

## Reflectivity measurement - before, after CO2 cleaning INT primary mirror

Equipment:	uscan reflectometer		
Mirror:	INT Primary mirror		
Person:	Juerg Rey, Neil O'Mahony, Tibor Agocs		
Date:	03/06/2008		
Lambda (micron):	0.67		
Incident angle (degree):	25		
BW (Bandwidth) limits:	1	0.1	

### INT mirror - before CO2

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	6.24E-03	6.29E-03	0.818	58.2	10:41:19	06/03/2008
2	6.25E-03	6.29E-03	0.818	58.2	10:41:23	06/03/2008
3	6.27E-03	6.28E-03	0.814	58.5	10:41:28	06/03/2008
4	5.68E-03	5.54E-03	0.819	55.4	10:41:37	06/03/2008
5	5.53E-03	5.55E-03	0.82	54.7	10:41:41	06/03/2008
6	5.51E-03	5.58E-03	0.82	54.6	10:41:46	06/03/2008
7	6.39E-03	5.62E-03	0.8	59.4	10:41:55	06/03/2008
8	6.31E-03	5.62E-03	0.784	59.6	10:42:00	06/03/2008
9	6.34E-03	5.65E-03	0.779	60	10:42:05	06/03/2008
10	6.03E-03	4.15E-03	0.809	57.4	10:42:20	06/03/2008
11	5.96E-03	4.14E-03	0.81	57	10:42:24	06/03/2008
<b>average</b>	<b>6.046E-03</b>	<b>5.518E-03</b>	<b>0.808</b>	<b>57.545</b>		
<b>corrected average</b>			<b>0.837</b>			
<b>standard dev</b>	<b>3.323E-04</b>	<b>7.467E-04</b>	<b>0.015</b>	<b>1.927</b>		

### INT mirror - after CO2

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
12	1.48E-03	5.93E-04	0.85	28.5	11:06:12	06/03/2008
13	1.49E-03	5.98E-04	0.832	28.8	11:06:16	06/03/2008
14	1.49E-03	5.99E-04	0.85	28.5	11:06:21	06/03/2008
15	1.10E-03	4.22E-04	0.85	24.6	11:06:30	06/03/2008
16	1.11E-03	4.09E-04	0.847	24.8	11:06:34	06/03/2008
17	1.13E-03	4.07E-04	0.841	25.2	11:06:39	06/03/2008
18	1.86E-03	7.27E-04	0.842	32.1	11:06:50	06/03/2008
19	1.79E-03	7.27E-04	0.841	31.4	11:06:55	06/03/2008
20	1.78E-03	7.25E-04	0.843	31.3	11:06:59	06/03/2008
21	2.03E-03	7.34E-04	0.825	34.1	11:07:06	06/03/2008
22	2.01E-03	7.33E-04	0.825	34	11:07:11	06/03/2008
23	2.01E-03	7.35E-04	0.821	34.1	11:07:15	06/03/2008
24	1.16E-03	3.93E-04	0.844	25.6	11:07:24	06/03/2008
25	1.16E-03	3.97E-04	0.839	25.8	11:07:29	06/03/2008
<b>average</b>	<b>1.543E-03</b>	<b>5.856E-04</b>	<b>0.839</b>	<b>29.200</b>		
<b>corrected average</b>			<b>0.869</b>			
<b>standard dev</b>	<b>3.680E-04</b>	<b>1.489E-04</b>	<b>0.010</b>	<b>3.626</b>		

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