Reflectivity measurement - WHT Primary, before and after CO2 cleaning

Equipment:	uscan reflectometer	
Mirror:	**WHT Primary mirror**	
Person:	Tibor Agocs & Neil O'Mahony	
Date:	03/06/2008	
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	1.25E-02	6.71E-03	0.797	83.6	08:42:16	06/03/2008
2	1.25E-02	6.73E-03	0.765	85.4	08:42:21	06/03/2008
3	1.25E-02	6.71E-03	0.774	84.9	08:42:26	06/03/2008
4	1.36E-02	8.20E-03	0.771	88.3	08:42:37	06/03/2008
5	1.36E-02	8.20E-03	0.744	89.9	08:42:42	06/03/2008
6	1.36E-02	8.21E-03	0.754	89.4	08:42:46	06/03/2008
7	1.62E-02	8.48E-03	0.725	100	08:42:55	06/03/2008
8	1.62E-02	8.52E-03	0.747	98.7	08:42:59	06/03/2008
9	1.62E-02	8.52E-03	0.746	98.7	08:43:04	06/03/2008
10	1.56E-02	8.53E-03	0.739	96.9	08:43:20	06/03/2008
11	1.56E-02	8.53E-03	0.737	97	08:43:25	06/03/2008
12	1.55E-02	8.56E-03	0.73	97.4	08:43:30	06/03/2008
13	1.58E-02	9.59E-03	0.732	97.9	08:43:40	06/03/2008
14	1.57E-02	9.64E-03	0.738	97.2	08:43:45	06/03/2008
15	1.58E-02	9.69E-03	0.737	97.4	08:43:49	06/03/2008
16	1.62E-02	8.69E-03	0.748	98.2	08:43:59	06/03/2008
17	1.62E-02	8.70E-03	0.745	98.5	08:44:03	06/03/2008
18	1.62E-02	8.76E-03	0.745	98.6	08:44:08	06/03/2008
average	**1.496E-02**	**8.387E-03**	**0.749**	**94.333**		
corrected average			**0.775**			
standard dev	**1.464E-03**	**8.964E-04**	**0.018**	**5.629**		

WHT Primary mirror after the CO2 cleaning

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
42	1.35E-02	6.92E-03	0.791	87.6	08:54:57	06/03/2008
43	1.35E-02	6.93E-03	0.796	87.4	08:55:02	06/03/2008
44	1.35E-02	6.94E-03	0.793	87.5	08:55:06	06/03/2008
45	1.61E-02	9.82E-03	0.768	96.3	08:55:15	06/03/2008
46	1.60E-02	9.79E-03	0.767	96.3	08:55:20	06/03/2008
47	1.61E-02	9.78E-03	0.763	96.6	08:55:25	06/03/2008
48	1.98E-02	1.08E-02	0.759	108	08:55:32	06/03/2008
49	1.98E-02	1.07E-02	0.756	108.2	08:55:36	06/03/2008
50	1.98E-02	1.07E-02	0.75	108.7	08:55:41	06/03/2008
51	1.49E-02	7.47E-03	0.707	97.3	08:55:51	06/03/2008
52	1.48E-02	7.36E-03	0.744	94.8	08:55:56	06/03/2008
53	1.53E-02	7.27E-03	0.75	96	08:56:00	06/03/2008
54	1.55E-02	8.43E-03	0.754	95.8	08:56:09	06/03/2008
55	1.55E-02	8.41E-03	0.766	95.2	08:56:13	06/03/2008

56	1.56E-02	8.34E-03	0.764	95.7	08:56:18	06/03/2008
57	1.79E-02	1.28E-02	0.734	103.7	08:56:26	06/03/2008
58	1.79E-02	1.28E-02	0.737	103.6	08:56:30	06/03/2008
59	9.20E-03	3.12E-03	0.808	74	10:11:39	06/03/2008
60	9.21E-03	3.12E-03	0.809	74	10:11:44	06/03/2008
61	9.20E-03	3.12E-03	0.808	74	10:11:49	06/03/2008
62	7.43E-03	2.19E-03	0.823	67.2	10:11:57	06/03/2008
63	7.40E-03	2.19E-03	0.825	66.9	10:12:02	06/03/2008
64	7.42E-03	2.19E-03	0.825	67	10:12:07	06/03/2008
65	8.63E-03	2.94E-03	0.83	70.7	10:12:14	06/03/2008
66	8.61E-03	2.94E-03	0.826	70.7	10:12:18	06/03/2008
67	8.59E-03	2.93E-03	0.817	71	10:12:23	06/03/2008
68	9.25E-03	3.36E-03	0.804	73.8	10:12:34	06/03/2008
69	9.29E-03	3.36E-03	0.783	75	10:12:38	06/03/2008
70	9.33E-03	3.35E-03	0.797	74.5	10:12:43	06/03/2008
71	8.98E-03	2.95E-03	0.812	73.2	10:12:53	06/03/2008
72	8.97E-03	2.94E-03	0.814	73.1	10:12:58	06/03/2008
73	8.99E-03	2.95E-03	0.813	73.2	10:13:02	06/03/2008
74	1.11E-02	3.83E-03	0.808	81	10:13:11	06/03/2008
75	1.11E-02	3.83E-03	0.798	81.5	10:13:15	06/03/2008
76	1.11E-02	3.84E-03	0.818	80.4	10:13:20	06/03/2008
77	1.62E-03	1.20E-03	0.918	27.9	10:13:45	06/03/2008
78	1.62E-03	1.20E-03	0.904	28.1	10:13:50	06/03/2008
79	1.63E-03	1.20E-03	0.915	28	10:13:54	06/03/2008
average	**1.196E-02**	**5.751E-03**	**0.793**	**82.051**		
corrected average			**0.821**			
standard dev	**4.841E-03**	**3.496E-03**	**0.046**	**20.268**		

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)

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