



Follows from 96-75

UWA DATA LOG: SHRIMP ZIRCON U-Pb

Date	UWA Mount No.	Whose sample?	Operator(s)							
27/3/97	94-07	MEB	McN/ALP							
Indicate any change to the following:										
	196	204	bkg	206	207	208	238	248	254	
Precambrian	Count time (secs):	2	10	10	10	30/10	10	5	5	2
Phanerozoic*	Delay time (secs):	78	3	1	2	1	1	3	2	2
expected 196-204 = 8.170 amu		expected 204-bkg = 0.040 amu		Dead-time = <u>32</u> nanosecs						
actual 196-204 = <u>8.1729</u>		actual 204-bkg = <u>0.040</u>		expected resolution = >4200						
actual 206-207 = <u>0.999</u>		actual 206-208 = <u>1.999</u>		actual resolution = <u>4980</u>						
Primary = <u>1.5</u> nA		PESABM = pA		actual Primary : PESABM (≈ 50:1) =						
Raster time (mins): <u>2</u>		Raster aperture (microns):		No. of scans: <u>7</u>						

Comments:

Low 1° beam, using the droplens z makes the beam unstable.
 Use this: sl 1-2 & 1-3 excluded.
 $Zr/U = 1.93324$ $Pb < 20$ counts. better < 15.
 $UO/U = 6.75585$
 $Pb^*/U = 0.221992$
 $n_{std} = 8$ Calibra² error = 1.3122%. $n_G = 19$.
 Target 3315. - NB: another age at @ 3285 Ma.
 (Zr/U = 1.94264, UO/U = 6.91873, Pb*/U = 0.229221, Nstd = 10, error = 2.8973%, Don't use this)

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 cps	206 cps	U ppm	204Pb ppb	f206 %	Age $\pm 1\sigma$ (Ma)		206/238	207/206	Corr.
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	196, 206, 208	sl 3-1	20:31	6.63	8210	899	220	0.1	0.01	572 \pm 1	562 \pm 27	204
	206, 207, 254	sl 3-2	20:52	6.51	7447	821	232	2.4	0.19	579 \pm 1	531 \pm 38	204
	196, 207, 208, 238, 254	u 2-1	21:31	6.60	7328	743	40.4	42.4	2.72	2448 \pm 16	3291 \pm 18	204
	196, 208	u 14-2	21:53	6.96	7193	5149	169	8.3	0.09	3361 \pm 10	3315 \pm 4	204
	204, 206, 207, 238, 248, 254	u 2-3	22:45	6.89	6361	4919	193	14.0	0.13	3298 \pm 9	3317 \pm 4	204
	196, 206, 207, 238, 254	sl 3-3	23:06	6.82	6513	721	216	2.8	0.25	543 \pm 1	670 \pm 26	204
	196, 204, 206, 207, 238	u 2-4	23:27	6.65	6241	4517	317	50.1	0.48	2258	3057 \pm 5	204
	248	sl 3-4	23:48	6.32	5606	592	250	1.4	0.08	564 \pm 1	618 \pm 29	208 ok
	196, 206, 238, 248	u 15-2	00:14	6.49	5487	2370	158	24.5	0.36	2795 \pm 10	3199 \pm 7	204 15 min x 5/0
	196, 206, 238, 248	sl 3-5	00:37	6.63	6725	737	229	1.3	0.06	553 \pm 1	645 \pm 26	208
	196, 206	u 16-2	1:01	6.80	6370	4997	228	11.8	0.11	3014 \pm 8	3270 \pm 4	204

1° slowly drifting down stable during analysis.
 1.5 \rightarrow 1.2 \AA
 v. noisy 1° \rightarrow 248
 1.2 \AA stable
 dropped last scan
 1° at 1.4 \AA stable
 1° at 1.2 \AA very noisy

Rejection over-ride Sample/Std ID Time - printout UO/U 196 cps 206 cps U ppm 204Pb ppb f206 % Age ±1σ (Ma) 206/238 207/206 Corr.

1° stable at 1.2 Å
 ↓
 1° dropped 1 Å
 ↓
 slow gradual decay
 ↓
 0.9 Å - 0.8 Å

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 cps	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma)	206/238	207/206	Corr.
	196, 204, 206											
	207, 238, 248, 254	u 16-3	1:22	7.04	5824	2462	101.2	10.6	0.20	3241 ± 13	3317 ± 6	204 ✓
	196, 208	u 12-3	1:45	6.99	5830	4443	255	83.1	0.86	2494 ± 7	3163 ± 6	204
	196, 238	u 12-4	2:06	7.33	4895	3666	189	19.5	0.23	2827	3284 ± 5	204 (2)
	206, 238, 248, 254	sl 3-6	2:28	7.01	4638	544	207	-ve	0.01	555 ± 1	563 ± 31	208
	196, 206, 207, 208, 238, 254	u 11-4	2:52	6.54	4499	3738	245	120.4	0.92	3286 ± 10	3299 ± 6	204 (2)
	196, 207, 248, 254	u 11-5	3:27	6.67	4364	1909	126	85.7	0.32	3445 ± 14	3291 ± 9	204 (2)
	196	u 3-4	3:52	6.75	4490	1749	96.3	13.8	0.25	3475 ± 17	3289 ± 7	204 (2)
	196	u 3-5	4:21	6.95	4267	1471	80.8	3.5	0.08	3391 ± 18	3310 ± 8	204 ✓
	196, 206, 238, 254	sl 3-7	4:43	7.14	3415	442	211	-ve	0.08	568 ± 1	603 ± 34	208
	196, 206, 207, 208, 238, 248, 254, 206	u 3-6	5:06	7.33	3702	1346	77.8	20.8	0.50	3226 ± 18	3316 ± 9	204 ✓
	238, 248, 254	u 3-7	5:27	7.13	3364	1829	120	13.1	0.20	3345 ± 16	3285 ± 7	204 (2)
	196, 204, 207, 208, 238	u 6-4	5:49	7.23	3615	1542	97.6	31.4	0.62	3153 ± 16	3312 ± 9	204 ✓
	196, 238, 248, 254	u 6-5	6:09	7.40	3292	1293	83.2	15.8	0.36	3184 ± 18	3315 ± 9	204 ✓
	206, 207, 208, 248, 254	u 8-3	6:34	7.39	3391	1583	100.2	21.1	0.40	3160 ± 16	3344 ± 8	204 - old
	206, 238, 254	sl 1-1	6:57	7.23	3026	381	208	0.0	0.06	542 ± 1	552 ± 37	208
	204, 206, 238, 248	u 8-4	7:20	7.57	2665	707	53.9	16.0	0.58	3131 ± 24	3342 ± 12	204 - old
	196, 106, 248	sl 1-2	7:51	7.75	2432	307	18.3	4.5	0.08	518 ± 1	596 ± 40	208
	207, 238, 248	sl 1-3	8:13	7.46	2178	279	197	0.8	0.12	534 ± 1	562 ± 43	208

↑ rasters to 3 min

1° at 0.6 Å →