

Reflectivity measurement - WHT Primary, before and after CO2

Equipment:	uscan reflectometer		
Mirror:	WHT Primary mirror		
Person:	Neil O'Mahony		
Date:	20090907		
Lambda (micron):	0.67		
Incident angle (degree):	25		
BW (Bandwidth) limits:	1	0.1	

WHT Primary mirror before CO2

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
1	8.33E-03	4.85E-03	0.834	66.6	10:30:28	9/7/2009
2	8.32E-03	4.83E-03	0.831	66.7	10:30:33	9/7/2009
3	1.30E-02	5.16E-03	0.815	86.2	10:30:45	9/7/2009
4	1.30E-02	5.15E-03	0.815	86.2	10:30:50	9/7/2009
5	8.00E-03	3.83E-03	0.795	67.5	10:31:00	9/7/2009
6	7.98E-03	3.74E-03	0.838	65.7	10:31:08	9/7/2009
7	8.56E-03	4.74E-03	0.816	68.4	10:31:18	9/7/2009
8	8.54E-03	4.73E-03	0.833	67.6	10:31:23	9/7/2009
9	6.79E-03	3.37E-03	0.813	61.3	10:31:39	9/7/2009
10	6.75E-03	3.34E-03	0.832	60.5	10:31:44	9/7/2009
11	1.07E-02	6.27E-03	0.815	76.4	10:32:09	9/7/2009
12	1.07E-02	6.24E-03	0.793	77.6	10:32:15	9/7/2009
13	1.01E-02	5.50E-03	0.828	73.6	10:32:28	9/7/2009
14	1.00E-02	5.50E-03	0.825	73.7	10:32:33	9/7/2009
15	1.10E-02	5.30E-03	0.819	77.8	10:32:43	9/7/2009
16	1.11E-02	5.29E-03	0.823	78	10:32:48	9/7/2009
17	1.26E-02	6.74E-03	0.812	83.2	10:33:00	9/7/2009
18	1.24E-02	6.78E-03	0.839	81.2	10:33:05	9/7/2009
average	9.881E-03	5.075E-03	0.821	73.233		
standard dev	2.061E-03	1.045E-03	0.013	8.073		

WHT Primary mirror after CO2

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
2	4.19E-03	1.01E-03	0.847	51.6	11:41:15	9/7/2009
3	4.06E-03	9.77E-04	0.848	50.8	11:41:20	9/7/2009
4	3.95E-03	1.16E-03	0.849	48.2	11:41:31	9/7/2009
5	3.89E-03	1.10E-03	0.848	48.2	11:41:37	9/7/2009
6	5.94E-03	1.37E-03	0.841	62.3	11:41:50	9/7/2009
7	1.01E-02	2.60E-03	0.829	80	11:42:02	9/7/2009
8	1.01E-02	2.60E-03	0.83	79.9	11:42:07	9/7/2009
9	6.54E-03	2.23E-03	0.829	61.5	11:42:18	9/7/2009
10	6.55E-03	2.22E-03	0.84	61.2	11:42:23	9/7/2009
11	4.50E-03	1.49E-03	0.84	50.9	11:42:34	9/7/2009
average	5.982E-03	1.676E-03	0.840	59.460		
standard dev	2.409E-03	6.642E-04	0.008	12.104		

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