

Reflectivity measurement - before, after CO2 washing INT primary mirror

Equipment:	uscan reflectometer		
Mirror:	INT Primary mirror		
Person:	Neil O'Mahony, Tibor Agocs		
Date:	22/06/2007		
Lambda (micron):	0.67		
Incident angle (degree):	25		
BW (Bandwidth) limits:	1	0.1	

INT mirror - before CO2 cleaning

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
10	1.31E-02	5.88E-03	0.823	85.000	08:53:15	06-22-1907
11	1.15E-02	4.90E-03	0.830	79.700	08:58:03	06-22-1907
12	1.15E-02	4.89E-03	0.828	79.700	08:58:07	06-22-1907
13	1.15E-02	4.89E-03	0.825	79.800	08:58:12	06-22-1907
14	9.15E-03	4.18E-03	0.843	70.300	08:58:22	06-22-1907
15	9.13E-03	4.18E-03	0.846	70.100	08:58:27	06-22-1907
16	9.13E-03	4.18E-03	0.843	70.200	08:58:32	06-22-1907
17	8.89E-03	3.46E-03	0.832	70.600	08:58:41	06-22-1907
18	8.90E-03	3.47E-03	0.845	70.100	08:58:46	06-22-1907
19	8.62E-03	3.17E-03	0.843	69.400	08:58:50	06-22-1907
20	9.76E-03	4.34E-03	0.839	72.900	08:59:02	06-22-1907
21	9.76E-03	4.32E-03	0.840	72.800	08:59:07	06-22-1907
22	9.75E-03	4.32E-03	0.839	72.900	08:59:11	06-22-1907
23	9.38E-03	4.72E-03	0.846	70.600	08:59:20	06-22-1907
average	9.993E-03	4.350E-03	0.837	73.864		
standard dev	1.324E-03	7.017E-04	0.008	5.008		

INT mirror - after CO2 cleaning

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	5.08E-03	1.43E-03	0.856	54.900	13:07:39	06-22-1907
2	8.62E-03	2.76E-03	0.857	70.000	13:07:47	06-22-1907
3	1.43E-02	3.60E-03	0.834	95.400	13:07:55	06-22-1907
4	7.52E-03	2.31E-03	0.853	66.000	13:08:06	06-22-1907
5	8.08E-03	2.28E-03	0.831	70.200	13:08:17	06-22-1907
6	9.26E-03	2.72E-03	0.814	75.400	13:08:27	06-22-1907
7	8.75E-03	2.71E-03	0.845	71.400	13:08:35	06-22-1907
8	8.17E-03	2.70E-03	0.844	68.400	13:08:47	06-22-1907
9	9.16E-03	2.49E-03	0.845	74.600	13:08:54	06-22-1907
10	2.42E-02	9.05E-03	0.778	120.900	13:09:03	06-22-1907
11	6.90E-03	1.92E-03	0.848	64.400	13:09:11	06-22-1907
12	1.03E-02	3.53E-03	0.832	77.100	13:09:21	06-22-1907
average	1.003E-02	3.124E-03	0.836	75.725		
standard dev	4.970E-03	1.960E-03	0.022	17.118		

INT mirror - after CO2 cleaning - without measurement no10

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	5.08E-03	1.43E-03	0.856	54.900	13:07:39	06-22-1907
2	8.62E-03	2.76E-03	0.857	70.000	13:07:47	06-22-1907
3	1.43E-02	3.60E-03	0.834	95.400	13:07:55	06-22-1907
4	7.52E-03	2.31E-03	0.853	66.000	13:08:06	06-22-1907
5	8.08E-03	2.28E-03	0.831	70.200	13:08:17	06-22-1907
6	9.26E-03	2.72E-03	0.814	75.400	13:08:27	06-22-1907
7	8.75E-03	2.71E-03	0.845	71.400	13:08:35	06-22-1907
8	8.17E-03	2.70E-03	0.844	68.400	13:08:47	06-22-1907
9	9.16E-03	2.49E-03	0.845	74.600	13:08:54	06-22-1907
11	6.90E-03	1.92E-03	0.848	64.400	13:09:11	06-22-1907
12	1.03E-02	3.53E-03	0.832	77.100	13:09:21	06-22-1907
average	8.745E-03	2.585E-03	0.842	71.618		
standard dev	2.309E-03	6.294E-04	0.013	9.985		

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