

Before Co2

SMS uScan Measurements from immediately BEFORE Co2 cleaning
 Made a pair of measurement at each position, to check consistency
 Excluded pairs which differ by more than 2% from Reflectivity average
 April 7, 2010

Lambda	0.67						
Incident Angle	25						
BW Limits	1	0.01					
Θs->	0	50					
Φs->	0	180	REFL	pair	chk	RMS(Å)	TIME
							DATE
	1	9.28E-003	3.25E-004	0.001		>1177	10:08:12 04/07/10
	2	9.38E-003	3.34E-004	0.001		>1177	10:09:40 04/07/10
sensor cover on	9.38E-003	3.35E-004	0.001			>1177	10:09:53 04/07/10
	4	8.36E-003	3.28E-003	0.800		69.8	10:11:51 04/07/10
	5	8.36E-003	3.28E-003	0.804	-0.004	69.6	10:11:56 04/07/10
	6	6.72E-003	2.65E-003	0.813		62	10:12:11 04/07/10
	7	6.72E-003	2.64E-003	0.811	0.002	62.1	10:12:16 04/07/10
	8	7.68E-003	4.92E-003	0.812		64.7	10:12:25 04/07/10
	9	7.70E-003	4.96E-003	0.811	0.001	64.8	10:12:30 04/07/10
	10	8.80E-003	5.10E-003	0.775		71.1	10:12:41 04/07/10
	11	9.56E-003	5.65E-003	0.838	-0.063	71.2	10:12:45 04/07/10
	12	9.90E-003	5.49E-003	0.821		73.3	10:12:56 04/07/10
	13	9.75E-003	5.41E-003	0.831	-0.010	72.3	10:13:01 04/07/10
	14	6.04E-003	2.49E-003	0.800		59	10:13:19 04/07/10
	15	6.41E-003	2.57E-003	0.818	-0.018	60.3	10:13:24 04/07/10
	16	5.62E-003	2.34E-003	0.828		56	10:13:34 04/07/10
	17	6.02E-003	2.32E-003	0.819	0.009	58.6	10:13:40 04/07/10
average		0.0077	0.0038	0.813		65.343	
selected avg				0.814			
std dev				0.010			
std error				0.003			

SUMMARY: before cleaning

81.4 % Reflectivity ± 0.3 %
 0.8% of light is scattered at 50 degrees
 and 0.4 % is scattered straight back

After CO2

Miu-Scan file AFTER CO2 cleaning of WHT primary mirror

April 7, 2010

Made a pair of measurement at each position, to check consistency

Excluded pairs which differ by more than 2% from Reflectivity average

Lambda	0.67						
Incident Angle	25						
BW Limits	1	0.01	difference	ratio			
Θs->	0	50	between	of			
Φs->	0	180 REFL	pairs	pairs	RMS(Å)	TIME	
2	3.51E-003	7.68E-004	0.831		48.9	11:17:10	
3	3.51E-003	7.69E-004	0.828	0.003	1.004	48.9	11:17:15
4	4.31E-003	9.70E-004	0.790		55.1	11:17:31	
5	4.31E-003	9.68E-004	0.820	-0.030	0.963	54.1	11:17:37
6	2.57E-003	4.46E-004	0.828		44.8	11:17:46	
7	2.57E-003	4.44E-004	0.830	-0.002		44.9	11:17:51
8	2.42E-003	4.50E-004	0.847		42	11:18:01	
9	2.42E-003	4.49E-004	0.844	0.003		42.1	11:18:06
10	2.68E-003	6.64E-004	0.586		49.4	11:18:20	
11	2.65E-003	5.95E-004	0.720	-0.134		45.3	11:18:25
12	5.21E-003	1.33E-003	0.837		57.3	11:18:38	
13	5.23E-003	1.33E-003	0.837	0.000		57.4	11:18:43
14	4.62E-003	1.15E-003	0.809		55.1	11:18:53	
15	4.64E-003	1.17E-003	0.781	0.028		56.1	11:18:58
16	2.86E-003	8.20E-004	0.837		41.5	11:19:07	
17	2.86E-003	8.17E-004	0.826	0.011		41.8	11:19:12
outlying data	3.33E-003	8.27E-004	0.785		47.5	11:19:26	
(included)	3.32E-003	8.30E-004	0.784	0.001		47.5	11:19:31
20	5.17E-003	1.54E-003	0.831		55.7	11:19:43	
reference mirror	3.24E-003	1.75E-003	0.906		40	11:35:40	
22	3.25E-003	1.75E-003	0.905	0.001		40	11:35:46
23	3.25E-003	1.75E-003	0.907		40	11:35:52	
24	3.25E-003	1.75E-003	0.906	0.001		40	11:35:57
25	3.25E-003	1.75E-003	0.907		40	11:36:02	
26	7.87E-003	1.93E-003	0.900	0.007		68.4	11:36:12
27	7.88E-003	1.93E-003	0.901		68.5	11:36:16	
28	7.88E-003	1.93E-003	0.902	-0.001		68.4	11:36:21
29	7.89E-003	1.93E-003	0.901		68.5	11:36:25	
30	7.88E-003	1.93E-003	0.901	0.000		68.5	11:36:30
average	3.50E-003	8.22E-004	0.801		48.872		
selected avg			0.826				
std dev	0.001	0.000	0.020		5.539		
			0.0059				

SUMMARY: after cleaning

82.6 % Reflectivity ± 0.6 % large dispersion, outlying data included. Reflectance increase barely significant

0.1 % of light is scattered at 50 degrees, 8x improvement after cleaning

0.08% of light is scattered straight back, 5x improvement

