Follow On From 99-12 100μm aperture

UWA DATA LOG: SHRIMP ZIRCON U-Pb

Date	UWA Mount No.	Whose sample?	Operator(s)
25/8/99	99-33	AGSO	Ian / A.P.

Indicate any change to the following:		196	204	bkg	206	207	208	238	248	254	270
Precambrian	Count time (secs):	2	10	10	~~10~~/20*	~~30~~/10*	10	5	5	2	
~~**Phanerozoic***~~	Delay time (secs):	8	3	1	2	1	1	3	2	2	

expected 196-204 = 8.170 amu expected 204-bkg = 0.045 amu Dead-time = 32 nanosecs

actual 196-204 = 8.170 actual 204-bkg = 0.045 expected resolution = >4200

actual 206-207 = 1.000 (Zircon) actual 206-208 = 1.9999 actual resolution = ...

Primary = 3.2 nA PESABM = 34 pA actual Primary : PESABM (≈ 50:1) = ...

Raster time (mins): 2 Raster aperture (microns): 120 No. of scans: 6

Comments: C = 9996 7049A – mostly high Pb204 zircons.

1° started out stable (esp for 1st analysis) & became worse with each analysis. Yduo is crap, it is so unstable.

NB: Au-coat may not be even as occasionally some grains have slightly higher Pb204 counts for 1st scan

Rejection over-ride	Sample/ Std ID	Time - printout	U/O	196 Kcps	206 cps	U ppm	^{204}Pb ppb	f_{206} %	Age ±1σ (Ma) 206/238	207/206	Offsets OK?	
	sl 2-1	18:48	7.40	11.1	1389	220	2.8	.08	572 ± 1	527 ± 33	✓	1° stable 3.2 nA
	sl 2-2	19:07	7.44	10.8	1367	219	5.5	.14	568 ± 1	516 ± 34	✓	1° 3.1 - 3.2 nA a lot of ortec rjns
	c.63-1	19:38	7.19	10.3	6564	179	(640)	7.16	2958 ± 9	3199 ± 10	✓	1° noisy 2.9 - 3.3 nA last scan check rjns NR core 204
	c.64-1	20:00	7.75	9.3	5459	173	293	4.71	2463 ± 8	2734 ± 14	✓	1° very noisy . 2.7 - 3.1 a lot of ortec rjns
	sl.1-1	20:18	7.80	9.7	1229	197	0.4	.03	559 ± 1	574 ± 35	✓	1° v. noisy . 2.7 - 3.1
	c.65-1	20:37	6.99	8.0	2565	93	5.2	.13	2973 ± 12	2820 ± 10	✓	" 2.6 - 3 nA
	c.65-2	20:55	7.35	8.8	1065	36	0.2	.02	2829 ± 18	2836 ± 16	✓	a lot of ortec rjns 2.4 - 3 nA
	c.88-1	21:13	7.95	9.2	10.9k	313	11.0	.09	2644 ± 5	2755 ± 5	✓	"
	sl.1-2	21:31	7.77	9.2	1208	212	1.0	.20	544 ± 1	535 ± 36	✓	"
	c.67-1	21:50	7.72	8.8	9262	276	27.6	.24	2830 ± 6	2784 ± 6	✓	1° a little stabler 2.6 - 2.9 nA 1° fewer ortec rjns
	c.72-1	22:09	7.71	8.1	8810	273	14.8	.13	2951 ± 7	2775 ± 6	✓	" 2.5 - 2.8 nA fewer ortec rjns

stability improves but 1° continues to drift ↓.

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Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 Kcps	206 cps	U ppm	^{204}Pb ppb	f_{206} %	Age ±1σ (Ma) 206/238	207/206	Offsets OK?
	c.75-1	22:29	7.84	8.5	5383	170	90.9	1.39	2669 ± 8	2781 ± 9	✓
	sl.1-3	22:49	7.24	8.7	1110	230	1.4	.11	588 ± 1	559 ± 42	✓
	c.76-1	23:07	7.44	9.4	2973	84	6.6	.18	3042 ± 12	2733 ± 10	✓
	c.87-1	23:25	7.45	8.5	9251	317	132.2	1.03	2789 ± 6	2788 ± 7	✓
	c.82-1	23:50	7.54	8.6	6214	201	101	1.22	2811 ± 8	2803 ± 8	✓
1st TuO	sl.1-4	24:34	7.80	7.2	1008 ~~355~~	~~705~~	4.5	.13	579 ± 2	523 ± 45	✓
	B.35-1	24:53	7.41	6.4	5549	257	2.8	.03	2806 ± 8	2656 ± 7	✓
	B.46-1	1:11	7.71	6.3	2932	132	3.3	.07	2663 ± 10	2663 ± 10	✓
	B.33-1	1:32	7.70	6.1	5447	258	1.0	.01	2640 ± 7	2643 ± 7	✓
	sl.1-5	1:50	7.74	5.8	812	207	0.3	.01	598 ± 2	610 ± 42	✓
	B.34-1	2:08	7.53	5.5	3486	184	3.6	.05	2732 ± 10	2624 ± 9	✓
	sl.1-6	2,28	7.56	5.7	779	218	1.1	.00	591 ± 1	647 ± 42	✓
	B.36-1	2:45	8.04	5.6	4954	234	2.6	.03	2552 ± 8	2618 ± 8	✓
	B.37-1	3:03	7.90	5.6	4007	193	3.6	.05	2650 ± 9	2624 ± 9	✓
	B.38-1	3:21	7.87	5.3	899	46	1.7	.10	2675 ± 19	2622 ± 19	✓
	sl.1-7	3:41	7.94	5.5	735	201	0.0	.003	553 ± 2	645 ± 43	✓
	B.39-1	3:58	7.86	5.2	5110	259	3.4	.04	2705 ± 8	2622 ± 8	✓
	B.40-1	4:17	7.75	5.1	4969	268	4.3	.04	2714 ± 8	2609 ± 8	✓
	B.41-1	4:36	7.71	5.1	4387	236	4.4	.05	2724 ± 9	2638 ± 8	✓
	sl.7-1	4:54	8.02	5.0	683	201	5.8	.37	549 ± 2	536 ± 50	✓
	B.42-1	5:11	7.78	4.9	4151	233	14.0	.16	2682 ± 9	2634 ± 9	✓
	B.43-1	5:29	8.01	4.8	4094	213	4.1	.05	2695 ± 9	2624 ± 9	✓
	B.43-2	5:46	7.76	5.1	1276	70	1.6	.06	2674 ± 16	2641 ± 16	✓
	B.44-1	6:03	7.90	4.9	2165	123	7.4	.17	2571 ± 12	2618 ± 12	✓
1st TuO	sl.7-2	6.22	7.71	4.7	658	214	11.9	.32	579 ± 2	548 ± 50	✓

1° noisy 2.4 - 2.8nA ortec rjns only 1pg

" 2.3 - 2.7nA ortec rjns 1½ pgs

ortec rjns <1pg

ortec rjns 1½ pgs

1° relatively stable! few rjns 1° = 2.4 - 2.6nA i° = 2.2 - 2.5nA slowly drifting down.

B 1° 2 - 2.4 nA noisy alot of ortec rjns 2½ pgs

NB = .2nA scatter but drifted down from 2.3 - 1.9nA few ortec rjns <1pg.

1° rel. stable. 1.8 - 2.1nA.

1° = 1.8 - 2.0nA rel stable

1° = 1.7 - 1.9nA ~~rel~~ stable.

1° = 1.8nA v. stable !!!

~~1° = 1.7nA. v. stable~~

1° = 1.7nA. v. stable

"

"

v stable.

1° = 1.6nA.

"

"

" v. stable.

"

but a few ortec rjns

"

ortec ok.

"

"

PCSA: 2pA

1° v. slow, v. subtle drift down.

1st scan Pb/U a bit high.

~1.5

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	B.61-1	6:41	7.82	4.7	4139	233	6.6	.07	2749 ± 9	2647 ± 9	✓
	B.47-1	7:00	7.72	4.4	3097	194	6.5	.09	2733 ± 10	2604 ± 10	✓
	B.59-1	7:17	7.94	4.5	2123	129	4.4	.10	2599 ± 12	2604 ± 12	✓
	B.58-1	7:35	7.66	4.3	2368	164	8.0	.13	2617 ± 11	2633 ± 12	✓
	sl.7-3	7:54	7.93	4.2	594	201	9.8	.46	578 ± 2	619 ± 51	✓
	B.57-1	8.10	7.71	4.1	853	59	3.3	.15	2677 ± 19	2640 ± 19	✓
	B.54-1	8.28	7.68	4-1	2040	143	11.5	.22	2645 ± 12	2618 ± 13	✓

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	B.61-1	6:41	7.82	4.7	4139	233	6.6	.07	2749 ± 9	2647 ± 9	✓	1° v. stable ≈ 1.4 - 1.5nA; 1st 204 high.
	B.47-1	7:00	7.72	4.4	3097	194	6.5	.09	2733 ± 10	2604 ± 10	✓	"
	B.59-1	7:17	7.94	4.5	2123	129	4.4	.10	2599 ± 12	2604 ± 12	✓	
	B.58-1	7:35	7.66	4.3	2368	164	8.0	.13	2617 ± 11	2633 ± 12	✓	
	sl.7-3	7:54	7.93	4.2	594	201	9.8	.46	578 ± 2	619 ± 51	✓	1° = 1.4; 1st 204 high slightly.
	B.57-1	8.10	7.71	4.1	853	59	3.3	.15	2677 ± 19	2640 ± 19	✓	"
	B.54-1	8.28	7.68	4.1	2040	143	11.5	.22	2645 ± 12	2618 ± 13	✓	