

Reflectivity measurement - before, after CO2 washing INT primary mirror

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|--------------------------|----------------------------|-----|--|
| Equipment: | uscan reflectometer | | |
| Mirror: | INT Primary mirror | | |
| Person: | Neil O'Mahony, Tibor Agocs | | |
| Date: | 18/01/2007 | | |
| Lambda (micron): | 0.67 | | |
| Incident angle (degree): | 25 | | |
| BW (Bandwidth) limits: | 1 | 0.1 | |

INT mirror - before CO2 cleaning

| No# | BSDF - 0°,0° detector position | BSDF - 50°,180° detector position | reflectivity | rms (Ångstrom) | time | date |
|---------------------|---|--|--------------|-------------------|----------|------------|
| 6 | 5.81E-03 | 2.41E-03 | 0.857 | 55.9 | 14:08:55 | 01-18-1907 |
| 7 | 1.38E-02 | 6.71E-03 | 0.823 | 87.1 | 14:09:10 | 01-18-1907 |
| 8 | 1.07E-02 | 4.79E-03 | 0.839 | 76.3 | 14:09:20 | 01-18-1907 |
| 9 | 7.10E-03 | 3.67E-03 | 0.853 | 61.1 | 14:09:29 | 01-18-1907 |
| 10 | 7.17E-03 | 4.49E-03 | 0.841 | 61.4 | 14:09:59 | 01-18-1907 |
| 11 | 9.04E-03 | 4.01E-03 | 0.862 | 69.2 | 14:10:08 | 01-18-1907 |
| 12 | 9.15E-03 | 4.09E-03 | 0.847 | 70.2 | 14:10:16 | 01-18-1907 |
| 13 | 8.08E-03 | 3.85E-03 | 0.874 | 64.7 | 14:10:25 | 01-18-1907 |
| 14 | 6.04E-03 | 1.89E-03 | 0.864 | 58.6 | 14:11:04 | 01-18-1907 |
| 15 | 7.46E-03 | 2.91E-03 | 0.855 | 63.8 | 14:11:14 | 01-18-1907 |
| 16 | 8.00E-03 | 5.25E-03 | 0.837 | 65 | 14:11:22 | 01-18-1907 |
| 17 | 5.49E-03 | 2.33E-03 | 0.855 | 54.3 | 14:11:30 | 01-18-1907 |
| average | 8.156E-03 | 3.867E-03 | 0.851 | 65.633 | | |
| standard dev | 2.337E-03 | 1.368E-03 | 0.014 | 9.165 | | |

INT mirror - after CO2 cleaning

| No# | BSDF - 0°,0° detector position | BSDF - 50°,180° detector position | reflectivity | rms (Ångstrom) | time | date |
|---------------------|---|--|--------------|-------------------|----------|------------|
| 18 | 3.96E-03 | 1.11E-03 | 0.873 | 48 | 14:43:16 | 01-18-1907 |
| 19 | 5.28E-03 | 1.67E-03 | 0.868 | 54.6 | 14:43:24 | 01-18-1907 |
| 20 | 7.47E-03 | 2.34E-03 | 0.87 | 64.9 | 14:43:32 | 01-18-1907 |
| 21 | 5.46E-03 | 1.69E-03 | 0.894 | 54.8 | 14:43:39 | 01-18-1907 |
| 22 | 4.93E-03 | 1.24E-03 | 0.872 | 54.7 | 14:44:03 | 01-18-1907 |
| 23 | 6.97E-03 | 1.81E-03 | 0.864 | 64.9 | 14:44:11 | 01-18-1907 |
| 24 | 4.22E-03 | 1.26E-03 | 0.864 | 49.3 | 14:44:20 | 01-18-1907 |
| 25 | 4.37E-03 | 1.27E-03 | 0.866 | 50.4 | 14:44:27 | 01-18-1907 |
| 26 | 4.27E-03 | 1.17E-03 | 0.87 | 50.2 | 14:44:40 | 01-18-1907 |
| 27 | 5.16E-03 | 1.45E-03 | 0.873 | 54.8 | 14:44:47 | 01-18-1907 |
| 28 | 3.50E-03 | 1.02E-03 | 0.868 | 45 | 14:44:56 | 01-18-1907 |
| 29 | 5.27E-03 | 1.69E-03 | 0.869 | 54.4 | 14:45:04 | 01-18-1907 |
| average | 5.073E-03 | 1.477E-03 | 0.871 | 53.833 | | |
| standard dev | 1.175E-03 | 3.784E-04 | 0.008 | 6.076 | | |

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 $\cos\theta$