

Reflectivity measurement - WHT Primary, before and after CO2 cleaning

Equipment:	uscan reflectometer	
Mirror:	WHT Primary mirror	
Person:	Tibor Agocs & Neil O'Mahony	
Date:	23/07/2008	
Lambda (micron):	0.67	
Incident angle (degree):	25	
BW (Bandwidth) limits:	1	0.1

WHT Primary mirror before the CO2 cleaning

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	1.39E-02	6.99E-03	0.813	87.7	08:36:33	07-23-2008
2	1.39E-02	6.98E-03	0.815	87.4	08:36:37	07-23-2008
3	1.39E-02	6.98E-03	0.814	87.5	08:36:42	07-23-2008
4	1.34E-02	5.40E-03	0.825	86.8	08:36:50	07-23-2008
5	1.34E-02	5.40E-03	0.828	86.5	08:36:55	07-23-2008
6	1.34E-02	5.40E-03	0.825	86.8	08:37:00	07-23-2008
7	1.08E-02	4.21E-03	0.792	79.9	08:37:10	07-23-2008
8	1.08E-02	4.18E-03	0.792	79.9	08:37:15	07-23-2008
9	1.08E-02	4.20E-03	0.805	79.2	08:37:19	07-23-2008
10	1.45E-02	7.13E-03	0.821	89.1	08:37:28	07-23-2008
11	1.45E-02	7.13E-03	0.822	89.1	08:37:32	07-23-2008
12	1.45E-02	7.14E-03	0.818	89.4	08:37:37	07-23-2008
13	1.02E-02	4.62E-03	0.805	76.1	08:37:46	07-23-2008
14	1.02E-02	4.62E-03	0.82	75.3	08:37:51	07-23-2008
15	1.02E-02	4.62E-03	0.821	75.2	08:37:55	07-23-2008
16	1.24E-02	5.12E-03	0.832	82.8	08:38:04	07-23-2008
17	1.11E-02	4.72E-03	0.809	79.5	08:38:08	07-23-2008
average	1.246E-02	5.578E-03	0.815	83.424		
standard dev	1.694E-03	1.191E-03	0.011	5.177		

WHT Primary mirror after the CO2 cleaning

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
18	7.27E-03	2.53E-03	0.85	63.9	09:36:42	07-23-2008
19	7.09E-03	2.52E-03	0.849	63	09:36:46	07-23-2008
20	7.08E-03	2.52E-03	0.848	63	09:36:50	07-23-2008
21	8.98E-03	2.88E-03	0.805	73.8	09:36:58	07-23-2008
22	8.96E-03	2.88E-03	0.812	73.3	09:37:02	07-23-2008
23	8.95E-03	2.88E-03	0.828	72.6	09:37:06	07-23-2008
24	8.78E-03	2.87E-03	0.845	71	09:37:18	07-23-2008
25	8.78E-03	2.88E-03	0.846	70.9	09:37:22	07-23-2008
26	8.78E-03	2.89E-03	0.842	71.1	09:37:26	07-23-2008
27	9.56E-03	3.57E-03	0.837	73.3	09:37:35	07-23-2008
28	9.50E-03	3.57E-03	0.854	72.3	09:37:40	07-23-2008
29	9.48E-03	3.56E-03	0.854	72.2	09:37:44	07-23-2008
30	6.90E-03	2.26E-03	0.843	63	09:37:55	07-23-2008
31	6.89E-03	2.26E-03	0.848	62.8	09:37:59	07-23-2008
32	6.90E-03	2.27E-03	0.841	63.1	09:38:03	07-23-2008
33	6.93E-03	2.03E-03	0.882	62.7	09:38:11	07-23-2008

34	6.82E-03	2.10E-03	0.866	62.3	09:38:16	07-23-2008
average	8.097E-03	2.732E-03	0.844	67.900		
standard dev	1.109E-03	4.937E-04	0.018	4.857		

All the reflectivity measurements that were taken on 03/06/08 had to be corrected with a factor of *1.035 (the corr factor comes from the reference mirror measurement)

<u>Notes:</u> RMS - Root Mean Square surface roughness in Angstrom, BSDF - Bidirectional scatter distribution function, it is equal to the scattered power per unit solid angle
