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8/9/13 San 316

E+2θ Calibration (Al_2O_3) SAN_315_0029.med

~~0638~~ 1833 SAN_316_0001.med open press olivine, 600s 320s

2244 Press closed, sample a bit left of center onscreen.

2247 McP to 20% begin pressurization to 80T

2320 4.5T, McP to 12%

2344 4.2T McP to 18%

8/10 0040 9T must have load to close a gap.
37.5% of stroke used up.

0049 16.7T McP to 12%
Tried to run differential rams out, main ram pressure drops, sample length drops

0117 15T McP to 16%

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8/10/13 San 316 Continued

0131 20.4T McP to 8%

0202 34.2T McP to 6%

0226 44.0T

0241 51.6T McP to 4%

0304 57.4T lot of pressure in Diff Rams, but sample length is stable.

~~0341~~?

0414 77.8T Logger Started, 10s interval

0423 @ 80T

0426 Begin heating to 1100°C (~291W)

0500 Centered in x @ 22.2 mm

0505 Jog diff Rams gently. Already near 36% of Main Ram T

0507 .0002.mod, 600s, mid of1 (27.45, -8.781, 0.2, 0) image #2 l_0 = 0.998
x, y, z range, y-r

0521 Diff Rams Forward. Begin Step (1), (80T, 1100°C, 0.0012 mm/s)

0523 .0003.mod, 600s, mid of1 (27.45, -8.781, 0.2, 0) image #3 l_0 = 0.996

0535 .0004 " " (") #4 l_0 0.992

0546 .0005 " " (") #5 l_0 = 0.996

0602 .0006 " " (") #6 l_0 = 0.997

0616 .0007 " " (") #7

? .0008 #8

0.4

0640 0009 " " 27.50 -8.782 0.2, 0 9

0649 * strain definitely too high. Change ram speed 0.0012 → 0.0006 mm/s

0651 0010 all same #10

0701 0011 all same 11 0.940

0711 — — 12 0.936

* done as a group with DiffImageScanPrinting ML routine

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8/10/13 san316 (cont)

	12				
0746	00 ~~11~~ med	mid d	600s	(27.55, -8.792, 0.4, 0.0 ± range, ± range) image #	13
0756(+1?)	~~12~~ 13	"		all same	14
0806(+1?)	~~13~~ 14	"		"	15
0819	~~14~~ 15	"		"	16 I_{0c} = 0.915
0831	16	"	"	-8.811	17
0841	17				18
0851	18				19
0929	19			(27.55, -8.872, 0.4, 0.0)	20
0939	20				21
0950	21				22
1004	adjust beam spot back to sweet spot on monitor : ~~B~~ Det ~~table~~ table y +30μm, z − 20μm				
1005	22			- all same	23
1015	23				24
1025	24				25
1036	25				26 I_{0c} = 0.874
1046	26				27
1056	27				28
1110	28				29
1120	29				30
1130	30				31
1146	31			(27.60, -8.851, 0.4, 0.0)	32 I_{0c} = 0.849
1156	32				33
1207	33				34
1219	34			27.65, -8.870	35
1229	35				36
1239	36				37
1252	37			27.70 -8.90	38
1302	38				39
1312	39				40 0.833
1324	40			-8.91	41
1334	41				42
1345	42				43 0.820

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10/13 San 314 Continued

Furnace Log

t	T (°C)	W	m-Ω
0430	RT	0	0
0433	~500	151	41
0433	600	175	39
0435	700	203	37
0435	800	225	~36
0436	900	252	35
0437	1000	273	34
0438	1100		
0658	"	291	33
1221	"	"	32

Notes:

Roughly following San 280

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8/10/13 Sam 316 (cont.)

1355	43	all same	44
1406	44		45
1416	~~45~~		~~46~~
~~1426~~	Note Beam is down. (Actually beam is OK; it's in X17B1!)		Fixed by beam guys
1439	44	(27.70, -8.910, 0.4, 0.0)	46
1449	45		47 ℓ_d = ~~0.19~~ 0.200
1500	46		48
1512	47	27.75	49 0.791
1522	48		50
1533	49		51 0.781
1550	50	-8.939, 0.3 (*)	52
1600	51	(*) oops -- only for 1/3 + 2/3 in group; 3/3 st. II 0.4	53
~~1610~~	52		54 ~~0.777~~
1640	53	Check x centering, still @ 22.2	55
1653	54		56
1703	55		57
1715	56	all same	58
1725	57		59
1735	58		60
1749	Adjust detector table z -20μm to get back on spot		
1752	59	27.80, -8.96, 0.3 (**) (**) for 3/3 also	61
1802	60		62
1812	61		63 ℓ_d = 0.725
1824	62		64
1834	63		65
1844	64		66 0.711
1854	65		67
1908			68
1954	66	all same	69 0.686
2004	67		70 ~~0.68~~
2020	Intermittent -- stop diff runs w/in ~30s; guard probably immediately but absolutely w/in 90s, stop diffraction after ~90s, stopped MCP from recovering w/in ~90s (lost ~10T)		
~2014	68 (messed up)		71

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8/10/13 run 3/4 (cont)

2027 Image #72 after blowout

2028 MeP to -4%

2033 Run diff ramp out -0.002 mm/s Sample onscreen ~76 mm

2107 45.5T Sample onscreen ~77 mm

2301 9.0T MeP to -6% ~79 mm

2326 2.9T MeP to -8% ~80 mm

2341 0.8T MeP to -10%

11/13 0034 Press open. Image #73: You can see that the "flash" or "wrap" is well to the right side of the sample: this is where we were taking patterns

0043 Im #74 Sample turned 90°

0116 Al_2O_3 x-centering scan shows beautiful alignment saved in ppt) file in folder.

0121 Al_2O_3 E-2θ scan .0069.med 600s

No anvils broken, even after blowout!

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