

UWA SHRIMP DATA LOG: ZIRCON U-Pb

Date: 12/4/95 UWA Mount No. 94-17 Whose sample? CHRIS YEATS Operator(s) IAN F

Indicate any change to the following: 196 204 bkg 206 207 208 238 248 254

Count time (secs): 2 ✓ 10 ✓ 10 ✓ 10 ✓ 40 ✓ 10 ✓ 5 ✓ 5 ✓ 2 ✓
 Delay time (secs): 6 ✓ 3 ✓ 1 ✓ 2 ✓ 1 ✓ 1 ✓ 3 ✓ 2 ✓ 2 ✓

expected 196-204 = 8.170 amu expected 204-bkg = 0.040 amu Dead-time = 36 nanosecs

actual 196-204 = 8.170 → 8.165 (note 3) actual 204-bkg = 0.040 → 0.045 expected resolution = >4200

Primary = 1.75 nA PESABM = 2.6 pA actual resolution = 4420

expected Primary : PESABM ≈ 1.50 ~ 50 actual Primary : PESABM = 6.7

Comments from Log-Book:

- ① moved Bkg to 0.045
- ② Scans taken ~10 min after analysis, Bkg back to 0.040 (Background counts are real)
- ③ Break for sample (rack) change. Scanned 196-204, moved 204 down 5 mmu (see scan)

Rejection over-ride	Sample/ Std ID	Time	196 cps	206 cps	U ppm	204Pb ppb	f ₂₀₆ %	204-corr. Age ±1σ (Ma) 206/238 207/206	Peak cent. OK?	
	sl-1a-1	(12:30) 11:45	10.1K	1103	220	2.1	0.18	571	✓	
	sl-1a-2	(12:55) 12:12	10.8K	1060	248	1.3	0.09 0.09	582	✓ ①	
	sl-1a-3	(13:18) 12:35	10.4K	1120	231	1.3	0.10	573	✓	
	uc-8-1x	(13:44) 13:00	10.3K	10.6K	447	165	1.25	2224 ± 4 2762 ± 3	✓ 204 problem ②	
	uc-7-1x	(14:25) 13:40	10.8K	5.0K	145	22	0.36	2842 ± 7 2909 ± 5	✓	
	sl-1a-4	(14:49) 14:03	10.5K	1067	232	<0	0	579	✓	
	sl-1a-5	(15:11) 14:30	10.0K	1130	235	2.4	0.19	577	✓	
	uc-7-2	14:50	Quit - high 204 (~80 counts)							
	uc-19-1	(15:43) 15:00	10.1K	21.6K	624	3900	17%	2329 ± 4 2280 ± 18	✓ ? on inclusion?	
	uc-12-4	(16:06) 15:22	11.3K	2190	112	314	14%	1323 ± 6 2703 ± 35	✓ ③	
	sl-1a-6	(16:49) 16:03	10.3K	1045	238	1.7	0.14	571	X (1 ThO)	
	uc-1-1x	(17:16) 16:30	10.2K	3.2K	96	3.2	0.07	2973 ± 10 2917 ± 5	✓	
	uc-20-1	(17:39) 16:55	10.7K	7.0K	274	177	1.8	2500 ± 5 2844 ± 6	✓	
	uc-21-1	(17:58) 17:18	10.8K	5.4K	200	3.0	0.04	2518 ± 6 2876 ± 4	✓	

This one was let run as a university piece not much better!

Rejection over-ride	Sample/ Std ID	Time	196 cps	206 cps	U ppm	204pb ppb	f206 %	204-corr. Age $\pm 1\sigma$ (Ma) 206/238 207/206		Peak cent. OK?
		(18:33)								
	u C-15-1x	17:47	10.1K	2.6K	85	3.4	0.09	2871 ± 10	2944 ± 6	✓
	sl/a-7	18:56	9.9K	1021	224	3.7	0.31	²⁰⁸ 572 ± 1	²⁰⁶ 569 ± 21	X TH(1)
1 ^o sl. unstable → Lots of Rejections	u C 6.1x	19:23	9.9K	5655	195	3.1	0.04	2761 ± 7	2942 ± 4	✓
	u C 6.2x	19:46	9.7K	11.7K	609	15.6	0.12	1771 ± 2	2371 ± 4	✓
1 ^o sl. unstable	u C 6.3x	20:10	9.6K	5.2K	199	8.9	0.10	2959 ± 8	2944 ± 4	✓
"	u C 5.1x	20:37	8.9K	258	10.2	<0	0	^{uncorr} 2479 ± 26	^{uncorr} 2718 ± 19	✓
	sl/a-8	21:01	10.0K	102	247	2.2	0.17	²⁰⁸ 566 ± 1	552 ± 21	✓
1 ^o sl. unstable	u C 5.3	21:27	8.2K	433	12.4	0.9	0.24	2182 ± 19	2566 ± 22	X 238(1) 254(1)
Saved w "u1"	u C 4.2	21:50	7.8K	5549	201	4.3	0.05	2840 ± 7	2935 ± 4	✓
	u C 23.1	22:14	8.1K	3852	171	57.9	0.86	2673 ± 8	2924 ± 7	✓
	u C 22.1	22:36	7.5K	3358	164	5.8	0.08	2950 ± 7	2955 ± 6	✓
1 ^o sl. unstable	sl/a-9	23:00	7.3K	866	223	4.0	0.34	²⁰⁸ 563 ± 1	449 ± 23	✓
MAGNET cut out → No COUNTS!	u C 2.1x	23:23								
had to cycle magnet & peak centre	sl/a-10	00:31	7.1K	783	220	0.8	0.11	572 572 ± 1	645 ± 22	254(1) Run 2
	sl/a-11		CANCELLED MAGNET TRIPPED OUT AGAIN							