

Reflectivity Measurements on WHT M1 and Reference Mirror

Checking consistency of SMS Reflectivity meter on WHT Primary and Reference Mirror

First take measurements without cleaning either the reference mirror or SMS head beforehand

	Lambda	Incident Angle	BW Limits	Θs->	Φs->						
	0.67	25	1	0	0						
						180 REFL					
							RMS(Å)	TIME	DATE		
Ref Mirror	8.42E-003	4.10E-003	0.883				65.6	11:36:37	06/10/10		
2	8.44E-003	4.11E-003	0.883				65.7	11:36:41	06/10/10		
3	8.44E-003	4.11E-003	0.884				65.7	11:36:46	06/10/10		
4	2.02E-003	1.36E-003	0.900				31.5	11:36:54	06/10/10		
5	2.03E-003	1.37E-003	0.902				31.5	11:36:58	06/10/10		
6	2.03E-003	1.37E-003	0.900				31.5	11:37:03	06/10/10		
7	1.77E-003	1.01E-003	0.904				29.5	11:37:11	06/10/10		
8	1.77E-003	9.91E-004	0.905				29.5	11:37:15	06/10/10		
9	1.77E-003	9.93E-004	0.905				29.5	11:37:20	06/10/10		
10	4.79E-003	2.46E-003	0.896				49	11:37:27	06/10/10		
11	4.80E-003	2.47E-003	0.896				49	11:37:32	06/10/10		
12	4.64E-003	2.48E-003	0.896				48.1	11:37:38	06/10/10		
13	2.00E-003	1.36E-003	0.903				31.3	11:37:47	06/10/10		
14	2.25E-003	1.48E-003	0.903				33.2	11:37:53	06/10/10		
average ref			0.897								
Primary Mirror	6.83E-003	3.30E-003	0.805				61.9	11:44:50	06/10/10		
16	6.77E-003	3.29E-003	0.805				61.6	11:44:56	06/10/10		
17	6.75E-003	3.20E-003	0.805				61.6	11:45:02	06/10/10		
18	6.51E-003	2.37E-003	0.812				61.6	11:45:15	06/10/10		
19	6.46E-003	2.36E-003	0.811				61.4	11:45:20	06/10/10		
20	6.44E-003	2.34E-003	0.810				61.3	11:45:26	06/10/10		
21	4.72E-003	1.88E-003	0.822				51.6	11:45:35	06/10/10		
22	4.70E-003	1.89E-003	0.823				51.5	11:45:40	06/10/10		
23	4.69E-003	1.89E-003	0.822 Port 1				51.4	11:45:45	06/10/10		
24	7.64E-003	3.56E-003	0.824				64.9	11:46:50	06/10/10		
25	7.64E-003	3.57E-003	0.825				64.8	11:46:54	06/10/10		
26	7.63E-003	3.56E-003	0.825				64.8	11:46:59	06/10/10		
27	8.12E-003	3.17E-003	0.781				69.6	11:47:14	06/10/10		
28	8.08E-003	3.15E-003	0.782				69.4	11:47:19	06/10/10		
29	8.10E-003	3.15E-003	0.782				69.5	11:47:24	06/10/10		
30	6.82E-003	2.46E-003	0.809				63.2	11:47:37	06/10/10		
31	6.82E-003	2.45E-003	0.809				63.2	11:47:42	06/10/10		
32	6.82E-003	2.45E-003	0.809 Port 2				63.2	11:47:47	06/10/10		
33	4.64E-003	1.78E-003	0.802				52	11:48:53	06/10/10		
34	4.62E-003	1.78E-003	0.803				51.9	11:48:58	06/10/10		
35	4.61E-003	1.78E-003	0.805				51.7	11:49:03	06/10/10		
36	8.11E-003	4.93E-003	0.800				67	11:49:14	06/10/10		
37	8.09E-003	4.93E-003	0.799				67	11:49:19	06/10/10		
38	8.09E-003	4.93E-003	0.801				66.9	11:49:24	06/10/10		
39	4.66E-003	1.75E-003	0.805				52.2	11:49:42	06/10/10		
40	4.65E-003	1.75E-003	0.805				52.1	11:49:48	06/10/10		
41	4.64E-003	1.75E-003	0.804 Port 3				52	11:49:53	06/10/10		
42	5.19E-003	2.36E-003	0.799				54.4	11:50:49	06/10/10		
43	5.19E-003	2.36E-003	0.798				54.4	11:50:53	06/10/10		
44	5.19E-003	2.35E-003	0.798				54.4	11:50:58	06/10/10		
45	5.19E-003	2.34E-003	0.796				54.5	11:51:05	06/10/10		

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46	5.18E-003	2.34E-003	0.792	54.6	11:51:10	06/10/10
47	5.18E-003	2.34E-003	0.793	54.5	11:51:15	06/10/10
48	6.29E-003	2.66E-003	0.792	60.4	11:51:30	06/10/10
49	6.24E-003	2.65E-003	0.793 all ok	60.1	11:51:35	06/10/10
50	6.21E-003	2.65E-003	0.793 Port 4	60	11:51:40	06/10/10
51	6.92E-003	2.43E-003	0.799	64.3	11:51:50	06/10/10
52	6.88E-003	2.43E-003	0.801	64	11:51:55	06/10/10
53	6.87E-003	2.43E-003	0.800	64	11:52:00	06/10/10
54	7.55E-003	3.34E-003	0.796	65.8	11:53:06	06/10/10
55	7.52E-003	3.34E-003	0.796	65.7	11:53:11	06/10/10
56	7.50E-003	3.34E-003	0.796 Port 4	65.6	11:53:16	06/10/10
57	6.85E-003	3.07E-003	0.790	62.9	11:53:27	06/10/10
58	6.82E-003	3.07E-003	0.791	62.7	11:53:32	06/10/10
59	6.81E-003	3.07E-003	0.791	62.6	11:53:37	06/10/10
60	9.96E-003	5.38E-003	0.803	74.4	11:53:48	06/10/10
61	1.00E-002	5.39E-003	0.802	74.7	11:53:53	06/10/10
62	1.50E-003	8.52E-004	0.889	27.4	11:58:48	06/10/10
63	1.49E-003	8.58E-004	0.888	27.4	11:58:52	06/10/10
64	1.49E-003	8.62E-004	0.887 Port 1	27.3	11:58:57	06/10/10
average M1			0.807	similar to May 20 th		
Measurements of Reference Mirror again						
65	1.48E-003	1.18E-003	0.903	26.9	11:59:04	06/10/10
66	1.52E-003	1.28E-003	0.903	27.3	11:59:10	06/10/10
67	1.53E-003	1.03E-003	0.905	27.4	11:59:15	06/10/10
68	1.54E-003	1.03E-003	0.904	27.4	11:59:20	06/10/10
69	1.54E-003	1.04E-003	0.904	27.4	11:59:26	06/10/10
70	1.54E-003	1.04E-003	0.904	27.5	11:59:31	06/10/10
71	1.55E-003	1.05E-003	0.904	27.5	11:59:37	06/10/10
72	7.86E-003	1.51E-003	0.903	72.6	11:59:42	06/10/10
73	7.84E-003	1.52E-003	0.905	72.3	11:59:47	06/10/10
74	5.34E-003	1.28E-003	0.904	56.5	11:59:52	06/10/10
75	3.85E-003	2.57E-003	0.900	43.4	12:00:04	06/10/10
76	3.34E-003	2.57E-003	0.900	40.5	12:00:10	06/10/10
			0.903	Similar value to that before M1 measurements		
Now try manual air blower on SMS Head						
after blower	2.02E-003	1.16E-003	0.864	32.3	12:07:46	06/10/10
78	1.91E-003	1.07E-003	0.861	31.4	12:07:51	06/10/10
79	1.91E-003	1.07E-003	0.861	31.4	12:07:56	06/10/10
80	2.79E-003	1.18E-003	0.824	39.5	12:08:04	06/10/10
81	2.80E-003	1.19E-003	0.823	39.5	12:08:09	06/10/10
82	2.61E-003	1.13E-003	0.822	38.1	12:08:15	06/10/10
83	1.41E-003	8.79E-004	0.834	27.4	12:08:23	06/10/10
84	1.41E-003	9.56E-004	0.834	27.3	12:08:28	06/10/10
85	1.42E-003	9.78E-004	0.834	27.4	12:08:32	06/10/10
%R values too low, try air blower again.			0.840			
blew again	3.41E-003	2.24E-003	0.914	40.6	12:09:47	06/10/10
87	3.40E-003	2.24E-003	0.914	40.6	12:09:52	06/10/10
88	3.41E-003	2.24E-003	0.914	40.6	12:09:57	06/10/10
89	3.40E-003	2.24E-003	0.916	40.5	12:10:02	06/10/10
90	2.64E-003	9.82E-004	0.918	36.8	12:10:10	06/10/10
91	2.65E-003	9.84E-004	0.921	36.8	12:10:14	06/10/10
92	2.65E-003	9.82E-004	0.919	36.9	12:10:19	06/10/10
93	1.27E-003	8.67E-004	0.913	24.7	12:11:14	06/10/10

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94	1.27E-003	8.75E-004	0.914	24.8	12:11:18	06/10/10
95	1.28E-003	8.83E-004	0.913	24.8	12:11:23	06/10/10
96	2.43E-003	1.29E-003	0.922	34.3	12:11:31	06/10/10
97	2.44E-003	1.30E-003	0.920	34.5	12:11:37	06/10/10

Average after blowing

0.917

Result: Reference mirror significantly higher than recently, conclude that blower has been effective.