

Reflectivity measurement - before, after CO2 washing INT primary mirror

Equipment:	uscan reflectometer		
Mirror:	INT Primary mirror		
Person:	Neil O'Mahony, Tibor Agocs		
Date:	24/07/2007		
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
1	1.00E-02	4.00E-03	0.846	74.1	10:26:00	07-24-1907
2	9.97E-03	3.98E-03	0.834	74.5	10:26:04	07-24-1907
3	1.03E-02	4.07E-03	0.834	75.6	10:26:09	07-24-1907
4	1.17E-02	6.17E-03	0.835	79.2	10:28:28	07-24-1907
5	1.17E-02	6.17E-03	0.831	79.4	10:28:33	07-24-1907
6	1.17E-02	6.17E-03	0.831	79.4	10:28:37	07-24-1907
7	1.02E-02	4.28E-03	0.85	74.1	10:28:47	07-24-1907
8	1.01E-02	4.28E-03	0.851	74	10:28:52	07-24-1907
9	1.01E-02	4.28E-03	0.85	74	10:28:57	07-24-1907
10	1.01E-02	4.25E-03	0.851	74	10:29:05	07-24-1907
11	1.01E-02	4.24E-03	0.848	74.1	10:29:10	07-24-1907
12	1.01E-02	4.25E-03	0.85	74.1	10:29:14	07-24-1907
14	1.15E-02	4.85E-03	0.833	79.8	10:29:38	07-24-1907
15	1.15E-02	4.88E-03	0.836	79.6	10:29:43	07-24-1907
16	1.15E-02	4.86E-03	0.831	79.8	10:29:48	07-24-1907
17	1.07E-02	4.25E-03	0.86	76	10:29:56	07-24-1907
18	1.08E-02	4.22E-03	0.856	76.8	10:30:00	07-24-1907
19	1.07E-02	4.22E-03	0.852	76.5	10:30:05	07-24-1907
average	1.072E-02	4.634E-03	0.843	76.389		
standard dev	6.945E-04	7.557E-04	0.010	2.452		

INT mirror - after CO2 cleaning

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	9.04E-03	3.38E-03	0.848	70.8	10:42:06	07-24-1907
2	9.05E-03	3.39E-03	0.846	70.9	10:42:13	07-24-1907
3	9.05E-03	3.39E-03	0.841	71.1	10:42:18	07-24-1907
4	8.31E-03	2.50E-03	0.859	69.3	10:42:27	07-24-1907
5	8.30E-03	2.51E-03	0.863	69.1	10:42:31	07-24-1907
6	8.30E-03	2.51E-03	0.863	69.1	10:42:36	07-24-1907
7	7.86E-03	2.45E-03	0.867	66.7	10:42:46	07-24-1907
8	7.84E-03	2.46E-03	0.862	66.8	10:42:51	07-24-1907
9	7.85E-03	2.45E-03	0.863	66.9	10:42:55	07-24-1907
10	1.21E-02	3.60E-03	0.856	84.1	10:43:02	07-24-1907
11	1.23E-02	3.64E-03	0.833	85.8	10:43:07	07-24-1907
12	1.25E-02	3.75E-03	0.855	85.1	10:43:11	07-24-1907
13	9.29E-03	2.81E-03	0.853	73.5	10:43:25	07-24-1907
14	9.27E-03	2.80E-03	0.854	73.4	10:43:30	07-24-1907
15	9.25E-03	2.80E-03	0.853	73.3	10:43:34	07-24-1907

16	8.25E-03	2.51E-03	0.857	69	10:43:41	07-24-1907
17	8.37E-03	2.52E-03	0.853	69.8	10:43:45	07-24-1907
average	9.228E-03	2.908E-03	0.854	72.629		
standard dev	1.546E-03	4.901E-04	0.009	6.276		

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