Measurements of WHT Primary Mirror reflectivity following CO2 cleaning
Taken by Neil O'Mahony using SMS micro-Scan reflectometer
CO2 cleaning immediately after calima dust event, ocurring 1 month after Aluminisation
Successive measurements with similar scattering measurements are in same location
%R exceeding specification repeatability of 0.5% are marked "skip" & omitted from average
"Ref" are measurements of MG reference mirror, typically 91-93% using SMS

Lambda	0.67	micron	
Incident Angle	25	deg	<-- Summary SMS characteristics
BW Limits	1	0.01	

Measurements immediately after CO2 cleaning with telescope at AP3

	Scattering	at angles Θ, Φ		Reflectivity	user	Rough-		
	Θs->	0	50		comm	ness		
	Φs->	0	180		ent	RMS(Å)	TIME	DATE
1		3.03E-03	2.40E-03	0.921	ref	38.1	11:19:43	03-14-1912
2		1.59E-03	4.45E-04	0.84	skip	31.1	11:22:37	03-14-1912
3		1.59E-03	4.46E-04	0.822	skip	31.4	11:22:42	03-14-1912
4		1.59E-03	4.46E-04	0.81	skip	31.6	11:22:47	03-14-1912
5		1.78E-03	1.14E-03	0.846	skip	30.5	11:23:02	03-14-1912
6		1.78E-03	1.13E-03	0.856	skip	30.3	11:23:08	03-14-1912
7		1.61E-03	6.15E-04	0.835		30.1	11:23:23	03-14-1912
8		1.61E-03	6.08E-04	0.837		30.1	11:23:28	03-14-1912
9		1.58E-03	4.10E-04	0.85		31.1	11:23:44	03-14-1912
10		1.58E-03	4.11E-04	0.847		31.2	11:23:51	03-14-1912
11		1.60E-03	1.34E-03	0.837		29.1	11:24:11	03-14-1912
12		1.60E-03	1.34E-03	0.836		29.1	11:24:17	03-14-1912
mean (valid %R only)		**1.63E-03**	**7.57E-04**	**0.840**		**30.50909**		

Measurements a week after CO2 cleaning with telescope at Zenith - at 4 port-hole positions

25	locations	5.40E-03	1.33E-03	0.925	ref	55.9	11:43:25	03-22-1912
26		5.41E-03	1.33E-03	0.924	ref	55.9	11:43:30	03-22-1912
27		2.97E-03	1.01E-03	0.929	ref	39.2	11:43:38	03-22-1912
28	1	2.73E-03	1.37E-03	0.862		37.7	11:49:03	03-22-1912
29		2.72E-03	1.37E-03	0.863		37.7	11:49:09	03-22-1912
30	2	3.21E-03	1.86E-03	0.858		40.8	11:49:20	03-22-1912
31		3.21E-03	1.86E-03	0.858		40.8	11:49:25	03-22-1912
32	3	4.03E-03	2.72E-03	0.846		45.9	11:49:37	03-22-1912
33		4.03E-03	2.72E-03	0.847		45.8	11:49:42	03-22-1912
34		3.20E-03	1.13E-03	0.862	single?	42.1	11:49:57	03-22-1912
35	4	2.19E-03	3.72E-04	0.863		40.8	11:51:12	03-22-1912
36		2.19E-03	3.67E-04	0.862		41.1	11:51:17	03-22-1912
37	5	3.25E-03	1.81E-03	0.86		41	11:51:26	03-22-1912
38		3.24E-03	1.80E-03	0.862		41	11:51:31	03-22-1912
39	6	3.14E-03	1.35E-03	0.858		41	11:51:51	03-22-1912
40		3.14E-03	1.36E-03	0.859		41	11:51:56	03-22-1912
41	7	3.54E-03	1.50E-03	0.86		43.5	11:52:13	03-22-1912
42		3.95E-03	1.98E-03	0.86		45.4	11:53:23	03-22-1912

43		3.95E-03	1.98E-03	0.861		45.4	11:53:28 03-22-1912
44	8	2.69E-03	1.08E-03	0.868		37.9	11:53:37 03-22-1912
45		2.69E-03	1.08E-03	0.868		37.9	11:53:42 03-22-1912
46	9	3.01E-03	1.12E-03	0.871		40.3	11:53:50 03-22-1912
47		3.01E-03	1.12E-03	0.869		40.3	11:53:54 03-22-1912
48	10	3.07E-03	1.71E-03	0.86		39.9	11:54:06 03-22-1912
49		3.07E-03	1.71E-03	0.86		39.9	11:54:11 03-22-1912
50	11	2.89E-03	1.32E-03	0.863	skip	39.1	11:54:24 03-22-1912
51		2.95E-03	1.41E-03	0.857		39.4	11:55:28 03-22-1912
52		2.95E-03	1.41E-03	0.857		39.4	11:55:33 03-22-1912
53	12	2.29E-03	1.07E-03	0.862		34.7	11:55:42 03-22-1912
54		2.29E-03	1.07E-03	0.862		34.7	11:55:47 03-22-1912
55		7.15E-03	2.73E-03	0.795	skip	64.9	11:56:00 03-22-1912
56		7.15E-03	2.75E-03	0.801	skip	64.6	11:56:04 03-22-1912
57	13	2.75E-03	8.85E-04	0.822		40.3	11:56:16 03-22-1912
58		2.75E-03	8.82E-04	0.821		40.4	11:56:20 03-22-1912
59	14	3.55E-03	1.36E-03	0.211	skip	88.8	11:56:32 03-22-1912
60		3.25E-03	1.18E-03	0.83		43	11:56:47 03-22-1912
61		3.25E-03	1.19E-03	0.83		43	11:56:53 03-22-1912
62		2.82E-03	1.08E-03	0.833		39.8	11:57:06 03-22-1912
63		3.63E-03	1.47E-03	0.94	ref	42.3	12:02:51 03-22-1912
64		3.63E-03	1.47E-03	0.94	ref	42.3	12:02:57 03-22-1912
65		7.42E-03	3.81E-03	0.929	ref	59.9	12:03:05 03-22-1912
mean, valid ms only		**3.40E-03**	**1.46E-03**	**0.855**		**43.4**	
std dev				**0.014**			
std err				**0.004**			
mean of all				0.85205882			

Conclusions: Too many invalid %R measurements straight after cleaning, %R statistics not reliable.
One week later, %R is maintained but scattering and rougness increased due to dust gathering.