0.037	0.048	0.059	0.061
Yavapai	0.063	0.069	0.180	0.141	0.039	0.047	0.028	0.035	0.051	0.066	0.096	0.109
Appalachian	0.028	0.031	0.034	0.037	0.027	0.034	0.031	0.044	0.031	0.038	0.035	0.042
Rocky foreland	0.538	0.132	0.432	0.169	0.606	0.138	0.594	0.137	0.527	0.111	0.331	0.117
TransHudson	0.054	0.058	0.051	0.047	0.040	0.054	0.030	0.049	0.107	0.089	0.105	0.081
Grenville	0.039	0.040	0.038	0.043	0.040	0.045	0.031	0.041	0.025	0.032	0.037	0.039
Granite-Rhyolite	0.033	0.039	0.073	0.061	0.041	0.049	0.030	0.037	0.046	0.047	0.074	0.066
Superior	0.048	0.048	0.057	0.046	0.029	0.038	0.037	0.044	0.105	0.094	0.088	0.066
Cordillera	0.134	0.069	0.079	0.064	0.139	0.080	0.190	0.131	0.071	0.075	0.174	0.080

Table S3

	J2		B3-2		21022001		BL_BR_21		21100901	
	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
Cross-correlation	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.021	0.029	0.023	0.032	0.024	0.035	0.071	0.097	0.061	0.082
Yavapai	0.103	0.120	0.039	0.063	0.045	0.049	0.094	0.091	0.059	0.070
Appalachian	0.013	0.014	0.017	0.020	0.012	0.016	0.007	0.009	0.037	0.039
Rocky foreland	0.677	0.188	0.799	0.091	0.781	0.109	0.684	0.182	0.615	0.148
TransHudson	0.048	0.049	0.034	0.047	0.019	0.024	0.014	0.016	0.020	0.022
Grenville	0.020	0.027	0.018	0.024	0.023	0.027	0.038	0.048	0.042	0.045
Granite-Rhyolite	0.072	0.066	0.032	0.039	0.040	0.053	0.030	0.034	0.032	0.034
Superior	0.037	0.041	0.018	0.024	0.021	0.029	0.037	0.042	0.025	0.024
Cordillera	0.011	0.013	0.019	0.028	0.035	0.041	0.026	0.025	0.110	0.051
Kuiper V value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.073	0.069	0.105	0.096	0.078	0.084	0.133	0.125	0.181	0.139
Yavapai	0.205	0.131	0.107	0.088	0.118	0.112	0.130	0.115	0.089	0.087
Appalachian	0.050	0.047	0.051	0.045	0.030	0.030	0.034	0.032	0.078	0.055
Rocky foreland	0.133	0.123	0.262	0.141	0.409	0.148	0.270	0.218	0.239	0.196
TransHudson	0.102	0.071	0.111	0.068	0.063	0.053	0.044	0.037	0.056	0.040
Grenville	0.041	0.044	0.050	0.044	0.049	0.048	0.082	0.070	0.062	0.054
Granite-Rhyolite	0.129	0.069	0.060	0.049	0.072	0.057	0.092	0.054	0.042	0.039
Superior	0.183	0.057	0.100	0.063	0.088	0.050	0.140	0.038	0.086	0.044
Cordillera	0.084	0.042	0.154	0.052	0.093	0.049	0.075	0.048	0.167	0.057
KS D value	Relative	St.	Relative	St.	Relative	St.	Relative	St.	Relative	St.
	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.	Contribution	Dev.
Peri-Gondawa	0.046	0.057	0.044	0.057	0.029	0.043	0.084	0.085	0.067	0.072
Yavapai	0.082	0.085	0.042	0.064	0.030	0.036	0.107	0.101	0.066	0.074
Appalachian	0.037	0.044	0.040	0.046	0.028	0.039	0.033	0.033	0.063	0.055
Rocky foreland	0.403	0.134	0.533	0.121	0.701	0.135	0.421	0.192	0.456	0.182
TransHudson	0.127	0.086	0.045	0.053	0.024	0.036	0.059	0.048	0.039	0.040
Grenville	0.035	0.041	0.032	0.040	0.031	0.040	0.056	0.058	0.048	0.054
Granite-Rhyolite	0.069	0.069	0.040	0.045	0.030	0.038	0.072	0.057	0.035	0.036
Superior	0.112	0.076	0.040	0.041	0.035	0.043	0.087	0.047	0.036	0.033
Cordillera	0.089	0.071	0.184	0.087	0.094	0.071	0.082	0.050	0.190	0.076

Table S4

Sample num.	USU num.	In-situ H ₂ O (%) ¹	Grain size (μ m)	K (%) ²	Rb (ppm) ²	Th (ppm) ²	U (ppm) ²	Cosmic (Gy/kyr)
B-1-2	USU-3552	6.7	75-125	1.96 $\pm$ 0.05	73.6 $\pm$ 2.9	7.8 $\pm$ 0.7	2.0 $\pm$ 0.1	0.14 $\pm$ 0.01
				1.51 $\pm$ 0.04	51.8 $\pm$ 2.1	6.6 $\pm$ 0.6	1.6 $\pm$ 0.1	
B-3-2	USU-3553	13.7	75-125	1.83 $\pm$ 0.05	71.0 $\pm$ 2.8	8.0 $\pm$ 0.7	2.3 $\pm$ 0.2	0.14 $\pm$ 0.01
				1.99 $\pm$ 0.05	98.4 $\pm$ 3.9	11.2 $\pm$ 1.0	3.3 $\pm$ 0.2	
W-9-2	USU-3554	31.4	75-125	2.00 $\pm$ 0.05	91.0 $\pm$ 3.6	9.9 $\pm$ 0.9	2.6 $\pm$ 0.2	0.14 $\pm$ 0.01
				1.92 $\pm$ 0.05	83.8 $\pm$ 3.4	8.6 $\pm$ 0.8	2.2 $\pm$ 0.2	
W-10-2	USU-3555	13.3	75-125	1.96 $\pm$ 0.05	78.9 $\pm$ 3.2	8.7 $\pm$ 0.8	2.1 $\pm$ 0.1	0.14 $\pm$ 0.01
				2.07 $\pm$ 0.05	99.4 $\pm$ 4.0	11.5 $\pm$ 1.0	2.8 $\pm$ 0.2	
J-4-2	USU-3556	27.1	75-125	1.98 $\pm$ 0.05	75.9 $\pm$ 3.0	7.0 $\pm$ 0.6	1.8 $\pm$ 0.1	0.14 $\pm$ 0.01
				1.97 $\pm$ 0.05	81.4 $\pm$ 3.3	9.1 $\pm$ 0.8	2.3 $\pm$ 0.2	
J-7-2	USU-3557	37.3	75-125	1.94 $\pm$ 0.05	81.9 $\pm$ 3.3	9.2 $\pm$ 0.8	2.3 $\pm$ 0.2	0.14 $\pm$ 0.01
				1.83 $\pm$ 0.05	75.3 $\pm$ 3.0	7.7 $\pm$ 0.7	2.0 $\pm$ 0.1	
J-6-2	USU-3558	29.7	75-125	1.95 $\pm$ 0.05	86.3 $\pm$ 3.5	9.7 $\pm$ 0.9	2.6 $\pm$ 0.2	0.14 $\pm$ 0.01
				1.96 $\pm$ 0.05	76.9 $\pm$ 3.1	7.6 $\pm$ 0.7	2.0 $\pm$ 0.1	

Table S5

Element	B1-2A	B1-2B	B3-2A	B3-2B	W9-2A	W9-2B	W10-2A	W10-2B	J4-2A	J4-2B	J7-2A	J7-2B	J6-2A	J6-2B
Ag	0.09	0.06	0.09	0.14	0.13	0.12	0.1	0.13	0.09	0.12	0.13	0.1	0.13	0.11
Al	5.05	3.82	5.07	6.7	6.15	5.59	5.44	6.76	5.15	5.54	5.45	5.2	5.78	5.32
As	5.1	3.8	7.9	9.1	5.4	6.9	6	8.1	8.1	5.2	6.4	12.7	6.9	9.4
Ba	750	610	710	810	750	750	740	790	770	780	750	740	790	780
Be	1.2	0.89	1.34	1.85	1.61	1.57	1.43	1.94	1.31	1.47	1.4	1.36	1.63	1.37
Bi	0.1	0.08	0.13	0.25	0.19	0.18	0.14	0.25	0.12	0.15	0.17	0.15	0.19	0.13
Ca	0.82	1.17	0.77	0.78	0.67	0.65	0.74	0.71	0.7	0.73	0.7	0.7	0.71	0.74
Cd	0.17	0.06	0.15	0.43	0.23	0.3	0.18	0.35	0.1	0.18	0.14	0.16	0.26	0.12
Ce	54.5	52.6	55	71.4	63.2	55	59.7	75.3	48	60.1	60	53.9	61.8	52.3
Co	7.5	5.2	8.7	14.9	10.5	11.6	12	16.8	8.9	9.2	7.5	7.5	9.5	6.9
Cr	43	46	48	60	59	47	48	63	38	48	61	49	53	40
Cs	2.37	1.3	2.76	5.23	4.42	3.74	3.12	5.23	2.69	3.32	3.48	3.01	3.95	2.9
Cu	8.2	7.8	19.1	29.2	38.3	28.4	17.4	20.7	13.1	20.3	46.2	31.6	20.8	17.6
Fe	2.46	2.31	2.88	3.26	3.56	2.87	2.24	3.29	2.53	2.43	3.86	3.39	2.7	2.38
Ga	11.35	8.67	11.4	15.6	14.35	13.1	12.6	16.05	11.5	12.5	12.9	12	13.55	11.95
Ge	0.2	0.18	0.2	0.22	0.19	0.18	0.2	0.23	0.18	0.19	0.22	0.21	0.24	0.19
Hf	2.9	2.9	2.9	3.7	3.4	3	3.2	4	2.2	3.3	3.7	2.7	3.2	2.6
In	0.024	0.019	0.03	0.051	0.041	0.037	0.03	0.052	0.027	0.029	0.034	0.032	0.036	0.03
K	1.96	1.51	1.83	1.99	2	1.92	1.96	2.07	1.98	1.97	1.94	1.83	1.95	1.96
La	29.5	28.5	29.1	37	32.8	29.5	31.7	39	25.9	32	32.1	28.8	33	28.2
Li	17	10.8	19.9	33.9	29.9	25.5	22.1	34.3	19.1	21.9	22.4	20.1	25.8	20.3
Mg	0.37	0.46	0.43	0.71	0.61	0.51	0.46	0.7	0.38	0.46	0.46	0.43	0.54	0.42
Mn	403	287	380	1080	387	268	204	271	330	318	382	412	359	304
Mo	0.58	1.01	1.28	1.24	1.29	1.07	0.96	0.88	1.15	0.78	2	1.31	1.15	0.96
Na	1.19	1.07	1.05	0.84	0.92	0.96	1.11	0.9	1.14	1.09	1.03	1.03	1	1.13
Nb	8.9	8.1	9.3	12.9	11.6	10	10.2	14.3	8.2	10.4	10.6	9.1	10.9	8.8
Ni	18.3	12.6	21.1	33.5	27.7	25.5	29.3	36.6	22	21.5	22.9	22.3	25.1	20.8
P	510	420	590	690	710	560	450	660	510	560	570	550	610	560
Pb	13.9	10.2	14.8	18.6	17.7	17.2	15.2	18.6	14.3	16.1	17	16.9	16.8	15.8
Rb	73.6	51.8	71	98.4	91	83.8	78.9	99.4	75.9	81.4	81.9	75.3	86.3	76.9
Re	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
S	0.01	0.02	0.01	0.02	0.01	0.04	0.09	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Sb	0.63	0.45	0.83	0.96	0.92	0.82	0.74	0.95	0.73	0.72	0.81	0.73	0.82	0.74
Sc	5.1	3.7	5.9	9.7	8.4	7.1	6.5	9.6	5.4	6.7	6.9	6.1	7.5	5.8
Sn	1.3	1	1.9	2.2	4.2	1.6	2.8	3.7	2.7	2.2	2.7	1.7	2	1.6
Sr	225	204	194.5	165	166.5	172	196	163.5	208	201	192.5	195	185	209
Ta	0.61	0.57	0.6	0.9	0.8	0.7	0.67	0.96	0.55	0.71	0.75	0.6	0.73	0.6

Table S5

Element	B1-2A	B1-2B	B3-2A	B3-2B	W9-2A	W9-2B	W10-2A	W10-2B	J4-2A	J4-2B	J7-2A	J7-2B	J6-2A	J6-2B
Te	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Th	7.75	6.63	8	11.2	9.86	8.63	8.68	11.45	7.01	9.11	9.21	7.73	9.66	7.57
Ti	0.223	0.223	0.242	0.346	0.315	0.259	0.266	0.374	0.206	0.275	0.281	0.233	0.289	0.221
Tl	0.45	0.32	0.46	0.63	0.61	0.55	0.5	0.65	0.48	0.52	0.55	0.48	0.58	0.47
U	2	1.6	2.3	3.3	2.6	2.2	2.1	2.8	1.8	2.3	2.3	2	2.6	2
V	49	34	58	91	79	68	60	94	52	62	62	58	71	56
W	4	0.7	2	1.6	2	1.2	1.7	1.6	1.8	1.2	4.2	1.1	1.7	1
Y	17.5	14.4	18.2	23.6	21.5	19.2	19.5	25.9	16.7	19.8	20.6	19.1	21	17.8
Zn	42	28	53	91	84	68	57	93	48	62	82	68	69	58
Zr	116	102.5	106.5	128.5	118	106.5	111.5	150.5	81.3	113	121.5	99	114	88.6