

## Reflectivity measurement - before, after aluminising

Equipment:	uscan reflectometer	
Mirror:	<b>WHT Primary mirror</b>	
Person:	Tibor Agocs	
Date:	29/01/2007-before, 30/01/2007-after	
Lambda (micron):	0.67	
Incident angle (degree):	25	
BW (Bandwidth) limits:	1	0.1

### BEFORE ALUMINISING

No#	BPDF - 0°,0° detector position	BPDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
10	1.06E-02	2.29E-03	0.874	83	16:48:15	01-29-2007
11	1.20E-02	2.29E-03	0.853	92.9	16:48:24	01-29-2007
12	1.09E-02	2.45E-03	0.866	83.7	16:48:41	01-29-2007
13	7.93E-03	1.59E-03	0.865	73.6	16:48:50	01-29-2007
14	9.39E-03	1.75E-03	0.861	82.1	16:49:07	01-29-2007
15	5.64E-03	2.85E-03	0.872	53.9	16:49:15	01-29-2007
16	3.74E-03	8.51E-04	0.873	48.7	16:49:26	01-29-2007
17	3.57E-03	1.02E-03	0.873	45.5	16:49:36	01-29-2007
18	1.15E-02	1.42E-02	0.79	81	16:49:52	01-29-2007
19	7.99E-03	2.43E-03	0.864	67.7	16:50:00	01-29-2007
20	8.18E-03	1.95E-03	0.864	71.6	16:50:10	01-29-2007
21	7.86E-03	1.92E-03	0.864	69.9	16:50:18	01-29-2007
22	8.36E-03	2.47E-03	0.854	69.9	16:50:29	01-29-2007
23	8.36E-03	2.47E-03	0.854	69.9	16:50:34	01-29-2007
24	3.90E-03	9.97E-04	0.863	48.7	16:50:43	01-29-2007
25	1.50E-02	2.65E-03	0.837	107.1	16:50:54	01-29-2007
26	7.65E-03	2.09E-03	0.86	67.5	16:51:03	01-29-2007
27	7.66E-03	2.10E-03	0.859	67.6	16:51:07	01-29-2007
28	3.88E-03	1.13E-03	0.868	47.4	16:51:31	01-29-2007
29	3.92E-03	1.12E-03	0.875	47.6	16:51:42	01-29-2007
30	5.19E-03	1.09E-03	0.874	58.5	16:51:55	01-29-2007
31	1.28E-02	4.66E-03	0.838	84.8	16:52:13	01-29-2007
32	1.28E-02	4.67E-03	0.839	84.8	16:52:18	01-29-2007
33	1.28E-02	4.67E-03	0.836	84.9	16:52:23	01-29-2007
34	1.82E-02	6.32E-03	0.804	104	16:52:33	01-29-2007
35	1.82E-02	6.23E-03	0.807	104	16:52:38	01-29-2007
36	1.84E-02	6.21E-03	0.805	104.7	16:52:44	01-29-2007
37	1.82E-02	6.17E-03	0.782	105.9	16:52:49	01-29-2007
38	1.23E-02	4.26E-03	0.822	84.6	16:52:56	01-29-2007
39	1.23E-02	4.28E-03	0.829	84.2	16:53:01	01-29-2007
40	4.28E-03	1.68E-03	0.862	48.1	16:53:12	01-29-2007
41	5.80E-03	2.23E-03	0.859	56.2	16:53:20	01-29-2007
42	8.13E-03	1.84E-03	0.881	71.6	16:53:33	01-29-2007
43	7.97E-03	1.61E-03	0.861	73.8	16:53:40	01-29-2007
44	4.69E-03	3.28E-03	0.849	49.4	16:53:53	01-29-2007
45	4.70E-03	3.16E-03	0.841	49.7	16:53:59	01-29-2007
46	4.38E-02	2.19E-02	0.619	178.5	16:54:07	01-29-2007
47	4.42E-02	2.23E-02	0.645	175.5	16:54:13	01-29-2007
48	9.80E-03	3.39E-03	0.827	75.3	16:54:20	01-29-2007
49	9.42E-03	3.17E-03	0.83	73.9	16:54:26	01-29-2007
50	3.65E-02	1.79E-02	0.737	149.4	16:54:35	01-29-2007
51	3.65E-02	1.80E-02	0.728	150.4	16:54:40	01-29-2007

52	5.60E-03	2.01E-03	0.862	55.5	16:54:47	01-29-2007
53	3.16E-03	6.85E-04	0.878	45.2	16:54:56	01-29-2007
54	1.80E-02	5.01E-03	0.825	105.4	16:55:21	01-29-2007
55	1.79E-02	5.00E-03	0.815	105.7	16:55:26	01-29-2007
56	1.78E-02	5.00E-03	0.813	105.6	16:55:31	01-29-2007
57	1.77E-02	4.97E-03	0.805	105.9	16:55:36	01-29-2007
58	1.27E-02	3.17E-03	0.833	89.8	16:55:44	01-29-2007
59	7.91E-03	2.16E-03	0.859	68.7	16:55:57	01-29-2007
60	1.01E-02	2.45E-03	0.851	79.9	16:56:06	01-29-2007
<b>average</b>	<b>1.227E-02</b>	<b>4.513E-03</b>	<b>0.833</b>	<b>82.220</b>		
<b>standard dev</b>	<b>9.487E-03</b>	<b>5.107E-03</b>	<b>0.053</b>	<b>30.781</b>		

**AFTER ALUMINISING**

No#	BSDF - 0°,0° detector position	BSDF - 50°,180° detector position	reflectivity	rms (Ångstrom)	time	date
7	1.06E-03	5.72E-05	0.896	67.1	15:17:53	01-30-2007
8	1.06E-03	5.68E-05	0.897	67.9	15:17:57	01-30-2007
9	1.06E-03	5.73E-05	0.9	67	15:18:02	01-30-2007
10	1.24E-03	7.52E-05	0.883	64.3	15:18:45	01-30-2007
11	1.24E-03	7.56E-05	0.884	64	15:18:49	01-30-2007
12	1.24E-03	7.44E-05	0.888	65	15:18:54	01-30-2007
13	1.26E-03	8.69E-05	0.872	56.5	15:19:18	01-30-2007
14	1.26E-03	8.62E-05	0.875	57	15:19:23	01-30-2007
15	1.41E-03	1.24E-04	0.884	47.5	15:19:49	01-30-2007
16	1.41E-03	1.22E-04	0.88	48.1	15:19:54	01-30-2007
17	1.41E-03	1.21E-04	0.881	48.7	15:19:59	01-30-2007
<b>average</b>	<b>1.241E-03</b>	<b>8.510E-05</b>	<b>0.885</b>	<b>59.373</b>		
<b>standard dev</b>	<b>1.362E-04</b>	<b>2.606E-05</b>	<b>0.009</b>	<b>8.147</b>		

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 normalized by the incident power and  $\cos\theta$