

UWA DATA LOG: SHRIMP ZIRCON U-Pb

Date: 18/6/99 UWA Mount No.: 99-08 Whose sample?: RM/JD Operator(s): JD / AP

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 =3.2..... nanosecs

actual 196-204 =8.170..... actual 204-bkg =0.043..... expected resolution = >4200

actual 206-207 =1.000..... actual 206-208 =2.000..... actual resolution =5205.....

Primary =3.8..... nA PESABM =3.9..... pA actual Primary : PESABM (≈ 50:1) =

Raster time (mins):2.3..... Raster aperture (microns):120..... No. of scans:6.....

Comments:

B = RM0243

1st scan 204 w/h 1 min raster - O.K. sl 1-1 best high for sl 1-2

" " " 2 min " " high for B1-1, 2-1, 3-1, sl 14-1

" " " 3 min " " still slightly higher for B4-1 but ok for others.

1° extremely stable, became unstable (spiky, range 0.4nA)

K23 ages 208-corr

during B13-1, B14-1, B15-1 sl 16-2
 → ARC FALLING OUT

1° on recovery @ 2.9nA → 2.8nA.

Follow on from 99-08

Rejection over-ride	Sample/ Std ID	Time - printout	UO/U Kcps	196 cps	206 cps	U ppm	204Pb ppb	f ₂₀₆ %	Age ±1σ (Ma) 206/238	207/206	Offsets OK?
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1 min raster	sl. 1-1	20:43	6.97	14.4	1574	220	2.2	.18	571 ± 1	619 ± 31	✓
1 min raster	sl. 1-2	21:00	6.84	15.1	1528	223	2.6	.24	553 ± 1	666 ± 31	✓
↓ 2 min rasters.	B. 1-1	21:23	6.84	14.0	462	168	5.2	1.45	241 ± 1	62 ± 157	✓ ?
2 min raster.	B. 2-1	21:42	7.05	13.6	1126	382	4.7	.56	247 ± 1	213 ± 63	✓ O.K.
"	B. 3-1	21:59	6.93	14.1	615	207	1.9	.41	252 ± 1	389 ± 74	✓ O.K.?
"	sl. 14-1	22:18	6.52	16.4	1477	224	7.8	.38	565 ± 1	595 ± 33	✓
3 min raster.	B. 4-1	22:36	6.89	14.1	523	178	2.0	.49	254 ± 1	131 ± 107	✓ ? O.K.
"	B. 5-1	22:57	7.09	13.7	100	31	5.4	7.45	246 ± 4	207 ± ?	✓ O.K.?
"	B. 6-1	23:15	6.96	13.9	525	180	2.8	.69	248 ± 1	287 ± 108	✓ O.K.
"	sl. 15-1	23:34	6.82	14.5	1519	228	0.9	.13	563 ± 1	569 ± 32	✓
"	B. 7-1	23:54	7.21	15.6	1225	388	60.5	8.08	200 ± 1	305 ± 196	✓ ? X

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 Offsets OK?

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?
	B.8-1	24:00	6.90	14.1	394	138	2.0	.66	246 ± 1	236 ± 134	✓ ok
	B.9-1	24:41	6.84	14.0	463	165	1.9	.51	249 ± 1	271 ± 106	✓ ok
	sl.13-1	1:00	6.87	14.0	1544	234	0.3	.08	567 ± 1	536 ± 32	✓
	B.10-1	1:19	6.89	13.9	418	146	0.8	.24	251 ± 1	275 ± 88	✓ ok
	B.11-1	1:37	7.01	13.5	728	243	21.1	3.82	248 ± 1	184 ± 183	✓ ok
	B.12-1	1:56	6.78	13.6	516	199	2.3	.54	243 ± 1	156 ± 95	✓ ok
	sl.16-1	2:15	6.78	14.2	1525	237	3.1	.09	568 ± 1	592 ± 31	✓
¹ ° dropped 0.4 nA during scan 4 → Alot of Ortec failures	B.13-1	2:34	6.92	12.5	249	100	3.4	1.23	236 ± 1	0	✓ ? X
¹ ° noisy → Alot of Ortec failures (range bet 2.2-3.2 nA)	B.14-1	2:53	6.52	13.6	252	103	1.6	.66	258 ± 1	336 ± 128	✓ ok
"	B.15-1	3:13	7.36	12.7	292	95	2.1	1.00	244 ± 1	255 ± 172	✓ ok
"	sl.16-2	3:34	6.74	13.4	1407	237	3.8	.33	565 ± 1	369 ± 35	✓
ARC FELL OUT →	sl.16-3	4:06	7.09	8.9	1055	237	3.0	.25	551 ± 1	506 ± 37	✓ ¹ ° scanned O.K.
¹ ° appeared to stabilised but started gradually dropping from 3 nA → 1.8 nA (from scan 3 onwards)	B.16-	4:29	6.79	11.1	259	120	2.1	.80	247 ± 1	157 ± 166	✓ ok
¹ ° @ 2.9 nA grad → 2.6 nA	sl.18-1	4:49	7.02	12.1	1347	226	0.1	.06	558 ± 1	584 ± 38	✓
¹ ° stable 2.8 nA	B.17-1	5:09	6.93	11.3	451	186	1.6	.38	256 ± 1	268 ± 103	✓ ok
"	B.18-1	5:28	6.98	11.5	379	154	2.1	.62	252 ± 1	224 ± 123	✓ ok
¹ ° dropped sharply to 1.8 nA from scan 5 → 6.	sl.21-1	5:46	7.69	11.4	1239	187	2.5	.10	513 ± 1	498 ± 38	✓
¹ ° @ 3.0 nA	sl.20-1	6:05	7.01	12.5	1450	236	1.3	.10	556 ± 1	589 ± 32	✓
"	B.19-1	6:23	6.91	13.3	578	215	2.1	.45	244 ± 1	214 ± 96	✓ ok
¹ ° @ 2.9-3.0 nA	B.20-1	6:42	7.21	12.2	940	325	1.8	.24	253 ± 1	197 ± 67	✓ ok
¹ ° @ 2.9 nA	B.21-1	7:00	7.10	12.2	448	167	2.1	.57	244 ± 1	189 ± 109	✓ ok
"	sl.22-1	7:19	6.89	12.3	1384	236	1.2	.09	569 ± 1	606 ± 32	✓
"	B.22-1	7:38	7.60	11.8	536	165	47.0	9.63	230 ± 2	0	✓ X
"	B.23-1	7:57	6.91	12.0	497	202	6.7	1.15	245 ± 1	0	✓ Z
"	B.24-1	8:15	7.07	11.8	401	154	2.0	.58	251 ± 1	350 ± 104	✓ ok

