

UWA DATA LOG: SHRIMP ZIRCON U-Pb

Date: 19/3/98 UWA Mount No. 98-02 Whose sample? BLAKE / AGSO Operator(s) STU / APRIL

What?

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 = 32 nanosecs
 actual 196-204 = 8.1877 actual 204-bkg = 0.045 expected resolution = >4200
 actual 206-207 = 1.001 actual 206-208 = 2.002 actual resolution = 5184

Primary = 3.2 nA PESABM = 37 pA actual Primary : PESABM (≈ 50:1) =
 Raster time (mins): 2 Raster aperture (microns): 100μ No. of scans: 5

Sensitivity ~ 16

Comments:

*10 stable. Stag ran away w/ A30-1, did stored positions out on X & Y values.
 3.2nA → 3.6nA w/ulst adj.
 NB Sample C: grain analyses 37 → 47 have no BSEMI Stand dev's n = 13 error % 1.45
 R = rounded grain E = euhedral F = fragment*

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 cps (k)	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.
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IRF ~ 1.1

	5-1	10:23	5.99	18.1	1635	220	0.2	0.03	572 ± 1	580 ± 21	208
	SL5-2	10:39	6.25	16.1	1697	218	-1.6	-	586 ± 1	501 ± 20	-
	SL5-3	10:53	6.24	17.7	1693	211	-1.3	-	556 ± 1	569 ± 19	-
	UA1-1	11:11	6.22	17.2	783	17.4	0.2	0.03	2711 ± 20	2745 ± 16	204 E
	UA2-1	11:28	6.16	16.0	3370	81.9	0.4	0.01	2743 ± 10	2726 ± 7	204 E
	UA3-1	11:43	6.28	16.5	3760	85.4	1.0	0.03	2696 ± 9	2709 ± 7	204 EF
	SL5-4	11:59	6.23	16.4	1622	213	-1.4	0.04	567 ± 1	549 ± 21	208
	UA4-1	12:17	6.15	16.5 93.7	3593 6.2	93.7	0.2	0.005	2716 ± 1	2713 ± 6	204 E
	UA5-1	12:32	6.22	15.3	1755	42.9	1.8	0.10	2767 ± 14	2699 ± 11	204 R
	UA6-1	12:47	6.23	16.2	2751	64.8	0.0	0.08	2713 ± 11	2715 ± 8	208 R
	UA7-1	13:04	6.12	16.3	3443	84.7	-0.6	-	2710 ± 10	2728 ± 7	- E

1° jumped to 3-4

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

Rejection over-ride	Sample/Std ID	Time - printout	UO/U	196 cps (k)	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238 207/206	Corr.
	sl 5-5	13:21	6.15	17.6	1637	213	0.7	0.03	560 ± 1 592 ± 21	208
	sl 5-6	13:35	6.08	17.8	1622	219	-1.0	0.01	556 ± 1 632 ± 21	208
	uA8-1	13:52	6.29	16.1	3589	85.4	1.5	0.05	2633 ± 9 2695 ± 7	204 R
	uA8-2	14:10	6.33	16.1	2949	66.3	-0.9	0.06	2713 ± 11 2697 ± 8	208 R
	uA9-1	14:24	6.30	13.8	3140	81.2	0.6	0.09	2768 ± 11 2716 ± 7	204 R
	uA10-1	14:42	6.09	14.7	3207	88.8	0.9	0.03	2724 ± 10 2708 ± 7	204 E
	uA11-1	14:57	6.40	14.0	3025	74.5	1.2	0.04	2741 ± 11 2724 ± 8	204 R
	sl 5-7	15:13	6.09	19.2	1771	214	-0.2	-	570 ± 1 645 ± 19	-
	uA12-1	15:29	6.18	14.8	2822	71.8	-0.2	-	2798 ± 11 2707 ± 7	- R
	uA13-1	15:50	6.02	17.9	4624	108	2.9	0.07	2745 ± 9 2805 ± 6	204 R
	uA14-1	16:06	6.14	18.8	3113	67	0.7	0.03	2689 ± 10 2714 ± 8	204 RF
	uA15-1	16:22	6.07	18.9	4701	101	-0.8	-	2743 ± 8 2716 ± 6	- SR
	sl 5-8	16:40	6.06	20.1 181	1851	216	1.6	0.14	574 ± 1 495 ± 42	204
	uA16-1	16:55	6.10	19.3	5421	116	0.2	0.005	2687 ± 8 2707 ± 5	204 E
	uA17-1	17:08	6.17	17.8	3747	81.8	-	-	2737 ± 9 2709 ± 6	- E
	uA18-1	17:24	6.01	19.2	4182	95.5	1.6	0.04	2657 ± 8 2716 ± 7	204 E
	uA19-1	17:41	6.02	20.7	3723	77.8	0.5	0.02	2681 ± 9 2722 ± 9	204 E
	uA20-1	17:55	5.93	19.4	1713	40.2	0.9	0.06	2675 ± 13 2717 ± 11	204 F
	sl 4-2	18:11	6.10	19.2	1871	220	-0.1	0.09	579 ± 1 530 ± 20	208
	uA21-1	18:30	5.99	19.6	2468	65.4	-	-	2718 ± 10 2720 ± 7	- R
	uA22-1	18:44	6.08	18.1	5480	128	0.4	0.008	2663 ± 7 2711 ± 5	204 E
	uA23-1	18:58	6.19	18.6	4047	92	1.8	0.05	2524 ± 8 2969 ± 6	204 E
	uA24-1	19:12	6.09	13.0	5474	126	0.7	0.01	2688 ± 8 2717 ± 6	204 E
	uA25-1	19:26	5.92	15.6	2250	66	-	-	2672 ± 11 2694 ± 8	-
	sl 4-2	19:43	6.03	20.0	1833	222	-	-	566 ± 1 593 ± 19	-

unstable - spiky
 3.0 nA dropped
 3.2 nA →
 3.4
 3.6

slightly lower than uA
 initial / at layer start

3.6

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Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 cps (μ)	206 cps	U ppm	204Pb ppb	f206 %	Age $\pm 1\sigma$ (Ma) 206/238 207/206		Corr.
	uA26-1	19:59	6.00	19.8	3288	72.7	-	-	2668 \pm 10	2720 \pm 7	-
	uA27-1	20:14	6.07	20.0	2825	59.2	0	-	2692 \pm 10	2730 \pm 7	-
	uA28-1	20:31	6.10	19.4	4030	87.1	0.7	0.02	2640 \pm 9	2719 \pm 7	204
	uA29-1	20:45	6.26	20.7	5238	101	0.7	0.02	2572 \pm 7	2717 \pm 6	204
	uA30-1	21:14	6.20	19.7	5614	113	-	-	2671 \pm 7	2717 \pm 5	-
	SL4-3	21:29	6.09	19.6	1873	222	-	-	568 \pm 1	529 \pm 19	-
	uA31-1	21:44	5.91	10.0	1163	50.4	1.1	0.05	2808 \pm 17	2749 \pm 12	204
	uA32-1	22:02	6.35	19.7	6278 2902	118 888	-0.4	-	2648 \pm 9 2770\pm10	2721 \pm 5	-
	uA33-1	22:11	6.26	18.6	2902	58.8	-	-	2700 \pm 10	2721 \pm 7	-
	uA34-1	22:34	6.04	14.9	2784	75	-	-	2821 \pm 11	2704 \pm 7	-
	uA35-1	22:52	6.11	20.3	2936	60.2	-0.5	0.03	2658 \pm 10	2701 \pm 9	208
	SL4-4 uA36	23:08	6.14	19.8	1917	218	0.3	0.03	573 \pm 1	484 \pm 22	204
	uA36-1	23:22	6.15	19.3	3516	73.8	0.7	0.03	2668 \pm 9	2707 \pm 7	204
	uA37-1	23:41	6.04	18.8	1278	28.7	0.2	0.02	2702 \pm 16	2700 \pm 11	204
	uA38-1	23:56	6.00	17.5	2724	66.9	-	-	2709 \pm 11	2728 \pm 7	-
	uA39-1	24:14	6.09	19.8	3365	71.4	-1.8	0.02	2656 \pm 9	2745 \pm 7	204
	uA40-1	24:33	6.14	19.0	4583	106	-	-	2642 \pm 8	2707 \pm 6	-
	SL4-5	24:50	6.04	19.4	1852	228	0	0.04	568 \pm 1	542 \pm 20	208
	uC38-1	1:06	6.39	23.0	3919	70.8	0.7	0.03	2355 \pm 7	2729 \pm 7	204
	uC35-1	1:21	6.01	21.4 188	6152 245	136	-0.5	-	2496 \pm 6	2662 \pm 5	-
	uC37-1	1:36	6.08	20.4	2464	51.6	-	-	2632 \pm 11	2655 \pm 5	-
	uC38-1	1:51	6.10	19.7	4575	97.1	1.9	0.05	2645 \pm 8	2723 \pm 6	204
	uC39-1	2:08	6.06	20.6	4429	96.7	0.3	0.009	2538 \pm 8	2668 \pm 6	204
	SL4-6	2:24	6.12	19.8	1799	217	0.8	0.04	546 \pm 1	623 \pm 20	208
	uC33-1	2:38	5.79	20.6	1717	43.3	-0.4	0.17	2561 \pm 12	2661 \pm 12	208

NB 34~~7~~ BSEMI, high U / 204Pb grain.NB/C 37-1 } no BSEMI image
C38-1 }
C39-1 }

[C]

Rejection over-ride	Sample/ Std ID	Time - printout	UO/U	196 cps (k)	206 cps	U ppm	204Pb ppb	f206 %	Age ±1σ (Ma) 206/238	207/206	Corr.
	UC4-1	2:55	5.91	21.7	3245	73.5	1.2	0.05	2530 ± 9	2649 ± 8	204
	UC5-1	3:09	6.54	16.8	4178	154	-1.1	16.8	1332 ± 4	372 ± 70	208
	UC40-1	3:26	6.16	19.1	3552	76.4	-1.2	0.10	2624 ± 9	2659 ± 10	208
	UC41-1	3:40	6.01	20.2	2552	55.9	-	-	2645 ± 9	2655 ± 8	-
	SL4-7	3:57	6.04	19.7	1798	222	0.4	0.04	562 ± 1	521 ± 32	204
	UC2-1	4:13	6.09	20.8	2578	52.7	0.3	0.02	2630	2652 ± ?	204
	UC1-1	4:27	6.09	20.7	1982	41.4	-	-	2606 ± 12	2662 ± 9	-
	UC42-1	4:43	6.07	20.8	2543	52.9	0.4	0.02	2627 ± 11	2664 ± 8	204
	UC43-1	4:58	6.00	20.8	2248	49	0.2	0.01	2599 ± 11	2659 ± 9	204
	UC44-1	5:21	6.23	19.4	7648	157	0.1	0.002	2627 ± 6	2676 ± 5	204
	SL6-2	5:37	5.95	20.7	1783	223	-0.2	0.03	552 ± 1	587 ± 20	208
	UC11-1	5:53	6.09	21.5	3634	105	0.2	0.009	1913 ± 5	2566 ± 7	204
	UC12-1	6:08	6.23	21.1	23.03	44.4	0.1	0.005	2571	2664	204
	UC45-1	6:22	6.01	20.5	2439	53.1	0.9	0.05	2617 ± 11	2654 ± 9	204
	UC8-1	6:42	6.21	19.5	2358	47.6	-	-	2662 ± 11	2634 ± 8	-
	UC7-1	6:57	6.21	20.5	5996	149	0.5	0.01	2152 ± 5	2671 ± 5	204
	SL6-3	7:13	6.02	20.6	1842	219	-0.4	0.01	562 ± 1	575 ± 20	208
	UC46-1	7:24	6.11	20.4	3201	68.7	-	-	2552 ± 9	2686 ± 7	-
	UC47-1	7:43	6.11	20.0	2622	55.7	-	-	2614 ± 10	2661 ± 8	-
	UC28-1	8:00	5.97	20.5	3282	75.9	-	-	2544 ± 9	2662 ± 7	-
	SL6-4	8:16	6.06	20.4	1823	210	-	-	570 ± 1	539 ± 19	-

3.6nA

1 sec

last 4 sec

7

5

into unit

3.6nA.

BSEMI
C3 - fractured turbid grain.
C10