

WHT Primary Mirror reflectivity and CO2 cleaning report, 29 June 2017
 Measurements, cleaning and report by Neil O'Mahony

	Temp. °C	Reflectivity (%R) wavelength of band (nm)							"Dust Indices" (DI)						
		365	404	464	522	624	760	970	365	404	464	522	624	760	970
1091 29/06/2017 10:35 1 left	20.8	87.6	86.4	86.0	86.1	84.7	82.5	88.2	8.2	8.1	8.9	7.6	9.9	8.7	9.5
1092 29/06/2017 10:36 1 left	20.8	88.5	87.0	86.4	86.5	85.7	82.8	88.9	7.8	7.7	8.7	7.2	8.8	8.3	8.6
1093 29/06/2017 10:37 1 top	20.8	88.8	87.3	86.9	87.0	86.1	83.5	89.2	7.6	7.6	8.2	6.7	8.0	7.2	7.7
1094 29/06/2017 10:38 1 right	20.9	88.5	87.3	86.8	87.1	85.7	83.4	89.2	7.4	7.1	8.1	6.2	8.6	7.3	7.5
1095 29/06/2017 10:40 1 bottom	20.9	88.6	87.1	86.6	86.7	85.8	83.2	88.9	7.5	7.6	8.6	6.8	8.4	7.7	8.1
average M1 before (omitting highlighted minimum) ranges		88.6	87.2	86.7	86.8	85.8	83.2	89.1	7.6	7.5	8.4	6.7	8.5	7.6	8.0
		1.2	0.9	0.9	1.0	1.4	1.0	1.0	0.8	1.0	0.8	1.4	1.9	1.5	2.0

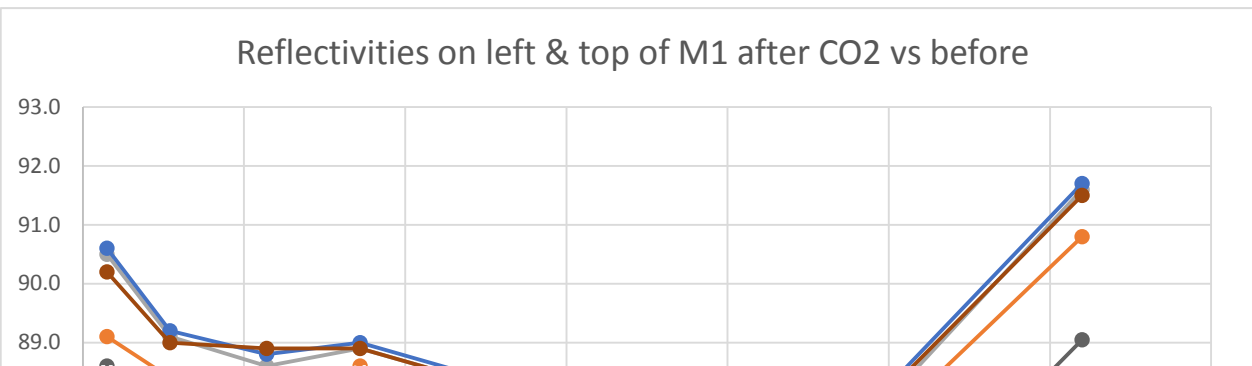
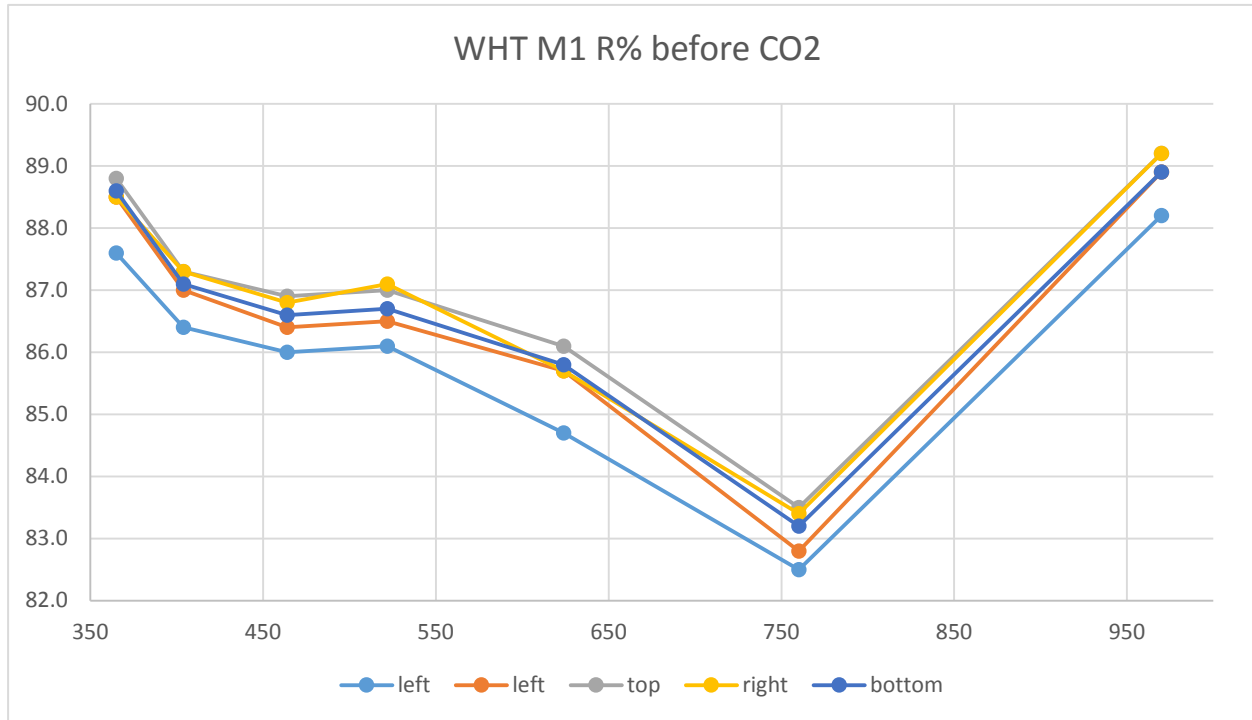
		365	404	464	522	624	760	970	365	404	464	522	624	760	970
1096 29/06/2017 12:14 1 left1	15.9	90.5	89.1	88.7	88.9	88.0	85.6	91.6	6.1	5.9	6.0	4.7	5.2	4.2	4.4
1097 29/06/2017 12:16 1 left2	16.3	89.1	88.4	88.1	88.6	86.7	85.3	90.8	7.8	6.7	6.9	5.0	7.6	4.9	5.9
1098 29/06/2017 12:17 1 left3	16.5	90.5	89.1	88.6	88.9	88.1	85.4	91.6	6.4	6.1	6.3	4.7	5.3	4.4	4.1
1099 29/06/2017 12:18 1 left4	16.8	90.3	89.0	88.6	88.9	87.9	85.5	91.4	6.1	5.8	6.1	4.4	5.4	4.3	4.4
1100 29/06/2017 12:19 1 top1	17.2	90.6	89.2	88.8	89.0	88.2	85.7	91.7	6.0	5.9	5.9	4.4	4.9	3.9	3.8
1101 29/06/2017 12:20 1 top2	17.4	90.4	88.8	88.2	88.3	87.7	85.0	91.0	6.2	6.1	6.7	5.4	5.8	5.3	5.0
1102 29/06/2017 12:21 1 top3	17.8	90.5	89.1	88.7	89.0	88.2	85.6	91.8	6.0	5.8	5.8	4.3	4.8	3.9	3.6
1103 29/06/2017 12:28 1 top4	18.9	90.2	89.0	88.9	88.9	88.1	85.7	91.5	6.3	5.9	5.6	4.7	5.0	4.1	4.4
1104 29/06/2017 12:29 1 right1	19.1	90.3	88.9	88.5	88.6	87.8	85.2	91.1	6.4	6.1	6.5	5.1	5.8	4.9	5.0
1105 29/06/2017 12:30 1 right2	19.4	88.6	87.1	86.4	86.8	85.7	83.2	88.8	7.8	8.2	9.2	7.1	9.1	8.1	8.8
1106 29/06/2017 12:31 1 right3	19.6	88.6	87.5	87.0	87.1	86.1	83.5	89.1	7.5	7.3	8.0	6.6	8.2	7.5	8.1
1107 29/06/2017 12:32 1 right4	19.9	90.4	89.1	88.7	88.8	88.0	85.5	91.4	6.3	6.1	6.2	4.8	5.5	4.5	4.6
1108 29/06/2017 12:34 1 bottom	20.2	90.8	89.3	88.9	89.0	88.3	85.6	91.8	5.9	5.6	5.7	4.3	4.6	4.0	3.8

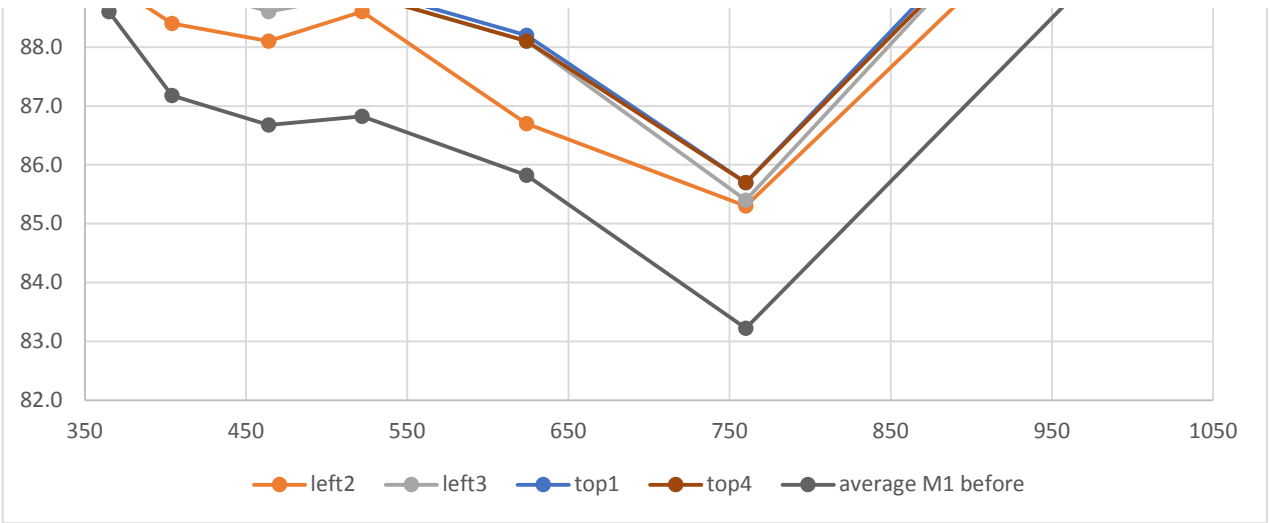
1109	29/06/2017 12:34	1 bottom	20.4	90.6	89.1	88.8	88.9	88.2	85.6	91.7	6.2	5.8	5.8	4.5	4.8	3.9	3.8
1110	29/06/2017 12:35	1 bottom	20.7	90.6	89.2	88.8	89.0	88.2	85.6	91.6	6.2	6.0	5.9	4.7	4.9	4.1	3.9
1111	29/06/2017 12:36	1 bottom	20.9	90.3	88.8	88.5	88.6	87.9	85.2	91.1	6.7	6.6	6.6	5.2	5.8	4.9	5.2
average M1 after (omitting highlighted minima)				90.5	89.1	88.7	88.8	88.0	85.5	91.5	6.5	6.2	6.5	5.0	5.8	4.8	4.9
Change since CO2				1.9	1.9	2.0	2.0	2.2	2.3	2.4	1.1	1.3	2.0	1.7	2.7	2.8	3.1
1112	29/06/2017 12:38	5 WHTM3 all	21.3	85.1	84.3	84.9	85.1	85.3	82.9	89.3	17.9	16.8	15.6	11.4	11.5	8.7	7.8
1113	29/06/2017 12:38	5 WHTM3 all	21.5	85.1	84.7	85	86.1	85.4	83.9	90.4	17.8	15.3	14.8	9.4	12.3	6.7	5.9
1114	29/06/2017 12:39	5 WHTM3 all	21.8	85.8	85	85.1	85.7	85.5	83.2	89.6	16.5	15.3	14.2	10.2	10.6	8.1	7.5
1115	30/06/2017 11:07	3 INTM1 all	22.6	86.9	85.8	85.7	85.9	85.3	82.8	88.5	8.5	8.3	8.4	7.3	8.3	7.5	8.2
1116	30/06/2017 11:09	3 INTM1 all	22.6	87.9	86.7	86.4	86.7	85.8	83.2	89.1	6.7	6.6	7.2	6.0	7.2	6.9	7.4
1117	30/06/2017 11:10	3 INTM1 all	22.8	86.4	85.1	85.0	85.3	84.8	82.2	88.2	9.0	9.2	9.7	8.2	9.0	8.5	8.7
1118	30/06/2017 11:11	3 INTM1 all	22.8	87.9	86.9	86.4	86.7	85.9	83.3	89.1	6.9	6.3	7.4	5.7	7.4	6.5	7.1
				87.3	86.1	85.9	86.2	85.5	82.9	88.7	7.8	7.6	8.2	6.8	8.0	7.4	7.9
1119	30/06/2017 11:33	3 INTM1 all	22	88.9	88.2	88.3	88.8	88.3	85.9	92.5	7.2	6.3	5.7	3.8	3.7	2.9	2.4
1120	30/06/2017 11:34	3 INTM1 all	22.1	86.3	85.0	87.1	83.4	86.3	83.0	85.1	9.6	9.7	7.6	11.1	7.4	7.8	13.7
1121	30/06/2017 11:35	3 INTM1 all	22.2	87.9	87.1	87.4	88.0	87.4	85.1	91.5	9.6	8.1	7.5	5.0	5.5	4.3	3.9
average after 1st cleaning				87.7	86.8	87.6	86.7	87.3	84.7	89.7							
1122	30/06/2017 11:51	3 INTM1 all	20.8	89.3	88.2	88.1	88.6	87.7	85.5	91.7	6.4	5.8	5.9	4.2	4.9	3.9	3.8
1123	30/06/2017 11:52	3 INTM1 all	20.7	88.0	87.4	87.5	88.5	87.5	85.6	91.9	9.6	8.7	7.7	4.5	5.6	3.5	3.2
1124	30/06/2017 11:53	3 INTM1 all	20.8	89.1	87.9	87.9	88.1	87.7	85.0	91.4	6.6	6.3	6.2	4.8	5.0	4.4	4.1
1125	30/06/2017 11:54	3 INTM1 all	21	89.6	88.5	88.3	88.9	88.1	85.6	91.9	6.0	6.7	5.7	3.8	4.3	3.4	3.2
1126	30/06/2017 11:55	3 INTM1 all	21.2	87.9	87.2	87.4	88.0	87.3	85.2	91.3	9.3	7.9	7.4	5.2	5.9	4.1	4.1

88.4 87.4 87.8 87.8 87.5 85.1 90.9 8.0 7.4 6.7 5.3 5.3 4.3 4.8

Change since CO2

1.1 1.3 1.9 1.6 2.1 2.2 2.2 -0.3 0.2 1.5 1.5 2.7 3.1 3.1





Reflectivities on right side of M1 after CO2

