

SMS Reflectivity meas. of WHT M3 straight after aluminising (22 March) and again 3 weeks later
Measurements are usually in pairs to confirm repeatability. 'Solo' & 'skip' omitted from avg

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

Measurements by ELH straight after opening of tank, in aluminising area.

ELH notes that SMS measuring head was not pushed down against surface in initial (blue) values

datum #	Scattering at angles Θ, Φ			Reflect-ivity	user comm-ent	Rough-ness RMS(Å)	TIME	DATE
	$\Theta_s \rightarrow$	$\Phi_s \rightarrow$						
			0 50 0 180					
1	location 1	3.24E-04	1.63E-05	0.823		42.3	"11:20:50"	"03-25-1913"
2		3.27E-04	2.24E-05	0.833		29.7	"11:21:01"	"03-25-1913"
3		3.27E-04	2.26E-05	0.834		29.5	"11:21:05"	"03-25-1913"
4	2	3.31E-04	2.50E-05	0.833		27.1	"11:21:10"	"03-25-1913"
5		3.28E-04	2.32E-05	0.834		28.8	"11:21:14"	"03-25-1913"
6	3	1.13E-03	5.24E-04	0.824		25	"11:21:29"	"03-25-1913"
7		1.13E-03	5.22E-04	0.824		25	"11:21:36"	"03-25-1913"
8		1.13E-03	5.23E-04	0.823		25	"11:21:40"	"03-25-1913"
9		1.13E-03	5.23E-04	0.824		25	"11:21:45"	"03-25-1913"
10		1.13E-03	5.23E-04	0.823		25	"11:21:49"	"03-25-1913"
11	4	8.67E-04	2.22E-04	0.822		23.5	"11:22:24"	"03-25-1913"
12	5	2.46E-04	1.70E-05	0.844		25.3	"11:22:45"	"03-25-1913"
13		2.45E-04	1.88E-05	0.831		23.1	"11:22:50"	"03-25-1913"
14		2.46E-04	1.79E-05	0.831		24.2	"11:22:55"	"03-25-1913"
15	6	2.45E-04	1.85E-05	0.83	ignore	23.5	"11:22:59"	"03-25-1913"
16		2.45E-04	1.81E-05	0.83	all meas	23.8	"11:23:03"	"03-25-1913"
17		2.45E-04	1.85E-05	0.83	till this	23.5	"11:23:07"	"03-25-1913"
18	7	3.09E-04	6.17E-05	0.869		14.5	"11:24:03"	"03-25-1913"
19		3.11E-04	6.60E-05	0.87		14.3	"11:24:18"	"03-25-1913"
20		3.10E-04	6.45E-05	0.868		14.4	"11:24:24"	"03-25-1913"
21		3.11E-04	6.38E-05	0.867		14.5	"11:24:28"	"03-25-1913"
22	8	1.61E-03	7.11E-04	0.86		29.2	"11:24:51"	"03-25-1913"
23		1.61E-03	7.11E-04	0.865		29.1	"11:24:56"	"03-25-1913"
24		1.61E-03	7.11E-04	0.859	skip	29.2	"11:25:01"	"03-25-1913"
25		1.61E-03	7.11E-04	0.862		29.2	"11:25:06"	"03-25-1913"
26		1.61E-03	7.10E-04	0.86		29.2	"11:25:11"	"03-25-1913"
27	9	2.94E-04	2.69E-05	0.867		21.2	"11:25:25"	"03-25-1913"
28		2.93E-04	2.68E-05	0.866		21.3	"11:25:29"	"03-25-1913"
AVERAGES		6.78E-04	2.35E-04	0.865		24.9	values in blue ignored	
STD DEV				0.004				
STD ERROR				0.001				
RANGE				0.859 - 0.869				

Measurements by NOM with M3 installed, over 3 weeks later

57	location 1	5.67E-04	1.46E-04	0.868 bottom	18.5	"11:02:00"	"04-19-1913"
58		5.56E-04	1.46E-04	0.869	18.3	"11:02:06"	"04-19-1913"
59	2	1.28E-03	3.92E-04	0.851	27.2	"11:02:15"	"04-19-1913"
60		1.25E-03	3.88E-04	0.846	27	"11:02:21"	"04-19-1913"
61	3	8.39E-04	1.47E-04	0.857	25.1	"11:02:31"	"04-19-1913"
62		8.41E-04	1.48E-04	0.855	25.2	"11:02:37"	"04-19-1913"
63	4	1.10E-03	4.25E-04	0.851	24.5	"11:02:45"	"04-19-1913"
64		1.10E-03	4.23E-04	0.854	24.5	"11:02:51"	"04-19-1913"
65	5	1.33E-03	9.28E-04	0.856	26.2	"11:03:04"	"04-19-1913"
66		1.34E-03	9.45E-04	0.853	26.3	"11:03:10"	"04-19-1913"
67	6	8.72E-04	6.64E-04	0.857	21.2	"11:03:30"	"04-19-1913"
68		8.74E-04	6.64E-04	0.856	21.2	"11:03:36"	"04-19-1913"
69	7	1.32E-03	7.52E-04	0.866 skip	26.1	"11:03:47"	"04-19-1913"
70		1.32E-03	7.48E-04	0.857	26.2	"11:03:54"	"04-19-1913"
71		1.32E-03	7.34E-04	0.856	26.2	"11:04:03"	"04-19-1913"
72	8	7.54E-04	2.26E-04	0.862 top	20.9	"11:04:11"	"04-19-1913"
73		7.57E-04	2.26E-04	0.863	20.9	"11:04:17"	"04-19-1913"
74	9	9.86E-04	5.40E-04	0.854	22.7	"11:04:31"	"04-19-1913"
75		9.85E-04	5.39E-04	0.857	22.6	"11:04:37"	"04-19-1913"
76	10	5.44E-04	1.17E-04	0.864	19	"11:04:49"	"04-19-1913"
77		5.44E-04	1.15E-04	0.862	19	"11:04:55"	"04-19-1913"
78	11	9.33E-04	5.18E-04	0.86	22	"11:05:04"	"04-19-1913"
79		9.34E-04	5.17E-04	0.86	22	"11:05:09"	"04-19-1913"
80	12	7.69E-04	4.82E-04	0.859	19.9	"11:05:17"	"04-19-1913"
81		7.71E-04	4.90E-04	0.858	19.9	"11:05:22"	"04-19-1913"
82	13	7.35E-04	4.27E-04	0.856 centre	19.5	"11:08:01"	"04-19-1913"
83		7.36E-04	4.30E-04	0.855	19.6	"11:08:06"	"04-19-1913"
84	14	4.10E-04	1.19E-04	0.857	15.5	"11:08:15"	"04-19-1913"
85		4.09E-04	1.19E-04	0.858	15.5	"11:08:20"	"04-19-1913"
86	15	7.51E-04	2.60E-04	0.866	20.4	"11:08:29"	"04-19-1913"
AVERAGES		8.82E-04	4.15E-04	0.858	22.0		
STD DEV				0.005			
STD ERROR				0.001			
RANGE				0.848 - 0.868			
global average				0.860			

Reference Surface

87	3.33E-03	1.19E-03	0.938	41.1	"11:12:36"	"04-19-1913"
88	3.34E-03	1.19E-03	0.937	41.1	"11:12:41"	"04-19-1913"
89	5.81E-03	1.69E-03	0.939	55.7	"11:12:53"	"04-19-1913"

Reference values are within range

Conclusions: measurements will be underestimated 2-3% if the measurement head is not pushed down when measuring a surface larger than the inner diameter (~8 cm)

NOM notes that measurements at given location dropped slightly following small head movement
Average reflectivities obtained on each day are mutually consistent & typical of new Alum surface

Note: surface suffered 3-4 slight scratches during mounting, but no measureable effect on %R.