

UWA DATA LOG: SHRIMP ZIRCON U-Pb

Date: 26/2/98 UWA Mount No.: 98-06 Whose sample?: Yaman Operator(s): McW + YQ

Indicate any change to the following:

	196	204	bkg	206	207	208	238	248	254
Precambrian Count time (secs):	2	10	10	²⁰ 10	²⁰ 30/10*	10	5	5	2
Phanerozoic* Delay time (secs):	<u>18</u>	3	1	2	1	1	3	2	2

expected 196-204 = 8.170 amu expected 204-bkg = ⁵0.040 amu Dead-time = 32 nanosecs
 actual 196-204 = 8.170 actual 204-bkg = 0.045 expected resolution = >4200
 actual 206-207 = 1.000 actual 206-208 = 1.999 actual resolution = 5451

Primary = 5.1 nA PESABM = 85 pA actual Primary : PESABM (≈ 50:1) = 60
 Raster time (mins): 1/2* Raster aperture (microns): 120 No. of scans: 5
 * increased raster time to 2 minutes

Comments: A = EDG-3 ⊕ turned HV off to load new sample into rack
B = PSHL-4
C = EDG-7

Mstd = 16 , % = 0.70 (default) - used this
 (Actual Slope = 2.04; % = 0.69)

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 Kcps	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.
	<u>sl. 2-1</u>	<u>10:02</u>	<u>5.76</u>	<u>32.0</u>	<u>3323</u>	<u>220</u>	<u>1.3</u>	<u>.11</u>	<u>572 ± 1</u>	<u>525 ± 23</u>	<u>204</u>
	<u>sl. 2-2</u>	<u>10:18</u>	<u>5.92</u>	<u>30.9</u>	<u>3324</u>	<u>208</u>	<u>0.1</u>	<u>.01</u>	<u>570 ± 1</u>	<u>549 ± 17</u>	<u>"</u>
	<u>A. 1-1</u>	<u>10:33</u>	<u>5.91</u>	<u>31.7</u>	<u>791</u>	<u>230</u>	<u>5.4</u>	<u>2.04</u>	<u>122 ± 1</u>	<u>247 ± 62</u>	<u>208</u>
	<u>sl. 2-3</u>	<u>10:49</u>	<u>5.86</u>	<u>32.2</u>	<u>3371</u>	<u>209</u>	<u>0.6</u>	<u>.05</u>	<u>575 ± 1</u>	<u>546 ± 25</u>	<u>204</u>
	<u>A. 37-1</u>	<u>11:14</u>	<u>6.01</u>	<u>30.7</u>	<u>985</u>	<u>212</u>	<u>0.3</u>	<u>.11</u>	<u>164 ± 1</u>	<u>107 ± 70</u>	<u>"</u>
	<u>A. 38-1</u>	<u>11:30</u>	<u>6.44</u>	<u>27.6</u>	<u>18K</u>	<u>3.1K</u>	<u>0.7</u>	<u>.01</u>	<u>184 ± 1</u>	<u>174 ± 9</u>	<u>"</u>
	<u>sl. 2-4</u>	<u>11:46</u>	<u>5.72</u>	<u>33.2</u>	<u>3251</u>	<u>215</u>	<u>0.1</u>	<u>-0.05</u>	<u>565 ± 1</u>	<u>566 ± 18</u>	<u>"</u>
	<u>A. 2-1</u>	<u>12:02</u>	<u>5.70</u>	<u>32.4</u>	<u>799</u>	<u>249</u>	<u>1.1</u>	<u>.38</u>	<u>128 ± 1</u>	<u>10 ± ?</u>	<u>"</u>
	<u>A. 3-1</u>	<u>12:18</u>	<u>5.91</u>	<u>31.6</u>	<u>727</u>	<u>210</u>	<u>0.2</u>	<u>.08</u>	<u>126 ± 1</u>	<u>99 ± 88</u>	<u>"</u>
	<u>A. 4-1</u>	<u>12:34</u>	<u>5.71</u>	<u>32.0</u>	<u>319</u>	<u>79.2</u>	<u>0.7</u>	<u>.44</u>	<u>162 ± 1</u>	<u>/</u>	<u>"</u>
	<u>sl. 2-5</u>	<u>12:51</u>	<u>6.00</u>	<u>30.6</u>	<u>3376</u>	<u>204</u>	<u>0.2</u>	<u>-0.2</u>	<u>570 ± 1</u>	<u>558 ± 20</u>	<u>"</u>

extremely high U cps.
 ∴ delete scans 25 for 254.

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

delete scan 5 for 206 → 254

A.7-1	13:09	5.68	32.3	420	132	-0.8	/	129±1	256±52	/
A.39-1	13:24	5.83	31.3	670	204	0.8	.37	126±1	245±61	208
A.40-1	13:40	6.24	30.9	6262	1155	2.3	-14	168±1	131±20	204
A.41-1	13:56	5.72	30.2	682	231	1.0	-.42	125±1	118±?	"
sl. 2-6	14:12	5.66	32.2	3181	224	0.7	.06	569±1	516±24	"
A.9-1	14:28	5.78	31.3	808	204	0.1	.05	156±1	150±62	"
A.42-1	14:44	5.84	31.5	394	120	0.3	-.24	124±1	101±?	"
A.10-1	14:59	5.86	31.5	507	151	-0.7	/	126±1	202±48	/
A.11-1	15:15	5.94	31.3	724	208	1.2	.81	124±1	301±69	208
sl. 2-7	15:32	5.95	31.2	3371	207	-0.3	/	567±1	551±16	/
A.12-1	15:51	5.98	31.6	346	97.5	1.0	.69	123±1	/	204
A.43-1	16:07	5.78	31.9	441	138	0.9	-.44	124±1	/	"
A.13-1	16:23	5.97	31.3	284 ¹³³³	284	-0.7	/	166±1	123±30	/
A.44-1	16:38	5.96	31.8	571	157	0.1	-.07	128±1	180±125	204
sl. 2-8	16:55	5.74	32.8	3226	212	0.3	.03	568±1	591±25	"
A.45-1	17:12	6.12	27.2	5510	1257	0.9	.05	164±1	152±19	"
A.15-1	17:30	7.31	23.3	393	124	0.3	-.31	81±1	606±128	"
A.16-1	17:46	6.14	30.5	1395	359	0.6	.25	128±1	148±54	208
A.17-1	18:02	6.02	31.3	1478	398	0.3	-.06	127±1	54±51	204
sl. 2-9	18:17	5.84	30.8	3214	214	0.2	-.02	564±1	582±28	"
C.1-1	18:35	3.98	40.8	235	264	9.9	1.83	174±1	/	"
C.37-1	18:51	5.73	31.6	317	78.0	-0.1	/	163±1	289±58	/
C.2-1	19:07	6.07	30.2	955	205	-0.8	/	161±1	209±35	/
C.3-1	19:23	5.89	29.1	6.4K	1569	2.3	.10	163±1	182±20	204
sl. 2-10	19:39	5.58	32.0	2987	226	-0.3	.02	563±1	624±17	208

messy 238, 248, 254 no deletions

extremely high ThO cps

* 1° dropped out? del scan 4 for 196, 204, 206, 208, 228, 238, 206, 207

⊖ at 5.0 nA
⊕ at 4.2 nA
⊖ = 5.0 nA

extremely high ThO cps.

⊕ UNKNOWN PROBLEM: WAS O₂ PEAK! V. STABLE DURING RUN

* Error messages on 1^o screen after analysis finished.
Fixed by turning AUX HV off & on.

Mount/sample No: 98-06 Date: 26/2/98 Page No: 3

Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 K cps	206 cps	U ppm	204Pb ppb	f ₂₀₆ %	Age ±1σ (Ma) 206/238	207/206	Corr.	
	C.4-1	19:55	5.75	30.7	746	192	-0.3	/	160 ± 1	118 ± 41	/	
	C.4-2	20:11	5.75	31.6	537	131	7.5	3.06	158 ± 1	/	204	
*	C.5-1	20:27	5.82	31.5	414	93.9	7.6	5.25	160 ± 1	663 ± 290	"	
	C.6-1	20:45	6.00	30.3	1388	306	0.0	/	163 ± 1	156 ± 29	/	
	sl.3-1	21:02	5.70	31.6	3115	218	0.7	.06	568 ± 1	533 ± 26	204	
	C.7-1	21:18	6.01	30.6	416	92	0.1	.11	159 ± 1	208 ± 126	"	
	C.8-1	21:33	5.80	29.9	1087	272	1.2	.30	163 ± 1	132 ± 64	"	
	C.9-1	21:49	5.89	30.3	686	161	0.4	.16	162 ± 1	67 ± ?	"	
	C.10-1	22:10	5.67	30.9	184	50	-0.6	/	159	320	/	
	sl.3-2	22:27	5.63	32.3	3062	220	-0.4	/	566	561	/	
	C12-1	22:44	5.66	31.7	841	217	0.5	.2	164	96	204	
	C17-1	23:	5.76	30.2	1223	309	-0.4	/	164	184	/	
	C38-1	23:21	5.74	31.8	402	99.6	-1.4	/	161	139	/	
16	C39-1	23:39	5.78	31.2	224	55	0.8	2.	157	0	208	
17	C40-1	23:57	5.66	29.8	1260	341	1.2	.25	164	27	204	
18	C41-1	0:17	5.59	31.7	572	154	1.4	1.2	161	0	208	
	sl3-3	0:34	5.87	31.3	3214	207	0.5	.04	562	549	204	
B = PSHL-4	sl.1-1	B1-1	0:53	6.08	30.6	678	189	0.1	.05	123	212	204
	sl.2-1	B2-1	1:11	5.82	32.1	185	56	0.4	.7	123	26	204
		B3-1	1:29	6.13	30.9	1346	349	0.2	.05	127	219	204
		B4-1	1:47	5.87	31.1	1009	302	0.1	0.05	126	144	204
		B5-1	2:05	5.8	31.3	714	224	0.8	.3	124	45	204
		sl3-4	2:22	5.86	30.6	3205	211	0.5	.05	566	573	204
		B6-1	2:40	5.75	30.4	1156	380	0.2	.05	126	107	204
		B7-1	2:58	5.85	31.2	638	197	-0.2	/	123	142	/

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.

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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.
	B8-1	3:16	5.75	31.1	729	237	-0.2	/	125	150	/
	B9-1	3:34	5.8	31.6	441	137	1.1	.57	124	0	208
	B10-1	3:51	5.81	31.5	577	175	0	/	127	287	/
	S13-5	4:09	6.07	29.9	3221	196	0.3	.03	557	582	204
	B11-1	4:28	5.96	31.7	754	212	0.5	.28	124	147	208
	B12-1	4:44	6.09	31.8	870	225	1.8	.14	126	247	208
	B13-1	5:02	5.93	31.1	738	214	0.4	.2	125	186	204
*	¹⁴ B14-1	5:21	5.74	31.9	3782	113	-0.7	/	12213	2436±8	204
	B15-1	5:40	5.73	31.4	1046	334	0.1	.03	127	158	204
	S13-6	5:57	5.96	30.8	3249	200	0.9	.09	567	495	204
*	B16-1	6:17	5.74	32.3	392	119	13.4	7.	121	0	208
	B17-1	6:33	5.85	30.2	187 6.4	10 187	1.0 1.0	0.07 0.07	127	204	208
	B18-1	6:49	5.68	31.	470	156	0.3	/	128	143	/
	B14-2	7:12	5.79	32	987	310	0.6	.2	123	103	204