

SHRIMP data acquisition logsheet

SHRIMP ~~A~~ or B

Zircon or ~~Xenotime~~

Date	Sample/Mount(s)	Sample owner	SH operator	Night-runner(s)
8/12/10	06-30 (10-25=BU)	Sanna (Joas)	McW	Serena

Deadtime.....25 ns Kohler aperture.....100 Retard...13.9 volts Resoln...509.6

Primary O₂ on: epoxynA standard2.3 nA PostESA BM on std

Raster: Time (mins)2 Aperture120 No. of scans5

Zircon/Badd.	196	204	Bk	206	207	208	238	248	254
Count time (secs)	2	10	10	10/20	30/10	105	5	5	2
Delay time (secs)	8	4	2	4	43	2	3	42	42
Peak centring time (secs)	3	-	-	44	-	-	3	3	2
Xenotime	194	204	Bk	206	207	208	238	248	254
Count time (secs)	2	10	10	10/20	30/10	5	5	5	2
Delay time (secs)	8	3	2	4	2	2	3	3	3
Peak centring time (secs)	1	-	-	6	-	-	4	3	2

Offsets					
Zircon/Badd.	196-204	204-Bk	204-206	206-207	206-208
Expected offset	8.170	0.045	2.001/9	1.001/5	2.001/9
Setup offsets	8.159	.040	~2.004	1.004	2.006
Xenotime	194-204	204-Bk	204-206	206-207	206-208
Expected offset	10.143	0.045	2.001/9	1.001/5	2.001/9
Setup offsets					

Standards

Zircon: BR266 206/238 age = 559 Ma; 903 ppm U
 TEM2 206/238 age = 416.78 +/- 0.33 Ma; U = variable
 OGC-1 207/206 age = 3467 +/- 3 Ma; U = variable

Xenotime: MG-1 206/238 age = 490 Ma; notionally 1000 ppm U
 BS-1 206/238 age = 509 Ma;
 Xeno-1 207/206 age = 997 Ma;

0630

BR.

"

PH

BR

A

A

A

A

BR

A

A

A

A

A

BR

A

UNK.2-2

UNK.3-2

UNK.4-2

UNK.5-2

UNK.6-2

43-2

42-2

BR

A

BR

A

4-2

2-2

1-3

19-2

BR

A

Filename	Time	UO/U	196	206	f206	U	Sensit-	Age/Ma	Age/Ma	Check	SBM
		254/238	Keps	-cps-	(%)	ppm	ivity	206/238	207/206	offsets	%
Alternatives		UO2/UO	Reference			254/270		Pb/U ratio	207/206		
		270/254	Keps			Keps					
1-1	10:08	6.23	16	3500	-	903	23.2	559±3	570±25	✓	2.5
1-2	10:23	6.27	17	3600	.07	892	24.2	560±5	553±20	✓	2.8
1-1	10:40	3.82	28	1000	.06	87	23.9	1729±17	2057±22	✓	1.8
1-3	10:56	6.28	17	3700	.03	891	24.7	556±4	558±20	✓	1.9
53-1	11:16	6.31	17	1800	.11	81	24.2	2577±29	2605±19	✓	2.5
8-2	11:32	6.70	13	4000	.01	188	20.8	3178±40	3311±7	✓	2.4
6-2	11:49	6.08	16	2400	.16	100	21.9	3060±33	3184±10	✓	1.9
7-2	12:12	6.26	17	6300	-	230	23.8	3144±38	3166±5	✓	2.5
1-4	12:27	6.19	16	3400	-	929	22.5	551±3	568±15	✓	2.2
5-2											
18-2	12:57	6.26	17	1600	.02	54	23.2	3258±69	3327±12	✓	2.2
UNK1-2	13:17	6.51	18	5600	.49	208	26.2	2854±21	3489±8	✓	3.0
14-2	13:33	6.29	17	3800	1.17	163	24.3	2668±23	3241±9	✓	1.8
14-3											
15-2	13:56	6.36	16	3400	.34	173	23.2	2409±24	2592±13	✓	4.4
1-5	14:12	6.20	18	3000	.05	901	24.1	547±4	536±27	✓	2.7
UNK.2-2											
UNK.3-2	14:35	6.56	15	3600	0.05	139	25.2	3098±27	3262±6.1	✓	12.4
UNK.4-2											
UNK.5-2	14:57	6.46	14	1800	0.48	101	23.5	2385±30	2612±4	✓	3.0
UNK.6-2	15:13	6.37	15	2100	0.02	108	23.9	2516±33	2600±11	✓	2.1
43-2	15:31	6.21	15	1000	0.04	38	22.4	3375±71	3472±15	✓	5.6
42-2	15:46	6.34	15	3800	0.01	150	23.5	3127±28	3181±8	✓	3.6
1-6	16:02	6.31	14	3200	0.15	941	21.8	556±5	532±23	✓	2.7
3-2											
1-7	16:39	6.28	14	3100	0.04	957	20.8	560±3	547±25	✓	2.0
3-2	16:54	6.16	15	3100	0.06	124	21.4	3310±38	3177±10	✓	2.2
4-2	17:10	6.29	15	2800	0.05	105	23.5	3258±42	3298±7	✓	2.3
2-2	17:26	5.48	18	2900	0.01	152	22.7	3188±-	3351±-	✓	1.6
1-3											
19-2											
1-8	17:53	6.18	17	3400	0.00	927	23.9	530±-	552±-	✓	2.3
53-1	18:22	6.29	15	5300	0.02	213	22.7	3128±32	3275±5	✓	2.1

Offsets: 196-204 = 8.159 204-Bkg = .040 204-206 = ~2.00% 206-207 = 1.004 207-208 = ~1.002

0630A → Next = 53
0630B → " 49

Filename	Time	UO/U	196	206	f206	U	Sensit-	Age/Ma	Age/Ma	Check
		254/238	Keps	-cps-	(%)	ppm	ivity	206/238	207/206	offsets
Alternatives		UO2/UO	Reference			254/270		Pb/U ratio	207/206	
		270/254	Keps			Keps				
A 54-1	18:39	6.20	16	1700	0.06	86	22.8	2508±37	2636±14	✓
55-1	18:54	6.37	16	1700	0.04	60	24.1	3260±41	3291±8	✓
56-1	19:14	6.30	16	5100	0.052	184	23.6	3271±50	3262±31	✓
57-1	19:40	6.28	17	1600	0.10	56	24.7	3170±50	3169±14	✓
BR 1-9	19:55	6.39	15	3400	0.00	940	23.0	548±-	597±-	✓
A 58-1	20:12	6.13	14	2400	0.07	107	23.7	3150±36	3314±7	✓
59-1	20:36	6.36	17	3700	0.48	154	25.9	2726±36	3287±0	✓
60-1	20:51	6.26	16	4100	0.07	157	24.0	3146±29	3170±8	✓
61-1	21:08	6.02	13	1100	0.15	62	17.8	2862±47	3343±5	✓
62-1	21:24	6.18	12	8900	0.15	498	17.6	2843±36	322±10	✓
BR 1-10	21:41	6.20	14	3100	0.03	949	20.5	551±5	559±31	✓
B 15-2	22:02	5.97	19	1800	1.84	71	26.1	2716±30	3000±6	✓
14-2	22:20	5.89	17	2900	3.90	18	23.4	2049±25	2499±29	✓
11-2	22:37	6.25	16	2000	0.13	74	23.8	3177±57	3298±	✓
13-2	aborted due to high 204									
16-2	23:06	6.45	15	6500	0.08	283	23.8	2798±23	2910±9	✓
17-2	23:17	6.04	17	2500	0.51	94	23.2	3179±49	3380±8	✓
BR 1-11	23:32	6.39	15	3300	0.03	948	22.5	530±3	547±17	✓
18-2	23:50	6.20	16	7100	0.13	264	23.0	3166±30	3324±6	✓
12-2	00:11	6.52	18	6900	0.23	269	26.8	2712±20	3253±7	✓
10-2	aborted due to high 204									
1-2	00:31	6.33	16	2900	0.07	101	23.4	3280±46	3342±0	✓
3-2	00:49	6.70	15	6300	0.60	378	23.4	2081±22	2504±10	✓
2-3	01:05	6.52	13	4900	0.56	410	20.5	1779±11	2401±1	✓
BR 2-1	01:21	6.27	16	3400	0.04	871	23.2	560±3	551±21	✓
B 7-2	01:37	6.67	17	6500	0.60	375	24.8	2002±14	2464±8	✓
8-2	01:53	6.13	16	3200	2.14	176	21.6	2309±9	2516±7	✓
9-2	grain destroyed									
5-2	aborted due to high 204									
6-2	02:16	6.40	18	5400	0.20	278	24.8	2203±13	2492±8	✓
4-1	02:39	6.39	20	5300	1.41	687	28.2	858±9	1988±17	✓
49-1	03:00	6.24	16	3100	0.05	153	22.1	2462±35	2550±9	✓
BR 2-2	03:15	6.16	16	3300	0.04	909	21.5	556±4	560±17	✓

labeled as 15-1

Offsets: 196-204 = 204-Bkg = 204-206 = 206-207 = 207-208 =

Filename	Time	UO/U 254/238	196 Kcps	206 -cps-	f206 (%)	U ppm	Sensit- ivity	Age/Ma 206/238	Age/Ma 207/206	Check offsets	
<i>Alternatives</i>		<i>UO2/UO 270/254</i>	<i>Reference Kcps</i>			<i>254/270 Kcps</i>		<i>Pb/U ratio</i>	<i>207/206</i>		
B 50-1	04:00	6.27	17	2900	0.25	99	23.2	3233±37	3427±7	✓ 2.6	
51-1	04:31	6.06	19	4400	0.17	143	23.9	3232±47	3349±8	✓ 1.9	
52-1	04:59	6.22	18	2400	0.03	94	23.4	2844±57	2917±15	✓ 1.7	
53-1	05:21	6.42	18	3900	0.08	121	24.1	3295±47	3363±6	✓ 1.8	
54-1	05:41	6.10	19	5300	0.06	155	24.5	3385±42	3380±29	✓ 1.3	
BR 2.3	05:57	6.22	16	3400	0.02	900	21.5	551±4	584±19	✓ 3.1	
mislabeled as B 5-1	B 55-1	06:17	5.40	5.1	420	0.08	75.7	5.7	2645±6	3392±27	✓ 2.2
56-1	06:33	6.31	18	2300	0.05	75.1	24.2	3183±60	3206±10	✓ 2.4	
57-1	06:48	6.05	18	1500	0.18	558.0	22.7	3004±39	2990±15	✓ 2.5	
58-1	07:14	6.09	16	1500	0.00	69	20.5	2809±-	3020±-	✓ 1.8	
59-1	07:29	6.03	18	2300	0.46	78	23.4	3183±35	3316±9	✓ 2.4	
BR 2.4	07:45	6.16	18	3700	0.02	865	23.2	551±4	577±22	✓ 2.7	
B 60-1	08:10	5.89	19	1600	0.96	73	23.2	2495±6	2885±22	✓ 3.4	
61-1	08:30	6.07	18	1100	0.06	34	23.3	3404±6	3356±20	✓ 2.6	
BR 2.5	08:46	6.21	17	3500	.02	899	21.8	548±3	529±20		
FINISH											

Offsets: 196-204 = 204-Bkg = 204-206 = 206-207 = 207-208 =