

Table 1

Sample 1	ppm			Age (Ma) <sup>4</sup>				E <sup>5</sup>
	U	Th	Pb <sup>2</sup>	204/206 <sup>3</sup>	206/238	208/235	207/206	
NMO	215	n.d.	37	.0010	897	1170	1719	9
MO	262	n.d.	52	.0036	913	1204	1773	5
M1	315	n.d.	51	.0019	815	1086	1678	8
M2	319	n.d.	55	.0024	847	1159	1801	9
M4	197	n.d.	33	.0066	685	957	1648	8
1	294	228	118	.0003	1902	2004	2111	42
2	384	183	158	.0003	2079	2117	2154	34
3	60	24	25	.0012	2068	2067	1967	156
4	122	115	78	.0003	2677	2680	2683	40
5	127	42	51	.0003	2105	2083	2062	58
6	138	28	59	.0003	2279	2196	2120	54
7	803	997	407	<	2167	2123	2081	18
8	262	173	89	.0003	1735	1726	1717	54
9	62	32	28	.0003	2180	2201	2221	78
10	167	70	65	<	2001	2043	2084	48
11	45	44	5	.0028	635	-	-	44
12	149	66	13	.0019	546	-	-	24
13	117	60	34	.0005	1587	1518	1424	134
14	107	90	11	.0006	576	-	-	26
15	277	160	168	<	2735	2702	2678	20
16	81	51	40	<	2321	2300	2282	62
17	337	255	36	.0007	609	-	-	24
18	474	275	220	.0001	2227	2219	2212	22
19	92	104	10	.0022	501	-	-	32
20	507	509	223	.0001	2002	2027	2053	26
21	216	367	24	.0011	515	-	-	22
22	221	204	25	.0003	597	-	-	24
23	259	339	34	.0006	637	-	-	26
24	198	150	26	.0025	729	906	1368	334
25	508	334	55	.0008	019	-	-	26
26	221	189	20	.0016	520	-	-	22
27	182	139	18	.0007	549	-	-	24
28	169	169	16	.0018	518	-	-	22
29	55	42	19	.0002	1693	1723	1758	312
30	169	83	56	<	1664	1844	2053	40
31	296	307	32	.0002	577	-	-	24
32	264	99	24	.0007	563	-	-	24
33	281	58	24	.0003	547	-	-	22

34	37	30	3	.0066	609	-	-	52
35	167	233	19	<	541	-	-	22
36	237	104	103	.0003	2165	2143	2123	50
37	245	172	23	.0006	595	-	-	24
38	425	235	41	.0009	576	-	-	24
39	446	499	49	.0005	567	-	-	24
40	578	379	291	<	2336	2388	2433	14
41g	199	148	21	.0002	597	-	-	13
42g	524	723	64	<	584	-	-	13
43g	259	147	27	<	605	-	-	13
44g	144	92	95	<	2862	2810	2772	13
45g	312	256	239	<	3064	3119	3154	6
46g	614	323	56	.0003	541	-	-	12

Notes: 1) Samples are listed by magnetic fraction for conventional analyses (NMO, non-magnetic, O<sup>o</sup>) and by grain number for SHRIMP analyses, 41-46 are granite samples (g); 2) Pb is radiogenic Pb; 3) numerical ratios are for appropriate U and Pb isotopes (e.g.,  $204/206 = {}^{204}\text{Pb}/{}^{206}\text{Pb}$ ) and < is for values less than .0001; 4) ages are calculated from ratios corrected for blank and common Pb (Stacey and Kramers, 1975; conventional analyses) and for Cumming and Richards (1975) common Pb for SHRIMP analyses, dash is for no age calculated; 5) two sigma errors for  $207/206$  and  $206/238$  ages as appropriate.

#### Further Analytical Notes:

Zircon micro-analysis was undertaken by SHRIMP. Repeat analyses of the standard Sri Lankan zircon SL13 ( ${}^{206}\text{Pb}/{}^{238}\text{U}=0.0928$ ; 572 Ma) during the analytical sessions were used to determine U, Th, and Pb abundances and to calibrate inter-element isotopic ratios in the unknowns. Pb isotopic ratios were determined directly, with their uncertainties governed by ion-counting statistics. The majority of the unknowns yielded very low  ${}^{204}\text{Pb}$  count rates. The very small amount of non-radiogenic Pb reflected by the very low  ${}^{204}\text{Pb}$  count rate is modeled as Cumming and Richards (1975) 400 Ma Pb, the likely age of deposition of the sediment. The  ${}^{208}\text{Pb}$ -common Pb correction method (Compston et al. 1984) has been employed on the (well-preserved) <650 Ma zircons because it is more accurate and precise than the conventional  ${}^{204}\text{Pb}$  correction method for such young zircons, unless they have extremely low Th abundances. At the very low common Pb contents observed in the <650 Ma zircons, however, calculated  ${}^{206}\text{Pb}/{}^{238}\text{U}$  ages are largely insensitive to the choice of common Pb composition and correction method. For the older zircons

(with greater accumulated radiogenic  $^{206}\text{Pb}$  and  $^{207}\text{Pb}$ ), the more commonly-used  $^{204}\text{Pb}$  correction method was used and  $^{207}\text{Pb}/^{206}\text{Pb}$  ages are discussed. More detailed descriptions of the analytical procedures for the conventional analyses can be found in Mueller et al. (1988) and for single grains (SHRIMP) in Compston et al. (1984) and Compston & Williams (1992). Sm-Nd data were obtained from whole-rock powder for both samples using standard procedures (Heatherington and Mueller, 1991). Values obtained for the sandstone are: Sm=1.11 ppm; Nd = 10.9 ppm;  $^{143}\text{Nd}/^{144}\text{Nd}$  = 0.51189 and for the granitoid, Sm = 3.16; Nd = 10.7;  $^{143}\text{Nd}/^{144}\text{Nd}$  = .51230. Ages have been calculated using the decay constants and present-day  $^{238}\text{U}/^{235}\text{U}$  recommended by the IUGS Subcommittee on Geochronology (Steiger and Jäger, 1977).

#### Additional references:

- Compston, W., Williams, I., and Meyer, C., 1984, U-Pb geochronology of zircons from lunar breccia 73217 using a sensitive high mass-resolution ion microprobe: *Journal of Geophysical Research*, v. 89, Supplement B, p. 525-534.
- Compston, W. and Williams, I., 1992, Ion probe ages for the British Ordovician and Silurian stratotypes. *Global Perspectives on Ordovician Geology* (Webby and Laurie, eds.) Bolkema, Rotterdam, p. 59-67.
- Cummings, G. and Richards, J., 1975, Ore lead isotopic ratios in a continuously changing Earth: *Earth and Planetary Science Letters*, v. 28, p. 155-171.
- Heatherington, A. and Mueller, P., 1991, Geochemical evidence for Triassic rifting in southwestern Florida: *Tectonophysics*, v. 188, p. 291-302.
- Mueller, P., Shuster, R., Graves, M., Wooden, J., and Bowes, D., 1988, Age and composition of a late Archean magmatic complex, Beartooth Mountains, Montana-Wyoming: *Mont. Bur. Mines and Geol. Spec. Publ.* 96, p. 23-42.
- Stacey, J. and Kramers, J., 1975, Approximation of terrestrial lead isotope evolution by a two stage model: *Earth and Planetary Science Letters*, v. 26, p. 381- 399.
- Steiger, R. and Jager, E., 1977, Subcommittee on geochronology: Convention on use of decay constants in geo- and cosmochemistry: *Earth and Planetary Science Letters*, v. 36, p. 359-362.