

**Reflectivity and Scattering measurements on Freshly Aluminized surface of INT Primary mirror 2.5 m**

INT Primary had not been aluminised since October 2012. Reflectivity in Red bands maintained within 4% by washing. %R had degraded by nearly 10% in UV, unretrievable by washing, as consistent with tests on WHT M2 etc. Aluminisation evaporation stage was carried out manually, followed by early venting by error, but excellent result. %R values were the highest achieved in 5 wavebands in the 5 coatings done in 2023, and the lowest scattering values. See plot on page 2.

		%R per waveband (nm)						
Tempr/°C		365	404	464	522	624	760	970
07/09/2023 09:33	19.75	93.94	91.93	90.4	90.89	90.18	87.82	93.33
07/09/2023 09:34	20.75	93.92	91.82	90.36	90.93	90.2	87.88	93.26
07/09/2023 09:35	21.28	93.87	91.76	90.32	90.94	90.21	87.91	93.21
07/09/2023 09:36	21.84	93.83	91.69	90.26	90.93	90.21	87.92	93.17
Average for Fresh Aluminisation		93.89	91.80	90.34	90.92	90.20	87.88	93.24
range		0.11	0.24	0.14	0.05	0.03	0.1	0.16
global range, all Alum'ns 2023		1.82	2.85	3.99	3.21	3.49	6.11	0.27
After Washing, Jan 2023		84.03	85.00	84.65	86.85	87.14	85.00	91.26
Gain in %R from Aluminising		9.86	6.80	5.68	4.07	3.06	2.88	1.98

		Dust Index % per waveband (nm)						
Tempr/°C		365	404	464	522	624	760	970
07/09/2023 09:33		0.8	0.7	0.6	0.5	0.6	0.5	0.6
07/09/2023 09:34		0.7	0.6	0.6	0.5	0.5	0.5	0.6
07/09/2023 09:35		0.7	0.6	0.6	0.4	0.6	0.5	0.6
07/09/2023 09:36		0.7	0.6	0.6	0.4	0.5	0.5	0.5
Next best DI 2023 (Mercator)		0.8	0.8	0.9	0.6	0.7	0.6	0.7

Note discrepancy in values from 2017, attributed to refurbishment of CT7 instrument in 2022

