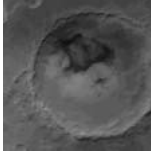
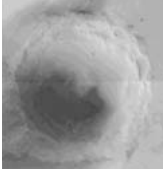
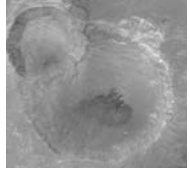

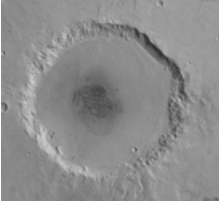


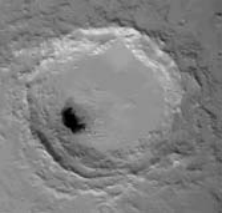
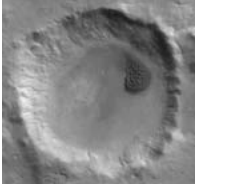
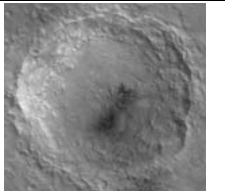
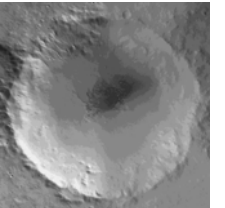
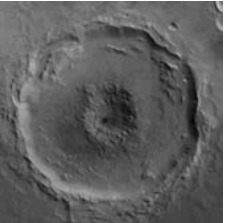
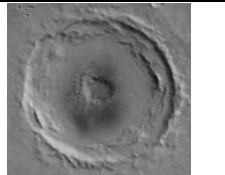



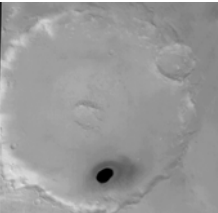
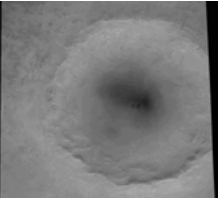
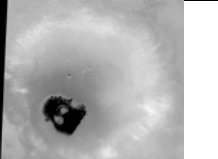

Database

HRSC-ORBIT	Locality ID	Lat	Lon [E]	Lon [W]	Preview	Region	Crater Diameter [km]	Crater Diameter [m]	HRSC mean Altitude Crater Rim [m]	HRSC mean Altitude Crater Floor [m]	MOLA ALTITUDE Crater Floor [m]	Crater Depth [m]	Crater Depth [km]	depth-diameter-ratio	Position of dark material in crater	HRSC Ls [°]	HRSC Season	OMEGA Orbit number	Omega Ls
0030_0000	Barnard	-61,41	61,65	298,35		MALEA PLANUM	122,6	122600	-11654	-14019	-276	2365	2,37	0,019	NNW	335,23	S-summer	2023_4	267,17 Sp
0032_0000	Elysium	9,63	150,13	209,87		ELYSIUM PLANITIA	65	65000	-3503	-4343	-4068	840	0,84	0,013	SW	335,77	N-winter	0032_3 1533_3	335,77 W 182,93 F
0047_0000	Tyrrhena 3	-6,65	81,81	278,19		TYRRHENA PLANITIA	26,56	26560	1578	512	355	1066	1,07	0,040	SW	338,45	S-summer	1508_5	177,85 W
0061_0008	Xante1	11,95	309,68	50,32		CHRYSE PLANITIA/ XANTE TERRA	37,45	37450	-2294	-3468	-2209	1174	1,17	0,031	SW	341,12	N-winter	0061_4 0394_3	341,12 W 32,53 Sp
0280_0001 od 2590_0001	Cimmeria 1	-38,52	154,13	205,87		TERRA CIMMERIA	39,6	39600	-6124	-6741	95	617	0,62	0,016	central	15,74 od 358,16	S-fall S-summer		
0283_0000	Ma'adim Vallis	-23,16	177,98	182,02		TERRA CIMMERIA Ma'adim Vallis	36,22	36220	-1821	-3528	-415	1707	1,71	0,047	SW	16,22	S-fall		
0394_0009	Ophir 1	-2,98	307,81	52,19		XANTE TERRA OPHIR PLANITIA	79,65	79650	1175	-3155	-2338	4330	4,33	0,054	WSW	32,5	S-fall	0394_2	32,50 F

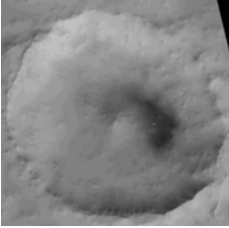
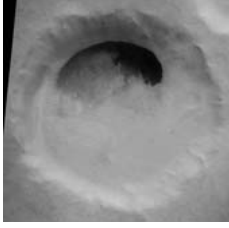
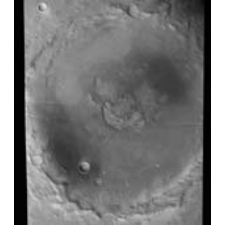
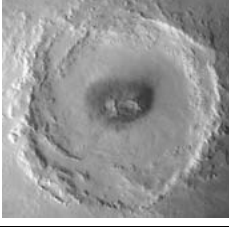
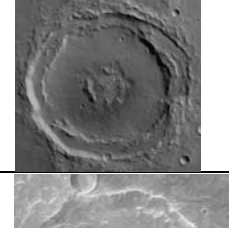
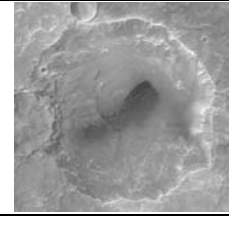
Mineralogy	THEMIS with Ls [°]	Characteristic on THEMIS	BTR	Thermal Inertia	~ grain size	Moc Image Numbers	MCD wind direction	Wind Direction (from MOC, wind streaks, dune shape)	Dune Shapes / Distribution of Dark Material	Area of Dune Field [km2]	Comments
pyroxene olivine (forsterite) hydrated cloud water ice on crater rim no more orbits covering	not resolvable	bad quality > no data	-	282	320	no useful data	SE	from SSE	diffuse distribution unclassified dunes	2380,00	
pyroxene pyroxene	I15491026 (228.494°) I01699003 (7.259°) I06168009 (180.263°)	dark	185	333	460	E 1701373	W	according to wind streaks from NE	barchans on outer margin barchanoid in interior dune field sand sheet	174,99	
pyroxene olivine (forsterite) no more orbits covering	no data	-	-	297	360	no data	NNE	according to dune shape N to NNE	barchans and sand sheet	17,21	
material contains H2O & CO2 ice blue slope in spectrum -> dust? no mafics no distinct pyroxene blue slop in spectrum, featureless > no mafics, dust?	I05401008 (146.506°) I10556026 (27.246°) I11467002 (66.795°) I06874006 (214.574°) I07236015 (233.127°)	bright	194	441	1000	no data	N	according to wind streaks in north >> wind from SSW ??? dark material blown to SSW crater rim > wind from NNE	unclassified dunes and sand sheet	41,80	exposed layers in small craters in the surrounding?
no OMEGA data	no data	-	-	255	250	no data	WSW	according to dune shape in HRSC: from SSW probably changing nothing to detect from MOC no wind streaks	barchans barchanoid unclassified dunes	59,78	
no OMEGA data	no data	-	-	214	170	E1201238	W	nothing to detect ? according to wind streaks from north: wind from S	sand sheet	17,36	dark material locally restricted in this orbit exposed on N/NNW-crater wall and on channel walls > exposed to the south >> insolation effects??
pyroxene above entire orbit olivine (below threshold, but in spectrum) no more orbits covering	I05863008 (166.395°) I07698011 (257.225°) I08060017 (276.011°) I05476011 (149.647°) I17083014 (309.870°) I17370013 (323.404°)	dark	194	320 south 530 north	400/1890	E1400954 E1501108 M0906116 R0401714 R0601677 R1002029	NW	according to southern barchans: from NE, partly from E according to some dunes on northern dune field: from NE from NNE from WNW	barchanoid dunes barchans on rim	30,31 80,25	exposed layers northern and southern dune field have different TIs but are both cold at night northern -> cold and high TI -> <u>unclear</u> or indurated? southern -> cold and low TI -> loose

2205_0001	Marte Vallis	15,58	181,58	178,42		AMAZONIS PLANITIA Marte Vallis	58,12	58120	-4608	-6420	-4400	1812	1,81	0,031				0270_2	13,83 Sp
									wrong dtm values, but it suffices for calculation of difference						WSW	298,66	N-winter	2183_5	294,44 W
																		1529_4	182,07 F
0427_0000	Argyre 1	-44,23	303,25	56,75		ARGYRE PLANITIA Bosporus Rupes. Nereidum Montes	47,32	47320	-7433	-9599	-723	2166	2,17	0,046				1341_5	153,35 W
									wrong dtm values, but it suffices for calculation of difference						ENE	36,58	S-fall	1885_3	242,45 Sp
0438_0000	Ophir 2	-7,76	303,47	56,53		XANTE TERRA OPHIR PLANUM	45,6	45600	2369	159	1083	2210	2,21	0,048				1341_2	153,0 W
									wrong dtm values, but it suffices for calculation of difference						SE	37,94	S-fall	1590_5	191,56 Sp
0469_0000	Cimmeria 2	-38,13	136,42	223,58		TERRA CIMMERIA	65	65000	-5155	-6347	-6347	1192	1,19	0,018				1938_4	251,97 Sp
															central	41,98	S-fall	1339_3	153,44 W
0482_0000 (50m) oder: 0493_0000 (25m) (rechter Rand fehlt)	Thaumasia 1	-17,83	296,43	63,57		VALLES MARINERIS THAUMASIA PLANUM	49,6	49600	2189	49	1855	2140	2,14	0,043				0482_1	43,33 F
									wrong dtm values, but it suffices for calculation of difference						central	44,66	S-fall	2464_3	339,86 Su
0482_0000 (50m) oder: 1973_0000 (25m) (nur 1/4 drauf)	Thaumasia2	-16,01	296,32	63,68		VALLES MARINERIS THAUMASIA PLANUM	54,8	54800	2591	882	2346	1709	1,71	0,031				0482_1	43,33 F
									wrong dtm values, but it suffices for calculation of difference						central	258,32	S-spring	2464_3	339,86 Su


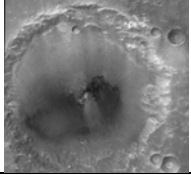
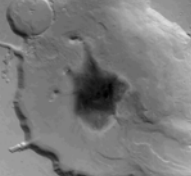
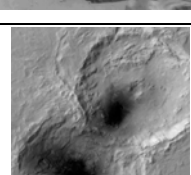
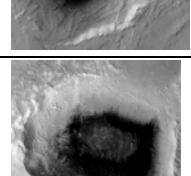
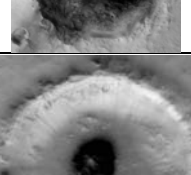
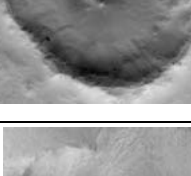
<p>just 2 pixel pyroxene mapping --> no pyroxene slope in spectrum --> dust?</p> <p>just 1 pixel pyroxene mapping --> no pyroxene H2O ice-ring around material</p> <p>just 1 pixel pyroxene mapping slope in spectrum --> dust? CO2 ice-cloud?</p>	<p>I06067006 (175.606°) I08289007 (278.694°) I04594022 (114.480°) I06816025 (211.652°) I09899014 (1.384°) I15128029 (210.015°) I16950027 (303.428°)</p>	<p>very bright</p>	<p>170</p>	<p>257</p>	<p>250</p>	<p>E0101278 E0301994 E1002590 E1100131 E1202742 E1700624 M0103785 M2100488 M2100916 R0500201 R1101351</p>	<p>W</p>	<p>from NE</p>	<p>sand sheet unclassified dunes</p>	<p>exposed layers ???</p>
<p>(difficult to identify, image noise covers the crater directly above material)</p> <p>no mafics</p>	<p>I06138003 (178.865°) I09009009 (322.628°) I14550031 (182.007°)</p>	<p>no difference light grey</p>	<p>199</p>	<p>392</p>	<p>770</p>	<p>R2300506</p>	<p>E</p>	<p>according to dune field wind mainly from E to SE</p>	<p>barchanoid dune field</p>	<p>67,90</p>
<p>pyroxene hydrated minerals</p> <p>pyroxene no hydrated minerals H2O ice on crater rim</p>	<p>I07099013 (226.051°) I07848014 (265.043°) I06737009 (207.692°)</p>	<p>dark</p>	<p>200</p>	<p>568</p>	<p>2490</p>	<p>S1000912</p>	<p>NNE</p>	<p>probably changing directions mainly from N from NNE from WNW</p>	<p>small dunes (shape?) unclassified dunes</p>	<p>3,08 7,61</p>
<p>pyroxene water ice on material little CO2 ice on material</p> <p>pyroxene no ice on material but in surrounding</p>	<p>I05582002 (154.138°) I05969009 (171.141°) I06306012 (186.728°) I08553010 (300.844°) I13782020 (148.033°) I14069002 (160.298°)</p>	<p>no difference light grey</p>	<p>167</p>	<p>248</p>	<p>230</p>	<p>E1004183</p>	<p>NE</p>	<p>according to dune shape: from S from W from SSW</p>	<p>barchans, barchanoid and unclassified dunes sand sheet</p>	
<p>pyroxene all over the region H2O ice from the rim of the crater on CO2 ice on material</p> <p>clearly pyroxene no ices</p>	<p>I03941002 (90.284°) I05102005 (134.278°) I05826002 (164.751°) I06213011 (182.355°) I06937002 (217.763°) I07299003 (236.396°) I07686009 (256.597°) I08435006 (295.011°) I10307018 (17.662°) I10594006 (28.685°)</p>	<p>center dark very thin sheet</p>	<p>186</p>	<p>577</p>	<p>2740</p>	<p>M1900695 R1003437 R1502176 R1601395 E0902485</p>	<p>WNW</p>	<p>from WNW</p>	<p>unclassified dune in centre (due to resolution) sand sheet</p>	
<p>pyroxene everywhere H2O ice around CO2 ice on rim</p> <p>clearly pyroxene no ices</p>	<p>see Thaumasia 1 I05826002 (164.751°)</p>	<p>small dark patch in crater center no difference between sand sheet and surrounding</p>	<p>176</p>	<p>452</p>	<p>1060</p>		<p>W</p>	<p>no deducible wind direction</p>	<p>sand sheet</p>	

0511_0000	Holden	-26,21	326,02	33,98		Uzboi Vallis Erythraea Fossa (Nähe Nirgal Vallis)	154,25	154250	-3102	-6151	-2217	3049	3,05	0,020	ENE	46,89	S-fall	0511_1	46,89 F
									wrong dtm values, but it suffices for calculation of difference									1154_3	127,28 W
																		2013_5	265,28 Sp
1323_0000	Feskov	21,91	273,48	86,52		THARSIS	85,75	85750	-1232	-2760	-1173	1528	1,53	0,018	S	151,02	N-summer	0380_3	30,67 Sp
																		3349_3	94,31 Su
																		0975_5	104,20 Su
1354_0000	Nier	43,11	106,09	253,91		UTOPIA PLANITIA	45,2	45200	-12078	-13812	-6140	1734	1,73	0,038	central	155,16	N-summer	0248_3	10,95 Sp
									wrong dtm values, but it suffices for calculation of difference									1017_5	109,00 Su
																		2290_6	312,81 W
1366_0000	Gill	15,80	5,4	354,6		ARABIA TERRA	71,6	71600	-2503	-4328	-2882	1825	1,83	0,025	SW	157,25	N-summer	2379_5	326,44 W
									wrong dtm values, but it suffices for calculation of difference									430_4	37,11 Sp
	Gill2	17,19	5,9	354,1		ARABIA TERRA	65,87	65870	-2497	-4646	-2858	2149	2,15	0,033	WNW	157,25	N-summer	2379_5	326,44 W
									wrong dtm values, but it suffices for calculation of difference									430_4	37,11 Sp

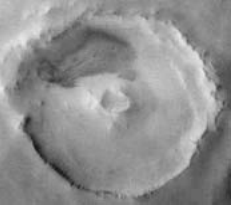
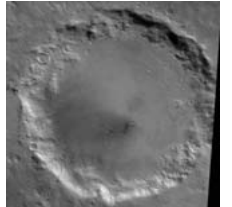
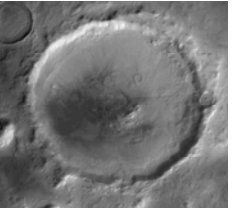

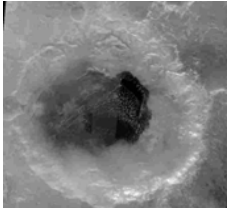
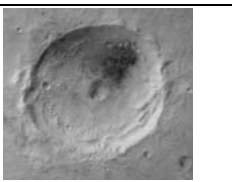
<p>pyroxene everywhere olivine (forsterite) in sand sheet CO2 cloud above entire orbit</p> <p>pyroxene olivine (forsterite) barely under threshold values no ice</p> <p>olivine visible in spectra</p>	<p>102467002 (36.861°) 103216002 (64.165°) 104327002 (104.451°) 105463005 (149.097°) 106599007 (200.862°) 104714019 (119.059°) 105438008 (148.047°) 105513008 (151.205°) 106212011 (182.309°) 106986009 (220.259°) 107348006 (238.943°) 114624013 (185.480°)</p>	<p>dust coated crater floor is dark</p> <p>dunes: brighter that dust coated areas but darker that surrounding</p>	157	231	200	<p>M0202300 M0302733 M0304184 M0400131 M0401496 E0102248 E0200169 E0201615 E0401036 E0501497</p>	W	<p>according to dune shape in MOC from NNW to NNE</p> <p>from NNE</p>	<p>dune field of barchans & barchanoid dunes</p>	226,71	
<p>some pyroxene mapped (4 pixel) -> no mafics H2O ice on rim CO2 ice on material</p> <p>pyroxene H2O ice on material very little CO2 ice on material</p> <p>no mafics spectrum inconspicuous</p>	<p>108523011 (299.374°) 107412012 (242.284°) 106663012 (204.023°) 104803002 (122.499°) 101807003 (11.571°) 102194002 (26.595°) 105889007 (167.557°) 107000009 (220.981°) 107749018 (259.891°) 10774019 (261.195°) 106276009 (185.318°)</p>	<p>very bright</p>	176	341	500	<p>R1103976 R1300400 R2100202 E1102164 E1200815 M0105869 M0807181 S0500298 S0501904 S0902586</p>	ENE	<p>according to barchans: from SSE</p> <p>according to wind streaks from THEMIS from SW</p>	<p>according to Mock S051904 : barchans and sand sheet</p>	28,21	<p>on MOC mosaic: dark streaks at NW-crater wall and in small crater seem to be superficial</p> <p>> dry avalanches of dust material expose subjacent dark material</p>
<p>H2O ice CO2 ice pyroxene on upper rim</p> <p>pyroxene on material H2O ice on material CO2 ice inside entire orbit</p> <p>blue slope in spectrum</p>	<p>101251007 (348.738°) 107168009 (229.615°) 107530011 (248.449°) 107917018 (268.634°) 114806016 (194.173°) 117564030 (332.259°)</p>	<p>no difference</p>	183	-		<p>E1102795 R0101079 R0201446 M1600493 R0901719 R1401871 S0400814</p>	NNW	<p>no deducible wind direction</p>	<p>sand sheet</p>		<p>exposed dark layers in north wall > exposed to south >> insolation effects?!</p> <p>> material transport down-wall to crater interior > alcove starts ca. 250m beneath crater rim</p> <p>> transport by water????????!!!!!! > would be hydrated > sulphate-like structures on crater floor >> dwelling H2O?</p>
<p>very shallow PX mapping spectra have blue slope > dust</p> <p>some PX mapping pixel ices</p>	<p>102428002 (35.412°) 106535009 (197.736°) 107671007 (255.817°)</p>	<p>bright</p>	185	395	780	<p>E0801662 M0103485 M0304393 M1101924 M2301170 R1500106 R1700984 SP124104</p>	NW	<p>from NNE</p>	<p>compact appearance</p> <p>unclassified dunes sand sheet</p>	295,79	
<p>very shallow pyroxene mapping spectra have blue slope > dust</p> <p>some PX mapping pixel ices featureless spectra > dust?</p>	<p>105037002 (131.65°) 106500018 (196.521°) 106872006 (214.475°)</p>	<p>bright</p>	182	450	1050	<p>see Gill</p>	NW	<p>according to wind streaks from NNE</p>	<p>compact appearance</p> <p>unclassified dunes sand sheet</p>	184,66	

1465_0009	Kunowsky	57,08	350,34	9,66		ACIDALIA PLANITIA	68,12	68120	-17136	-18821	-6124	1685	1,69	0,025				0171_3	ca. 0° W / Sp
									wrong dtm values, but it suffices for calculation of difference						E	171,75	N-summer	1205_1	134.52 Su
2350_0001	MaraldiZ	-60,99	331,76	28,24		ARGYRE PLANITIA Charitum Montes	42,97	42970	-12003	-13409	119	1406	1,41	0,033				0103_3	347.94 Su
									wrong dtm-values, but it suffices for the difference						N	321,96	S-summer	1293_4	146.43 W
2149_0000	Perrotin	-2,85	282,07	77,93		VALLES MARINERIS Hebes Chasma	84,4	84400	4707	3566	3241	1141	1,14	0,014				0581_3	57.00 F
															NE SW	288,96	S-summer	1506_4	14.00 F
1909_0000	Hesperia	-31,61	108,65	251,35		HESPERIA PLANUM / PROMETHEI TERRA	73	73000	-2491	-4780	-107	2289	2,29	0,031				1887_4	243.09 Sp
									wrong dtm values, but it suffices for calculation of difference						central	246,89	S-spring	1310_3	148.98 W
0526_0000	Melas Dorsa	-21,60	290,75	69,25		THAUMASIA PLANUM Melas Dorsa	28,3	28300	1184	-560	1924	1744	1,74	0,062				0308_1	19.0 Sp
									wrong dtm values, but it suffices for calculation of difference						central	49,11	S-fall	1429_1	166.3 W
0038_0000	Tyrrhena 1	-14,34	95,79	264,21		TYRRHENA TERRA	34,93	34930	1878	622	1514	1256	1,26	0,036				1420_3	165,22 W
									wrong dtm values, but it suffices for calculation of difference						central	336,84	S-summer		




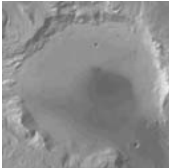
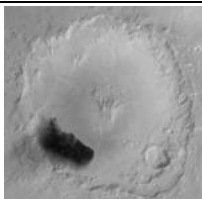
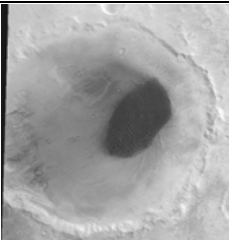
<p>no pyroxene H2O & CO2 ice in entire orbit</p> <p>pyroxene barely nameable, some pixel 3 pixel fayalite on crater rim hydrated minerals detection caused by ice H2O ice on material CO2 ice inside entire orbit</p>	I14760033 (191.962°)	<p>covers only crater rim</p> <p>gap in mosaic</p>		480	1200	E1201055 M0101244 M0402370	N	from W	sand sheet		
<p>pyroxene CO2 ice in entire orbit -> clouds?</p> <p>pyroxene H2O&CO2 ice above entire orbit clouds?</p>	I08484014 (297.43°) (only lower left corner)	<p>bad quality</p> <p>not resolvable</p>		243	220	no data	ESE	according to dune shape from S to ESE	unclassified dunes and sand sheet		
<p>shallow pyroxene</p> <p>shallow pyroxene</p>	I10557022 (27.282°)	<p>nur 1/2 daruf</p> <p>no difference light grey</p>	171	213	170	M2300700	NNE	no deducible wind direction	2 separated sand sheets		
<p>pyroxene in entire orbit no olivines cloud contamination ??</p> <p>clearly pyroxene in dark sand patch no olivines H2O ice around but not in dark material</p>	I06282003 (185.593°) I07780011 (261.500°) I10351007 (19.371°)	<p>hard to see</p> <p>no difference light grey</p>	165	260	260	E0500629	WNW	no deducible wind direction	sand sheet		
<p>pyroxene above entire orbit H2O ice on rim</p> <p>pyroxene above entire lower orbit</p>	I06363008 (189.436°) I11368002 (57.218°) I11967002 (78.770°) I14126002 (162.797°)	<p>hard to see</p> <p>no difference</p>	168	259	260	R0900880 R1501117 R1602484 S0602693	W	no deducible wind direction	sand sheet		
<p>pyroxene everywhere olivine (forsterite) on material</p> <p>no more orbits covering</p>	I06170007 (180.352°) I05808008 (163.956°) I06532008 (197.585°) I08005012 (2730178°) I08030012 (274.466°) I06919023 (216.850°)	<p>dark</p>	196	293	350	E1203343 M0103404 M1901314 M2101792 R0601795 R0700330	NNW	according to dune shape from N to NNW	barchans	33,18	exposed dark layers in small crater

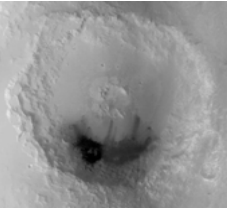
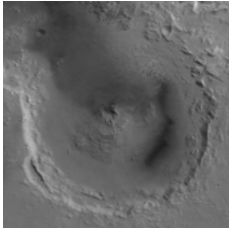
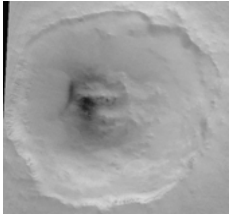
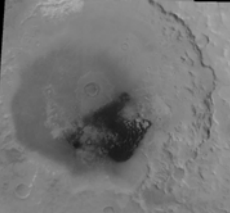
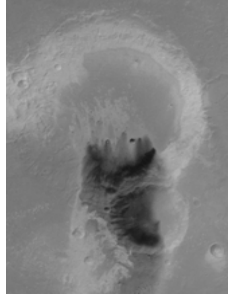
0061_0008	Xante 2	17,97	308,99	51,01		CHRYSE PLANITIA / XANTE TERRA	21,9	21900	-4576	-5388	-3260	812	0,81	0,037				0394_3	32.5 Sp
									wrong dtm values, but it suffices for calculation of difference						SW	341,12	N-winter	2244_4	305.21 W
0038_0000	Tyrrhena 2	-11,22	95,72	264,28		TYRRHENA TERRA	33,1	33100	1664	780	1255	884	0,88	0,027				1149_2	126.33 W
									wrong dtm values, but it suffices for calculation of difference						central	336,84	S-summer	1420_2	165.22 W
2192_0009	Mamers Valles	34,03	17,08	342,92		ARABIA TERRA Marmers Valles	60	60000	-7745	-9483	-3309	1738	1,74	0,029				3747_3	146.92 Su
									wrong dtm values, but it suffices for calculation of difference						central	296,25	N-winter	2192_6	296.25 W
1048_0000	Maja Valles	6,58	300,59	59,41		LUNAE PLANUM Maja Valles	34,2	34200	-696	-1996	-1320	1300	1,30	0,038				1048_6	113.70 Su
															SW	113,7	N-summer	2343_4	320.83 W
2097_0000	Meridiani	2,15	352,16	7,84		ARABIA TERRA Meridiani Planum	48,9	48900	-2486	-2982	-2320	496	0,50	0,010				1454_3	170.1 Su
															central	279,7	N-winter	2097_5	279.7 W
1269_0000	Arcadia	65,37	177,97	182,03		VASTITAS BOREALIS	46,72	46720	-18707	-20399	-6553	1692	1,69	0,036				0976_3	104.2 Su
									wrong dtm-values, but it suffices for the difference						central	143,41	N-summer	0888_2	93.4 Su
1910_0009	Sinus Meridiani	1,67	8,38	351,62		ARABIA TERRA Meridiani Planum west of Sinus Meridiani	17,6	17600	-1142	-1784	-1307	642	0,64	0,036				0430_3	37.4 Sp
															central	246,89	N-fall		

H2O ice in entire orbit blue slope in spectrum -> dust no mafics, featureless spectra -> dust H2O ice around material	107985015 (272.149°) I11467002 (66.795°) I05401008 (146.506°) I06874006 (214.574°)	no difference light grey	189	375	680	no data	ENE	material on northern crater rim, probably blown in and caught in the lee > wind from NE ? according to wind streaks from northern orbit >> Wind from NE	unclassified dunes sand sheet		in RGB: material on northern wall > blown in from north and trapped in the lee?
pyroxene CO2 ice on crater rim spectra show px and olivine absorptions pyroxene clearly olivine (forsterite)	I06170007 (180.352°) I06894011 (215.583°) I08005012 (2730178°)	dark	195	305	370	see Tyrrhena 1	WNW	according to dune shape from N to NW	barchans	12,53	exposed dark layers in small crater
pyroxene mapping and deep absorptions hydrated minerals on eastern margin of dark patch clearly pyroxene hydrated minerals on eastern margin of dark patch	I01716007 (7.946°) I04687002 (118.029°) I05436014 (147.971°) I06160010 (179.894°) I06522012 (197.107°) I07658013 (255.139°)	bright	185	437	980	E0202528 E0401862 E0502617 M0103245 M0201517 M0300346 M0301618 M0400536 M0701448 M0801091	NNW	no deducible wind direction	sand sheet		
traces of pyroxene, some pixel (but px comes out in spectra) hydrated mineral mapping on material (but looks like atm. eff.) H2o ice above entire orbit pyroxene no hydrated minerals	I06593016 (200.597°) I08478035 (297.172°) I05289005 (141.869°) I05626011 (156.030°) I05651011 (157.107°) I15361027 (221.816°)	bright	192	428	940	no data	W	according to wind streak and sand sheet orientation > from SW from NNE from ESE	unclassified dunes sand sheet		
pyroxene, esp. on lower rim of material some pixel for hydr.min. mapping pyroxene in south (little) some hyd. pixel (underlying material)	I01018006 (338.640°) I01355002 (353.133°) I06935007 (217.663°) I11216002 (51.712°) I16420009 (276.805°)	bright very thin sheet > crater floor shines through?	193	501	1510	E0501493 E1003333 E1900021 M0103266 M0300373 M0705389 M0906275 M1800457 R0401134 S0600857	ESE	from NE / NNE	sand sheet barchans		yardangs on crater floor probably sulphates as well >> dwelling Water and lower pH-values as during building of phyllosilicates (acidic <7) distinct traces of water influence
pyroxene on material olivine (forsterite und fayalite) on material hydrated material in entire orbit (cloud??) H2O ice in entire orbit out of material CO2 ice on material pyroxene olivine no hydrated minerals in material H2O ice not on mat. CO2 ice on rim	I03258035 (65.685°)	bright	190	449	1050	E0201365 E0503494 M0001253 M0102699 M0203757 M0303970 M0701029 M2100758	NNW	from SSW	sand sheet unclassified dunes barchans		
pyroxene hydrated minerals CO2 ice H2O ice around material no more orbits covering	I105504021 (27.169°)	dark	179	326	430	E0300425 M1901355 R0501890 R0601228 R0701414 R0801475	ENE	from NE/ENE	barchans unclassified dunes		

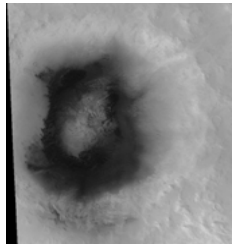
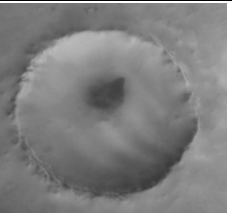
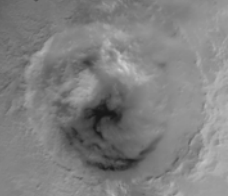

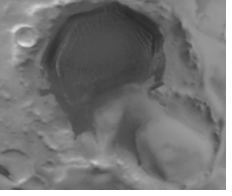

1946_0000	Hellas	-51,49	66,59	293,41		HELLAS PLANITIA	41	41000	-16731	-17832	-6833	1101	1,10	0,027				1979_4	258,59 Sp
									wrong dtm-values, but it suffices for the difference						NW	253,24	S-spring	1946_3	253,24 Sp
0397_0000	Verrier2	-38,37	13,16	346,84		NOACHIS TERRA Le Verriers neighbour	75,13	75130	-4841	-6772	223	1931	1,93	0,026				0397_1	32,5 Sp
									wrong dtm values, but it suffices for calculation of difference						WSW	32,5	S-spring	1322_4	15,98 F
1629_0000	Renaudot	42,40	62,66	297,34		UTOPIA PLANITIA	60	60000	-10059	-11411	-3955	1352	1,35	0,023				1153_4	127,28 Su
									wrong dtm values, but it suffices for calculation of difference						WSW	198,02	N-fall	3644_2	132,63 Su
Mosaic 1945_0000 /1967_0000	Reuyl	-9,76	166,9	193,1		ELYSIUM PLANITIA	83	83000	-2537	-4699	-3564	2162	2,16	0,026				1086_5	118,56 W
									wrong dtm values, but it suffices for calculation of difference						SW	253,24 257,05	S-spring S-spring	2436_3,	335,22 Su
Mosaic 2258_0000 /2247_0000 /2225_0000	Russell	-54,99	12,33	347,67		NOACHIS TERRA	219,9	219900	-9994	-11764	102	1770	1,77	0,008				1899_3	244,99 Sp
									wrong dtm values, but it suffices for calculation of difference						central	306,98 305,21 301,65	S-summer S-summer S-summer	2247_2	305,75 Su
0024_0000	Cimmeria_ Sirenum	-40,39	174,27	185,73		TERRA CIMMERIA / TERRA SIRENUM	24,41	24410	-6274	-7477	268	1203	1,20	0,049				0024_1	334,14 Su
															NE	334,14	S-summer	1890_3	243,70 Sp


<p>pyroxene no olivine entire orbit hydrated no H2O ice no CO2 ice</p> <p>bad orbit, does not cover entire crater not usable in ENVI</p> <p>no more orbits covering</p>	109490012 (343,69°)	dark	178	532	1940	E1103954 M1501582 R1702046	SSW	from ESE	unclassified dunes sand sheet		
<p>pyroxene in entire orbit H2O ice on crater rim CO2 ice in entire orbit</p>	no data	-	-	247	220	E0902585	ESE	from W	barchans sand sheet		
<p>clearly pyroxene hydrated mineral mapping (in atmosphere ??)</p> <p>clearly pyroxene in material cloud contamination in upper orbit</p>	107182012 230.338	no difference	170	-	-	E0400036 E1600149 M0904045	NNE	from ESE	barchans sand sheet		
<p>pyroxene olivine (forsterite)</p> <p>pyroxene olivine visible in spectra</p>	102435003 (35.671°) 103159023 (62.115°) 105456009 (148.803°) 105793002 (163.295°) 107266013 (234.682°) 11210004 (51.492°)	dune in center is darker rest is bright	175	422	910	M0201357 E0200936 R0100204 M0901664 M2000964 R0802674 R1602149	N	from NW from NE	barchans sand sheet		
<p>pyroxene no olivine H2O ice around material</p> <p>clearly pyroxene some olivines no ices</p>	101417005 (355.721°) 101442003 (356.760°) 105549003 (152.730°) 105861003 (166.298°) 106660006 (203.864°) 107011007 (222.092°) 108545010 (300.449°)	relative bright with dark ripples and brighter ripple crests not distinct difference to surrounding	190	326	430	M0100249 M0203529 M0301447 M0302396 M0401285 E0101619 E0200070 E0201493 E0501384 E0502470	E	from SE	huge complex dune field barchans, barchanoid, dome dunes, transverse dunes longitudinal dunes		
<p>pyroxene H2O ice around material</p> <p>pyroxene no ice on material</p>	110511007 (25.526°) 106467011 (194.430°) 105718002 (160.006°) 105356005 (144.628°) 117587009 (333.283°)	no difference light grey	148	266		no data	ESE	from SE	sand sheet		exposed dark layers

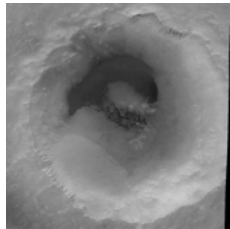
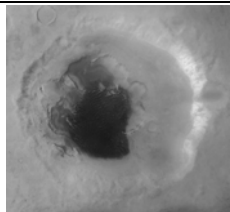
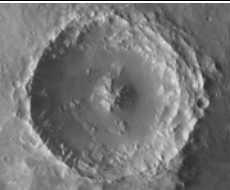
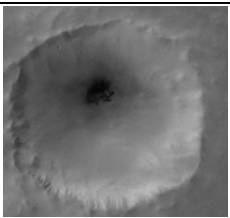
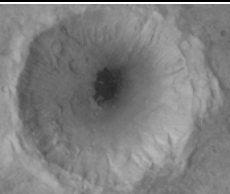
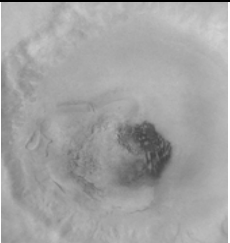
Mosaic 0912_0000/ 0901_0000	Chaos 4	8,47	344,28	15,72		MARGARITIFER TERRA/ ARABIA TERRA	70,42	70420	-2703	-4334	-3428	1631	1,63	0,023	S	96,51 95,18	N-summer N-summer	2196_5	296,85 Su
0912_0000	Chaos 3	11,39	343,44	16,56		MARGARITIFER TERRA/ ARABIA TERRA	24,17	24170	-2942	-3965	-2788	1023	1,02	0,042	S	96,51	N-summer	0912_5	96,51 Su
	Chaos 1	-5,63	343,49	16,51		MARGARITIFER TERRA/ ARABIA TERRA	49,05	49050	-2498	-3563	-3047	1065	1,07	0,022	NE	96,51	S-winter	0912_6 4112_4	96,51 W 203,42 Sp
	Chaos 2	4,11	343,76	16,24		MARGARITIFER TERRA/ ARABIA TERRA	34,65	34650	-3047	-3759	-3147	712	0,71	0,021		96,51	N-summer	0912_5 4112_4	96,51 Su 203,42 Sp
1530_0000	Peridier	25,78	83,91	276,09		ISIDIS PLANITIA	87,97	87970	-4872	-6442	-3321	1570	1,57	0,018	SW	182,36	N-fall	2937_5	43,79 Sp
Mosaic 2529_0000/ 2496_0000	Proctor	-47,99	29,52	330,48		NOACHIS TERRA	229,4	229400	-7986	-9137	566	1151	1,15	0,005	E	348,98 324,29	S-summer S-summer	1157_7 2027_5 5346_6	127,76 W 267,8 Sp 38,94 F

Mosaic 0155_0001/ 1969_0000 1980_0000/	Sagan	10,82	329,39	30,61		MARGARITIFER TERRA Ares Valles	89,8	89800	-3079	-5947	-4667	2868	2,87	0,032	S	356,64 257,68 259,58	N-winter N-fall N-fall	0376_3 0456_1	29,75 Sp 40,19 Sp
0442_0008	Oudemans	-9,88	268,22	91,78		THARSIS SINAI PLANUM	126,5	126500	6498	2942	2351	3556	3,56	0,028	NW & E	38,39	S-fall	1030_7 3056_6 (eastern part) 3078_6 (western part) 4230_3	111,40 W 58,37 F 61,00 F 223,70 Sp
2359_0000	Rosby2	-50,16	168,85	191,15		TERRA CIMMERIA	44,07	44070	-7525	-9197	975	1672	1,67	0,038	central	323,64	S-summer	1313_5 1912_3 2348_2 2370_2	149,49 W 247,53 Sp 321,39 Su 325,88 Su
Mosaic 2148_0000 2159_0001 2181_0001 2628_0001	Kaiser	-46,52	18,84	341,16		NOACHIS TERRA	275,71	275710	-6861	-8442	821	1581	1,58	0,006	SSE	288,96 290,79 294,44 3,14	S-winter S-winter S-winter S-fall	1245_6 3260_2	139,92 W 83,29 F
3297_0000	Mawrth Vallis	18,89	345,5	14,5		ARABIA TERRA/ Mawrth Vallis	63,2	63200	-4169	-5191	-3210	1022	1,02	0,016	S	87,68	N-spring	2185_5 3297_3	295,04 W 87,68 Sp

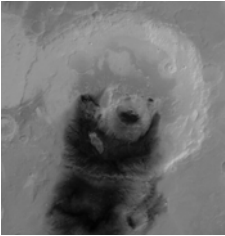


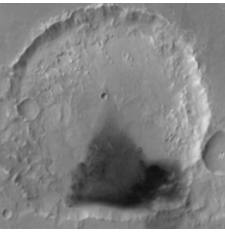
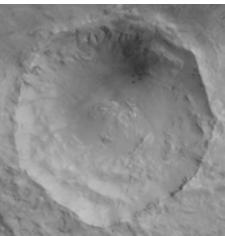
pyroxene on material H2O ice in broad parts of orbit CO2 ice on material clearly pyroxene no hydrated no ice on material	I00819001 (329.752°) I01206006 (346.812°) I02629002 (42.859°) I05625011 (155.988°) I11978005 (79.169°) I14137007 (163.282°)	bright	197	555	2230	M2100099 M2100607 R1401200 S0902388	NE	from N/NNE	barchans and sand sheet		Ares vallis: selective exposed layers on northern wall > exposed to south >> insolation effects??
H2O ice in entire orbit pyroxene pyroxene olivine in dune north of crater pyroxene (registration effects)	I06189006 (181.236°) I07300003 (236.449°) I07662007 (255.340°) I15487026 (228.285°) I02419002 (35.073°) I05802002 (163.691°) I06501011 (196.079°) I17309024 (320.571°) I17646025 (335.920°)	no difference	188	251	240	M0200242 M0301737 M0300406 E0300349 M0705427 M0806043 M1202320 M1500848 R0401804 R0500016 R0500757 R0501837	NNW	according to wind streaks in MOC: from ESE to WNW from NNW	sand sheet		
hydrated minerals and ice --> atmosphere bad orbit pyroxene (shallow) no ice on material pyroxene pyroxene	I06280004 (185.498°)	gap in data at dune position	-	-	-	E1302348 R1100511	ESE	no deducible wind direction	unclassified dunes		exposed dark layers
(noise above material) pyroxene hydrated minerals in entire orbit H2O&CO2 ice in entire orbit > atmospheric effects not usable in mapping program spectra prove px occurrence	I00880002 (19.029°) I0790819 (268,152°)	dunes resolvable but no distinct colour difference light-grey	210	328	440	AB110004 FHA00944 M0200759 M0204432 M0302216 M0303262 M0304863 E0201938 E0401253 E0401955	SSW	according to dune shapes in MOC and MGD3 data: mainly from W	mega-barchans (Claudin et al.) barchans, barchanoid transverse dunes star dunes	3780,44	
bad orbit with gaps pyroxene (shallow and spare)	I05175014 (137.224°) I05562013 (153.292°) I06311014 (186.970°) I07784025 (216.713°) I17169011 (313.982°)	gap in THEMIS data at dune location material emerging from small craters is dark!!	-	460	1100	R0701192 S0800041 S0901778	ENE	from N	barchans and sand sheet unclassified dunes	13,82	obvious insolation effects; material emanates from beneath the floor ATTENTION: "seemingly insol.eff. also south of the crater, where material is blown out and is catches in the lee of smaller craters

Mosaic 3333_0000 3344_0000	Moreux	42,12	44,51	315,49		ARABIA TERRA/ Ismeria Fossae. Protonius Mensae	165	165000	-9529	-12001	-4083	2472	2,47	0,015	central	92,1 93,87	N-summer N-summer	0294_5	18.0 Sp
1443_0000	Vastitas	70,26	352,1	7,9		VASTITAS BOREALIS	38,55	38550	-4436	-6563	-6487	2127	2,13	0,055	central	168,47	N-summer	1150_3	127,28 Su
Mosaic 1461_0000 1450_0000 3183_0000 1589_0000	Lyot	50,60	29,4	330,6		ACIDALIA / UTOPIA PLANITIA Deuteronilus Mensae	200,97	200970	-13506	-16568	-5984	3062	3,06	0,015	central to south	171,2 169,56 73,67 191,56	N-summer N-summer N-spring N-fall	3670_1 3194_3	136,18 W 75,42 Sp
Mosaic 1938_0000 1927_0000 1916_0000	Gale	-5,40	137,83	222,17		ELYSIUM PLANITIA Aeolis Mensae	155,8	155800	-932	-4554	-3305	3622	3,62	0,023	circular around centre	251,97 250,07 248,16	S-spring S-spring S-spring	2363_4 3061_6	324,21 Su 58,81 F
Mosaic 2205_0000 2586_0000	Richardson	-72,60	180	180		TERRA CIMMERIA TERRA SIRENUM	91,75	91750	2361	575	1162	1786	1,79	0,019	central	298,66 357,15	S-summer S-summer	2128_3 2073_3	285,27 Su 275,96 Su
Mosaic 1961_0000 1950_0000 1928_0000 1917_0000	Dawes	-9,23	38,01	321,99		TERRA SABEA	182,55	182550	2872	294	417	2578	2,58	0,014	SW-S-SE	255,78 253,87 250,07 248,16	S-spring S-spring S-spring S-spring	2386_4 3073_6	327,55 Su 60,57 F

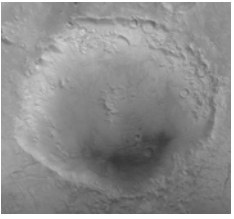

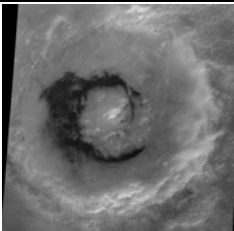
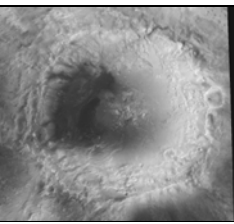

<p>pyroxene olivine (fayalite) no hydr. min.</p> <p>pyroxene no hydr. min. spectra prove olivine occurrence</p>	<p>I00991002 (337.45°) I02389006 (33.957°) I05772011 (162.378°) I06209018 (182.177°) I06521016 (197.058°) I06571017 (199.497°) I06883008 (215.033°) I08019613 (273.908°)</p>	<p>dunes obvoid but no distinct colour difference</p> <p>light-grey</p>	170	310	380	<p>E0100550 M0201490 M0300332 M0301604 M1202264 E0100550 E0300309 E0301754 E1003310 E1400269 E1602214</p>	NNW	<p>according to barchans and barchanoid ridges in MOC M1202264 : from ENE</p> <p>in other parts of dune field from NNW</p>	<p>barchans and barchanoid dunes sand sheet</p>		
<p>pyroxene ice covered dunes H2O ice CO2 ice almost in entire orbit</p> <p>no more usable orbits</p>		<p>no data from material</p>	-	-	-	<p>M0200057 M0201248</p>	W	<p>according to dune shape from E</p>	<p>barchans sand sheet</p>	<p>dust covered frosty crater rim; ice/frost covered sand dunes</p> <p>false colour THEMIS: ice/frost=bright blue; dust mated ice=red/orange</p>	
<p>pyroxene olivine</p> <p>pyroxene olivine obvious in spectra</p>	<p>I02402002 (34,420°)</p>	<p>material not resolvable</p> <p>no difference</p>	175	292	350	<p>E0101799 E0302501 M1800073 M1800972 M1900242 M1900748 M2300674 R0400620</p>	WNW	<p>according to dune shape from NE to ENE but also from NW to WNE</p>	<p>barchans, barchanoid, transverse dunes</p>		
<p>pyroxene olivine < threshold but obvious in spectra</p> <p>pyroxene olivine</p>	<p>I098800 (337,316°)</p>	<p>parts of material distinctly darker</p> <p>!!!very dark areas at bright material position!!</p>	194	290	340	<p>M0200118 M0202613 E0100067 E0100538 E0200343 E0200942 E0201115 E0201579 E0301733 E0301915</p>	NW	<p>according to dune shape from NW, N, and W</p>	<p>barchans, barchanoid, longitudinal dunes sand sheet</p>		
<p>Px obvious in spectra (OL mapping just with lower threshold) olivine absorption in spectrum</p> <p>no Px and OL mapping result Px obvious in spectra</p>	<p>no data</p>	-	-	279	310	<p>M0302972 E1102492 E1103101 M0903617 M1100963 M1202246 M1500807 M1600771 R0400498</p>	ESE	<p>multiple directions from E/ESE, ENE</p>	<p>barchanoid, transverse dunes</p>		
<p>pyroxene olivine</p> <p>pyroxene olivine</p>	<p>I05810002 (164,044°)</p>	<p>longitudinal dunes are darker</p>	169	271	290	<p>M0400223 E0101797 E0201052 E0500025 E1001052 E1003504 E1103591 E1104433 E1200683 E1301166</p>	WNW	<p>multiple directions, local winds</p> <p>from NW to NNW, WNW</p> <p>from SW</p> <p>from NE</p>	<p>barchans longitudinal dunes sand sheets</p>	<p>3 different local wind directions distinct traces for material supply along wind aisle in the southern wall</p>	

2197_0001	Porter2	-52,97	246,63	113,37		TERRA SIRENUM	66,62	66620	2181	-39	-27	2220	2,22	0,033	NW	296,85	S-summer	1272_3	143.41 W
4280_0000 4269_0000 4258_0000 für RGB: 2441_0000	Rabe	-43,96	34,84	325,16		NOACHIS TERRA	144,225	144225	197	-1208	-296	1405	1,41	0,010	central	336,3	S-summer	2441_3 1983_4	296,85 Su 88.0 F 336.3 Su 260.0 Sp
4125_0000 4114_0000 4092_0000	Molesworth	-27,73	149,84	210,16		TERRA CIMMERIA	29,92	29920	1067	-684	643	1751	1,75	0,059	W			1489_5 1478_5	175,62 W 173,95 W
4301_0000	Tolstoy2	-48,56	129,79	230,21		TERRA CIMMERIA PROMETHEI TERRA	34,5	34500	1987	-345	1102	2332	2,33	0,068	central to NW			1577_3 3160_4	189,22 Sp 71,05 F
4290_0000	Morpheus Rupes	-38,62	131,6	228,4		TERRA CIMMERIA PROMETHEI TERRA	26	26000	1342	-438	1928	1780	1,78	0,068	central			1577_3 1993_5	189,82 Sp 261,48 Sp
4280_0000	Rabe2	-41,07	34,41	325,59		NOACHIS TERRA	66,63	66630	1638	-462	-85	2100	2,10	0,032	central			1983_4 2441_3	260.0 Sp 336.3 Su

pyroxene hydr. mapping due to atmospheric effects			-	318	390	E0501539 E0600189 E1002190 E1003387 E1103523 E1501214 R0501845 R0601134 R0700841	ENE	from ENE from SE	barchans, barchanoid unclassified dunes	448,09	exposed dark layers, dark gullies	22
clear pyroxene clear olivine	no data	no data										
pyroxene olivine proved by spectra												
pyroxene olivine (below threshold) in dark layer olivine proved by spectra	I01179002 (deleted) I01903002 (15,35°) I15358013 (37.711°)	dunes light-grey	203	327	430	FHA01006 M0203078 M0204567 M0301111 M0303547 E0200691 E0202028 E0300818 M1300554 M1400371	SSE	from SE	barchans, barchanoid	2678,29	exposed dark layers	
clearly pyroxene olivine (below threshold) at NE-rim of Pit olivine proved by spectra												
according to spectral ratio pyroxene according to spectral ratio olivine	I07791020 (262,072°) I08540012 (300,207°)	very dark	193	286	330	M0100105 E0401552	NNW	from NW	barchans, barchanoid			
pyroxene												
pyroxene			180	-	-							
bad spectra	I17938008 (348,632°)	no difference					SE	from SE	unclassified dunes	18,04		
pyroxene some CO2 clouds in orbit	no data	-		230	200	E1100153 E1401791 R1003989 R1202835	WSW	from W/WNW	barchans unclassified dunes		dark gullies running down slope	
clearly pyroxene no ice on material												
much pyroxene	I08207009 (282,526°)		206	343	510	E0301354 E0902054 E1800079 E2100661 M1900984		from E/ENE				
clearly pyroxene	I15358013 (221,655°)	light-grey					SSE		barchans, barchanoid	84,10	exposed dark layers	

Mosaik 3286_0000 3275_0000	Trouvelot	16,30	346,5	13,5		ARABIA TERRA	130,2	130200	-1346	-4380	-3661	3034	3,03	0,023	central to S	86,36 85,05	N-spring N-spring	1260_2 0551_4 1498_4 2141_6	141,91 Su 52,20 Sp 177,29 Su 287,43 W
0416_0000	Agyre2	-42,50	305,1	54,9		ARGYRE PLANITIA Bosporus Rupes Nereidum Montes	48,4	48400	1656	-748	1114	2404	2,40	0,050	central to NW	35,23	S-fall	1297_3 1341_4	146,43 W 153,34 W
3132_0000	Arabia1	5,54	0,06	359,94		ARABIA TERRA Meridiani Planum Oxia Palus	40,9	40900	-1708	-2412	-1907	704	0,70	0,017	S-SW	67,56	N-spring	0485_3 1410_1 2500_4	43,77 Sp 163,61 Su 340,08 W
3132_0000	Arabia2	9,97	0,01	359,99		ARABIA TERRA Meridiani Planum Oxia Palus	40,2	40200	-1210	-2412	-2218	1202	1,20	0,030	S-SE	67,56	N-spring	0485_3 1410_1 2500_4	43,77 Sp 163,61 Su 340,08 W
2476_0000	Sirenum1	-39,33	195,93	164,07		TERRA SIRENUM Sirenum Fossae	19,9	19900	1540	577	455	963	0,96	0,048	N-NE	341,65	S-summer	1408_5 1996_5	163,61 W 262,12 Sp

<p>pyroxene olivine (forsterite) in small crater hydrated minerals in small patch</p> <p>pyroxene no olivine because of dust</p> <p>pyroxene no olivine because of dust</p> <p>pyroxene no olivine because of dust hydrated minerals</p>	<p>I01430003 (356,279°)</p> <p>I02516006 (38,685°)</p>	<p>dark</p>	<p>192</p>	<p>469</p>	<p>1130</p>	<p>M0001346 M0001347 M0201093 M0304176 M0304177 M0306501 E0100892 E0400713 E0500437 E0501291</p>	<p>NW</p>	<p>from ENE</p>	<p>barchans, barchanoid dome dunes unclassified dunes sand sheet</p>	<p>probable ILD on crater floor</p>
<p>(difficult to resolve/detect) but Px in spectra</p> <p>shallow Px absorption also visible in spectrum (crater is hard to resolve)</p>	<p>I05701008 (???) I16946018 (303,225°)</p>	<p>dark</p>	<p>199</p>	<p>381</p>	<p>720</p>	<p>R1501756 S0101231</p>	<p>SSE</p>	<p>multiple directions from E from S from NNE from SW</p>	<p>barchanoid star dunes</p>	<p>raea: 137,026</p>
<p>some pixel pyroxene hydrated minerals in material according to spectrum olivine</p> <p>little pyroxene some pixel ol4 hydrated minerals according to spectrum OL + HD</p> <p>some pyroxene few pixel mapped for hydr. minerals</p>	<p>gap at mat. location</p> <p>no data</p>	<p>no difference</p>	<p>-</p>	<p>394</p>	<p>760</p>	<p>R1304153</p>	<p>NE</p>	<p>from NWN/N</p>	<p>barchans unclassified dunes</p>	<p>lot of olivine in centre of Meridiani Planum, south of the crater -> bright streaks in Viking images</p>
<p>pyroxene</p> <p>some pyroxene slight blue slope in spectrum but Px obvious in spectral ratios</p> <p>some pyroxene</p>	<p>I07434014 (243,430°) I05961009 (170,786°)</p>	<p>seems to be brighter, but not sure</p>	<p>186</p>	<p>-</p>	<p>-</p>	<p>M0703738</p>	<p>NW</p>	<p>from N/NNE from NW</p>	<p>barchans sand sheet</p>	
<p>pyroxene in entire orbit H2O ice in material CO2 ice in entire orbit</p> <p>pyroxene</p>	<p>no data</p>	<p>gap in THEMIS data at material position</p>	<p>-</p>	<p>-</p>	<p>-</p>	<p>E0502190 E1601453 M1100629 M1700207 R1802085 S0701663</p>	<p>NE</p>	<p>from WNW</p>	<p>unclassified dunes</p>	

2399_0000	Newton2	-38,37	200,88	159,12		TERRA SIRENUM Newton Crater	56,3	56300	2217	-86	153	2303	2,30	0,041		329,76	S-summer	1952_4	254,51 Sp
															SSE			1941_4	252,60 Sp
2527_0000	Sirenum2	-45,30	225,4	134,6		TERRA SIRENUM	63,8	63800	2484	3	69	2481	2,48	0,039		348,98	S-summer	1177_7	130,64 W
															N			2047_5	270,95 Su
																		4670_3	300,67 Su
Mosaic 4381_0009 4370_0000 4359_0000	Liu Hsin	-53,51	188,42	171,58		TERRA SIRENUM	131,8	131800	1757	-61	26	1818	1,82	0,014				1203_3	134,03 W
															circular to the W			4696_3	304,99 Su
1347_0000	Nili Fossae	20,98	75,78	284,22		NILI FOSSAE	47,49	47490	656	-1963	-1977	2619	2,62	0,055		154,12	N-summer	0422_4	35,09 Sp
															W			2283_4	311,07 W
1098_0000	Nili Patera	8,85	67,26	292,74		NILI PATERA SYRTIS MAYOR PLANUM	53,3	53300	1251	-106	212	1357	1,36	0,025		120,19	N-summer	1402_2	162,54 Su
															SW			0488_3	44,40 Sp

<p>clearly pyroxene H2O ice not in material</p> <p>pyroxene widely distributed</p>	<p>I16700016 (291,033°)</p>	<p>no difference</p>	<p>196</p>	<p>302</p>	<p>370</p>	<p>M1402153 M1700879 R1302409 R1303447 S0500016</p>	<p>WSW</p>	<p>no deducible wind direction</p>	<p>sand sheet</p>		
<p>pyroxene everywhere hydrated minerals on rim and in material > atmospheric effects H2O ice in entire orbit CO2 ice on rim</p> <p>clearly pyroxene olivine just below threshold distinct olivine absorptions in spectra</p> <p>pyroxene some ice influences?</p>	<p>no good data</p>	<p>bad data</p>	<p>-</p>	<p>240</p>	<p>210</p>	<p>M0201005 M0302522 E0200748 E0503459 E1001705 E1302327 R0100828 M0700972 M1401481 M1801196</p>	<p>ESE</p>	<p>from W/WSW</p>	<p>barchans, barchanoid unclassified dunes</p>		
<p>(bad orbit for interpretation) spread pyroxene clouds?</p> <p>pyroxene also in spectra visible</p> <p>no better orbits</p>	<p>I15490017 (228,433°) I17312018 (320,706°) 18248018 (1,577°)</p>	<p>light-grey</p>	<p>194</p>	<p>286</p>	<p>330</p>	<p>M0202376 M0300454 E0201670 E0501556 R1304644 R1801043 R2001248</p>	<p>E</p>	<p>from ENE/E</p>	<p>barchans, barchanoid dome dunes</p>		
<p>pyroxene water ice in environment CO2 ice in crater rim</p> <p>pyroxene some water ice on rim much CO2 ice, especially on rim</p> <p>but no ice in material !</p>	<p>I0101500 (338,511°)</p>	<p>light-grey to dark >> loose</p>	<p>186</p>	<p>300</p>	<p>370</p>	<p>R0800802 R1102034</p>	<p>SE</p>	<p>from SE</p>	<p>barchans, barchanoid sand sheet</p>		
<p>pyroxene olivine (forsterite&fayalite)</p>	<p>I01015002 (75,598°)</p>	<p>dark</p>	<p>185</p>	<p>230</p>	<p>200</p>			<p>from NE/ENE</p>	<p>barchans, barchanoid longitudinal dunes</p>		

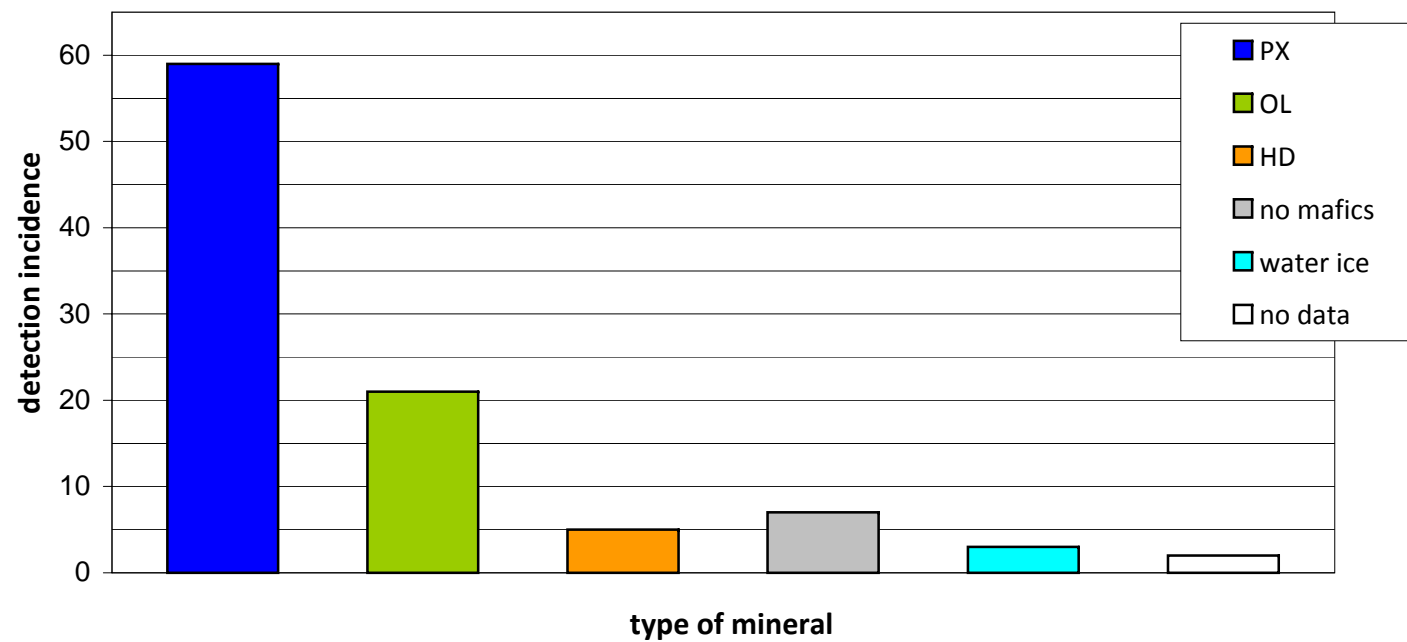
Mineralogy Statistics

Locality ID	PX	OL	HD	no mafics	water ice	no data
Arabia1	1	1	1			
Arabia2	1					
Arcadia	1	1				
Argyre1				1		
Argyre2	1					
Barnard	1	1				
Chaos 1	1					
Chaos 2	1					
Chaos 3	1					
Chaos 4	1					
Cimmeria 1						1
Cimmeria 2	1					
Cimmeria_Sirenum	1					
Dawes	1	1				
Elysium	1					
Fesenkov				1		
Gale	1	1				
Gill				1		
Gill2				1		
Hellas	1					
Hesperia	1					
Holden	1	1				
Kaiser	1					
Kunowsky					1	
Liu Hsin	1					
Lyot	1	1				
Ma'adim Vallis						1
Maja Valles	1					

Mamers Valles	1		1			
Maraldi2	1					
Marte Vallis				1		
Mawrth Vallis	1					
Melas Dorsa	1					
Meridiani	1		1			
Molesworth	1	1				
Moreux	1	1				
Morpheos Rupes	1					
Newton2	1					
Nier					1	
Nili Fossae	1					
Nili Patera	1	1				
Ophir 1	1	1				
Ophir 2	1					
Oudemans	1	1				
Peridier	1					
Perrotin	1					
Porter2	1	1				
Proctor	1					
Rabe	1	1				
Rabe2	1					
Renaudot	1					
Reuhl	1	1				
Richardson	1	1				
Rossby2	1					
Russell	1					
Sagan	1					
Sinus Meridiani	1		1			
Sirenum1	1					
Sirenum2	1	1				

Thaumasia1	1					
Thaumasia2	1					
Tolstoy2	1					
Trouvelot	1	1	1			
Tyrrhena 1	1	1				
Tyrrhena 2	1	1				
Tyrrhena 3	1	1				
Vastitas	1				1	
Verrier2	1					
Xante1				1		
Xante2				1		
Sum	59	21	5	7	3	2

Statistics of Mineralogical Analysis



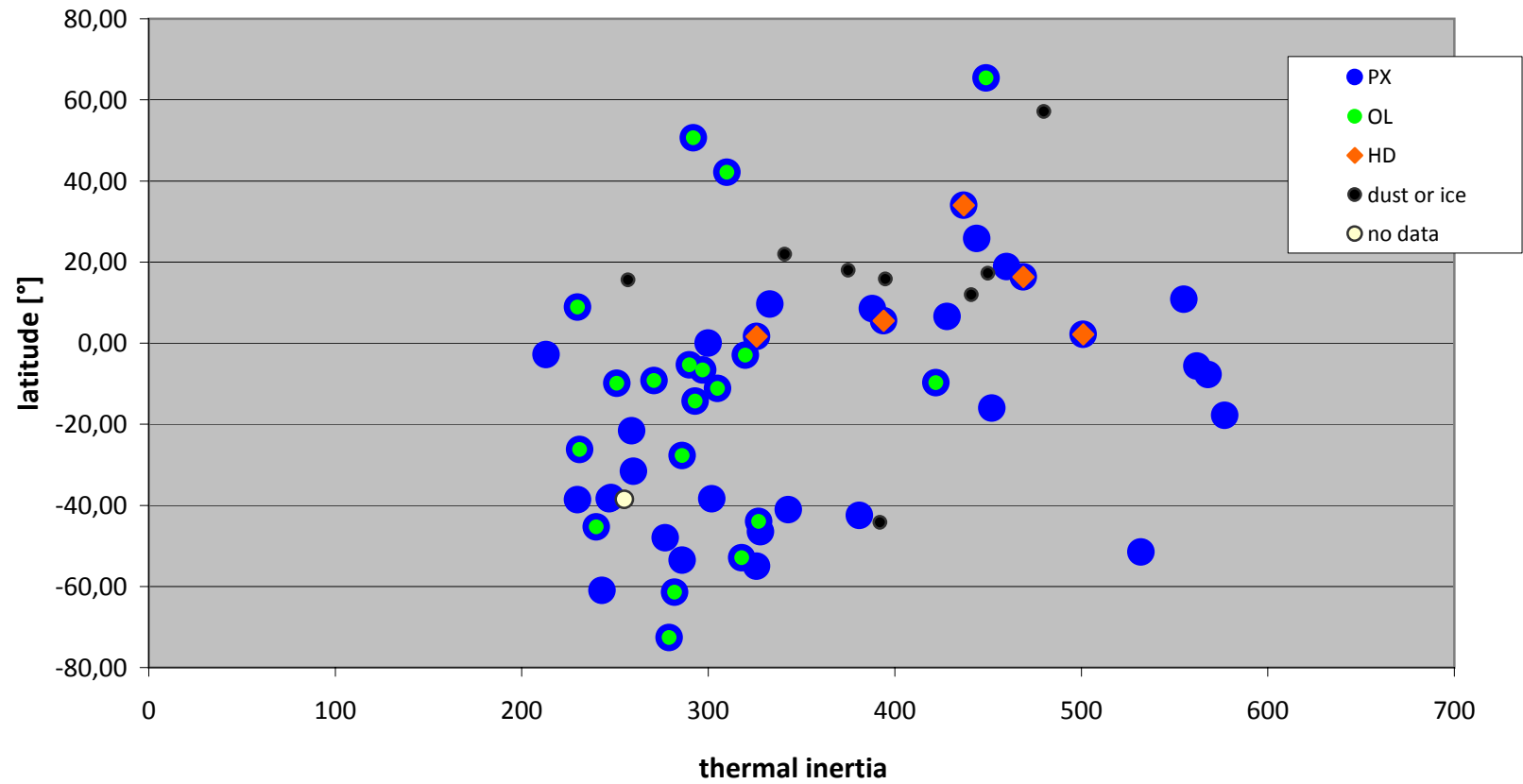
Thermal Inertia
vs.
Mineralogy

Locality ID	Thermal Inertia	PX	OL	HD	dust or ice	no data
Arabia1	394	5,54	5,54	5,54		
Arabia2		9,97				
Arcadia	449	65,37	65,37			
Argyre1	392				-44,23	
Argyre2	381	-42,50				
Barnard	282	-61,41	-61,41			
Chaos 1	562	-5,63				
Chaos 2		4,11				
Chaos 3		11,39				
Chaos 4	388	8,47				
Cimmeria 1	255					-38,52
Cimmeria 2	248	-38,13				
Cimmeria_Sirenum		-40,39				
Dawes	271	-9,23	-9,23			
Elysium	333	9,63				
Fesekov	341				21,91	
Gale	290	-5,40	-5,40			
Gill	395				15,80	
Gill2	450				17,19	
Hellas	532	-51,49				
Hesperia	260	-31,61				
Holden	231	-26,21	-26,21			
Kaiser	328	-46,52				
Kunowsky	480				57,08	
Liu Hsin	286	-53,51				
Lyot	292	50,60	50,60			
Ma'adim Vallis						-23,16
Maja Valles	428	6,58				
Mamers Valles	437	34,03		34,03		

Maraldi2	243	-60,99				
Marte Vallis	257				15,58	
Mawrth Vallis	460	18,89				
Melas Dorsa	259	-21,60				
Meridiani	501	2,15		2,15		
Molesworth	286	-27,73	-27,73			
Moreux	310	42,12	42,12			
Morpheos Rupes	230	-38,62				
Newton2	302	-38,37				
Nier					43,11	
Nili Fossae	300	20,98				
Nili Patera	230	8,85	8,85			
Ophir 1	320	-2,98	-2,98			
Ophir 2	568	-7,76				
Oudemans	251	-9,88	-9,88			
Peridier	444	25,78				
Perrotin	213	-2,85				
Porter2	318	-52,97	-52,97			
Proctor	277	-47,99				
Rabe	327	-43,96	-43,96			
Rabe2	343	-41,07				
Renaudot		42,40				
Reuyl	422	-9,76	-9,76			
Richardson	279	-72,60	-72,60			
Rossby2		-50,16				
Russell	326	-54,99				
Sagan	555	10,82				
Sinus Meridiani	326	1,67		1,67		
Sirenum1		-39,33				
Sirenum2	240	-45,30	-45,30			
Thaumasia1	577	-17,83				

Thaumasia2	452	-16,01				
Tolstoy2		-48,56				
Trouvelot	469	16,30	16,30	16,30		
Tyrrhena 1	293	-14,34	-14,34			
Tyrrhena 2	305	-11,22	-11,22			
Tyrrhena 3	297	-6,65	-6,65			
Vastitas						70,26
Verrier2	247	-38,37				
Xante1	441				11,95	
Xante2	375				17,97	

TI vs. Lat & Mineralogy

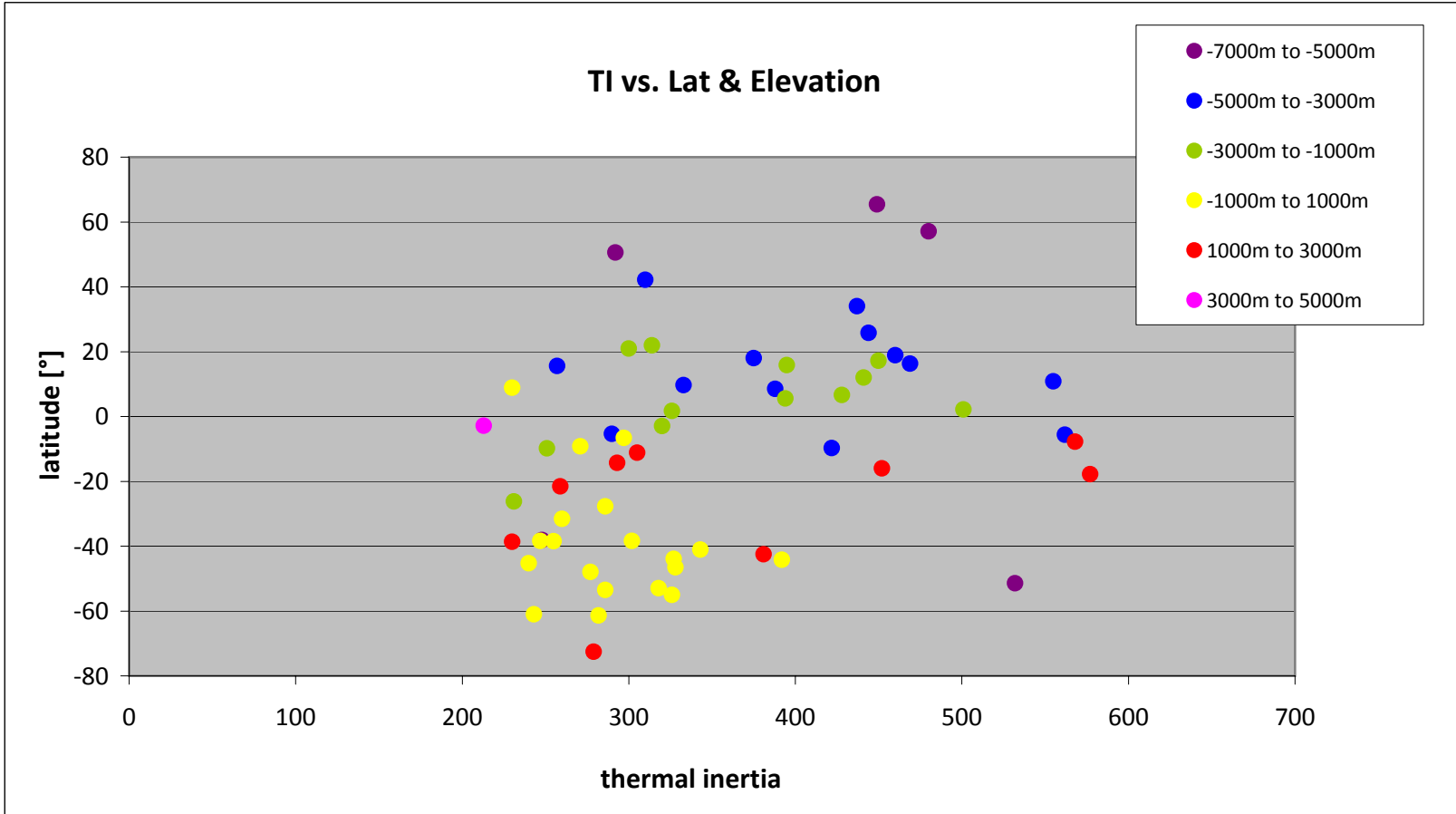


Thermal Inertia
vs.
Latitude & Elevation

Locality ID	Thermal Inertia	-7000m to -5000m	-5000m to -3000m	-3000m to -1000m	-1000m to 1000m	1000m to 3000m	3000m to 5000m
Arabia1	394			5,54			
Arabia2				9,97			
Arcadia	449	65,37					
Argyre1	392				-44,23		
Argyre2	381					-42,50	
Barnard	282				-61,41		
Chaos 1	562		-5,63				
Chaos 2							
Chaos 3				11,39			
Chaos 4	388		8,47				
Cimmeria 1	255				-38,52		
Cimmeria 2	248	-38,13					
Cimmeria_Sirenum					-40,39		
Dawes	271				-9,23		
Elysium	333		9,63				
Fesekov	314			21,91			
Gale	290		-5,40				
Gill	395			15,80			
Gill2	450			17,19			
Hellas	532	-51,49					
Hesperia	260				-31,61		
Holden	231			-26,21			
Kaiser	328				-46,52		
Kunowsky	480	57,08					
Liu Hsin	286				-53,51		
Lyot	292	50,60					
Ma'adim Vallis					-23,16		
Maja Valles	428			6,58			

Mamers Valles	437		34,03				
Maraldi2	243				-60,99		
Marte Vallis	257		15,58				
Mawrth Vallis	460		18,89				
Melas Dorsa	259					-21,60	
Meridiani	501			2,15			
Molesworth	286				-27,73		
Moreux	310		42,12				
Morpheos Rupes	230					-38,62	
Newton2	302				-38,37		
Nier							
Nili Fossae	300			20,98			
Nili Patera	230				8,85		
Ophir 1	320			-2,98			
Ophir 2	568					-7,76	
Oudemans	251			-9,88			
Peridier	444		25,78				
Perrotin	213						-2,85
Porter2	318				-52,97		
Proctor	277				-47,99		
Rabe	327				-43,96		
Rabe2	343				-41,07		
Renaudot			42,40				
Reuhl	422		-9,76				
Richardson	279					-72,60	
Rossby2					-50,16		
Russell	326				-54,99		
Sagan	555		10,82				
Sinus Meridiani	326			1,67			
Sirenum1							
Sirenum2	240				-45,30		

Thaumasia1	577					-17,83	
Thaumasia2	452					-16,01	
Tolstoy2						-48,56	
Trouvelot	469		16,30				
Tyrrhena 1	293					-14,34	
Tyrrhena 2	305					-11,22	
Tyrrhena 3	297				-6,65		
Vastitas		70,26					
Verrier2	247				-38,37		
Xante1	441			11,95			
Xante2	375		17,97				



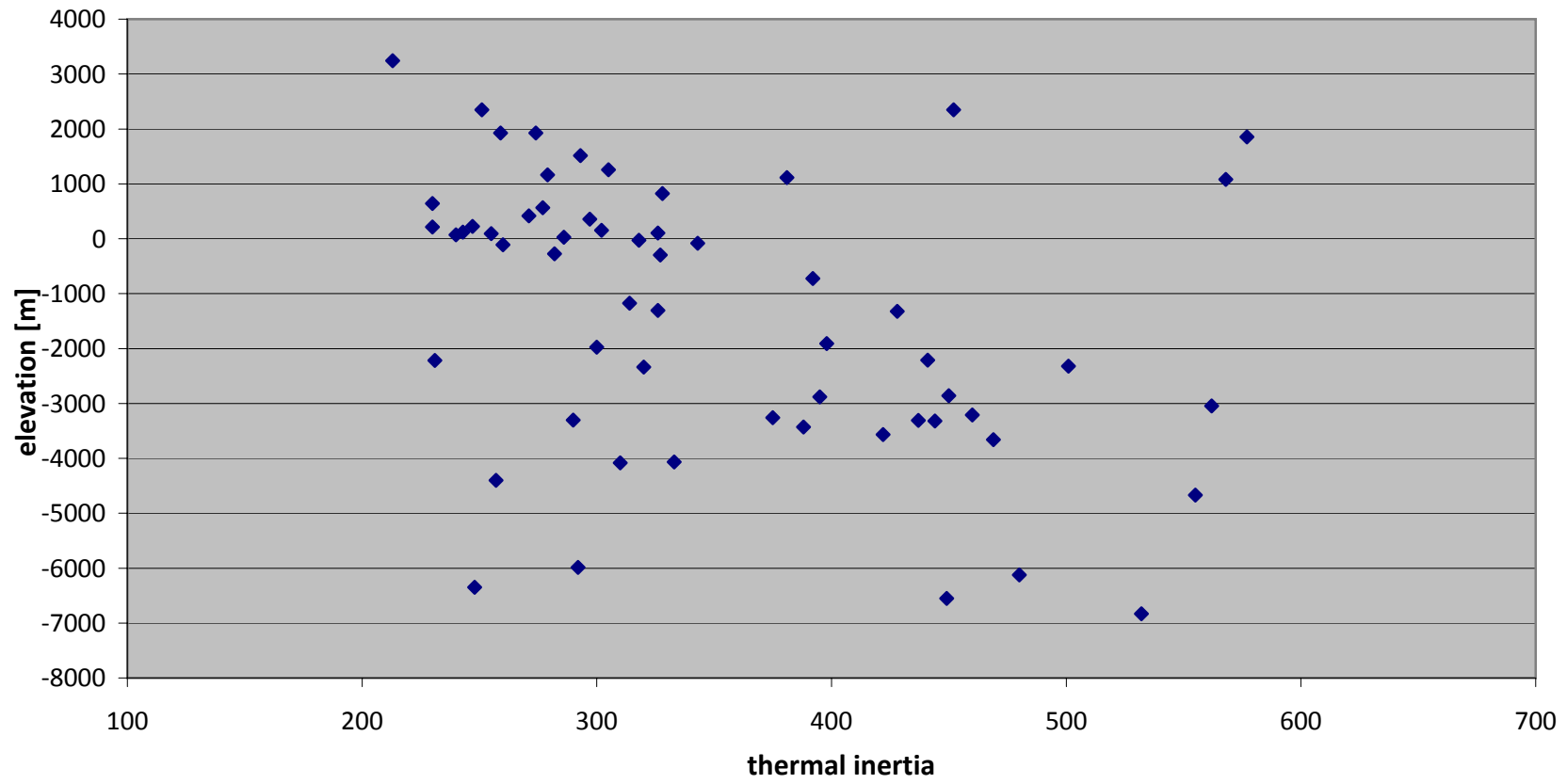
Thermal Inertia
vs.
Elevation

Locality ID	Thermal Inertia	MOLA Altitude Crater Floor
Arabia1	398	-1907
Arabia2		-2218
Arcadia	449	-6553
Argyre1	392	-723
Argyre2	381	1114
Barnard	282	-276
Chaos 1	562	-3047
Chaos 2		-3147
Chaos 3		-2788
Chaos 4	388	-3428
Cimmeria 1	255	95
Cimmeria 2	248	-6347
Cimmeria_Sirenum		268
Dawes	271	417
Elysium	333	-4068
Fesenkov	314	-1173
Gale	290	-3305
Gill	395	-2882
Gill2	450	-2858
Hellas	532	-6833
Hesperia	260	-107
Holden	231	-2217
Kaiser	328	821
Kunowsky	480	-6124
Liu Hsin	286	26
Lyot	292	-5984
Ma'adim Vallis		-415
Maja Valles	428	-1320

Mamers Valles	437	-3309
Maraldi2	243	119
Marte Vallis	257	-4400
Mawrth Vallis	460	-3210
Melas Dorsa	259	1924
Meridiani	501	-2320
Molesworth	230	643
Moreux	310	-4083
Morpheos Rupes	274	1928
Newton2	302	153
Nier		-6140
Nili Fossae	300	-1977
Nili Patera	230	212
Ophir 1	320	-2338
Ophir 2	568	1083
Oudemans	251	2351
Peridier	444	-3321
Perrotin	213	3241
Porter2	318	-27
Proctor	277	566
Rabe	327	-296
Rabe2	343	-85
Renaudot		-3955
Reuhl	422	-3564
Richardson	279	1162
Rossby2		975
Russell	326	102
Sagan	555	-4667
Sinus Meridiani	326	-1307
Sirenum1		455
Sirenum2	240	69

Thaumasia1	577	1855
Thaumasia2	452	2346
Tolstoy2		1102
Trouvelot	469	-3661
Tyrrhena 1	293	1514
Tyrrhena 2	305	1255
Tyrrhena 3	297	355
Vastitas		-6487
Verrier2	247	223
Xante1	441	-2209
Xante2	375	-3260

TI vs. Elevation



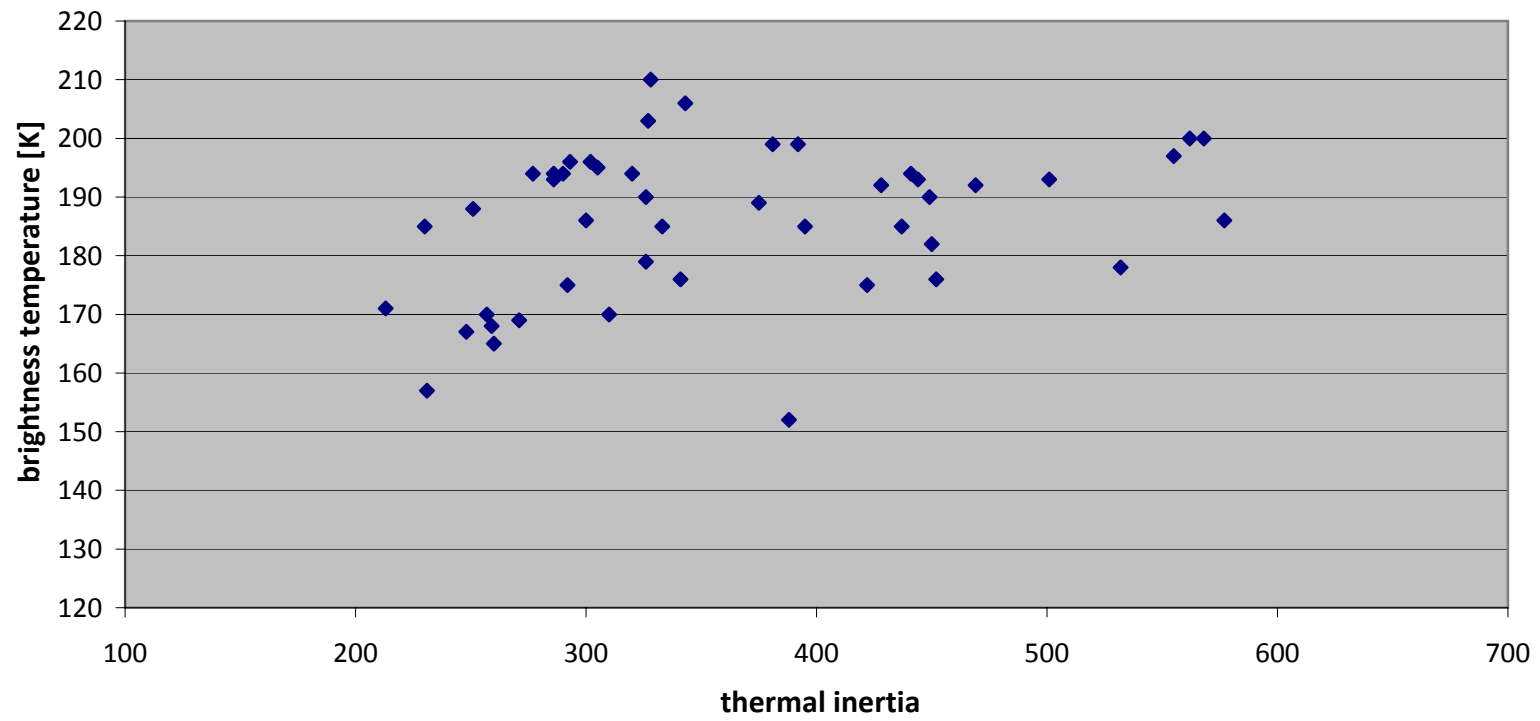
Thermal Inertia
vs.
Brightness Temperature

Locality ID	Thermal Inertia	BTR
Arabia1	398	
Arabia2		186
Arcadia	449	190
Argyre1	392	199
Argyre2	381	199
Barnard	282	
Chaos 1	562	200
Chaos 2		196
Chaos 3		190
Chaos 4	388	152
Cimmeria 1	255	
Cimmeria 2	248	167
Cimmeria_Sirenum		148
Dawes	271	169
Elysium	333	185
Fesekov	341	176
Gale	290	194
Gill	395	185
Gill2	450	182
Hellas	532	178
Hesperia	260	165
Holden	231	157
Kaiser	328	210
Kunowsky	480	
Liu Hsin	286	194
Lyot	292	175
Ma'adim Vallis		
Maja Valles	428	192
Mamers Valles	437	185

Maraldi2	243	
Marte Vallis	257	170
Mawrth Vallis	460	
Melas Dorsa	259	168
Meridiani	501	193
Molesworth	286	193
Moreux	310	170
Morpheos Rupes	230	
Newton2	302	196
Nier		183
Nili Fossae	300	186
Nili Patera	230	185
Ophir 1	320	194
Ophir 2	568	200
Oudemans	251	188
Peridier	444	193
Perrotin	213	171
Porter2	318	
Proctor	277	194
Rabe	327	203
Rabe2	343	206
Renaudot		170
Reuyl	422	175
Richardson	279	
Rossby2		
Russell	326	190
Sagan	555	197
Sinus Meridiani	326	179
Sirenum1		
Sirenum2	240	
Thaumasia 1	577	186

Thaumasia2	452	176
Tolstoy2		180
Trouvelot	469	192
Tyrrhena 1	293	196
Tyrrhena 2	305	195
Tyrrhena 3	297	
Vastitas		
Verrier2	247	
Xante1	441	194
Xante 2	375	189

TI vs. BTR

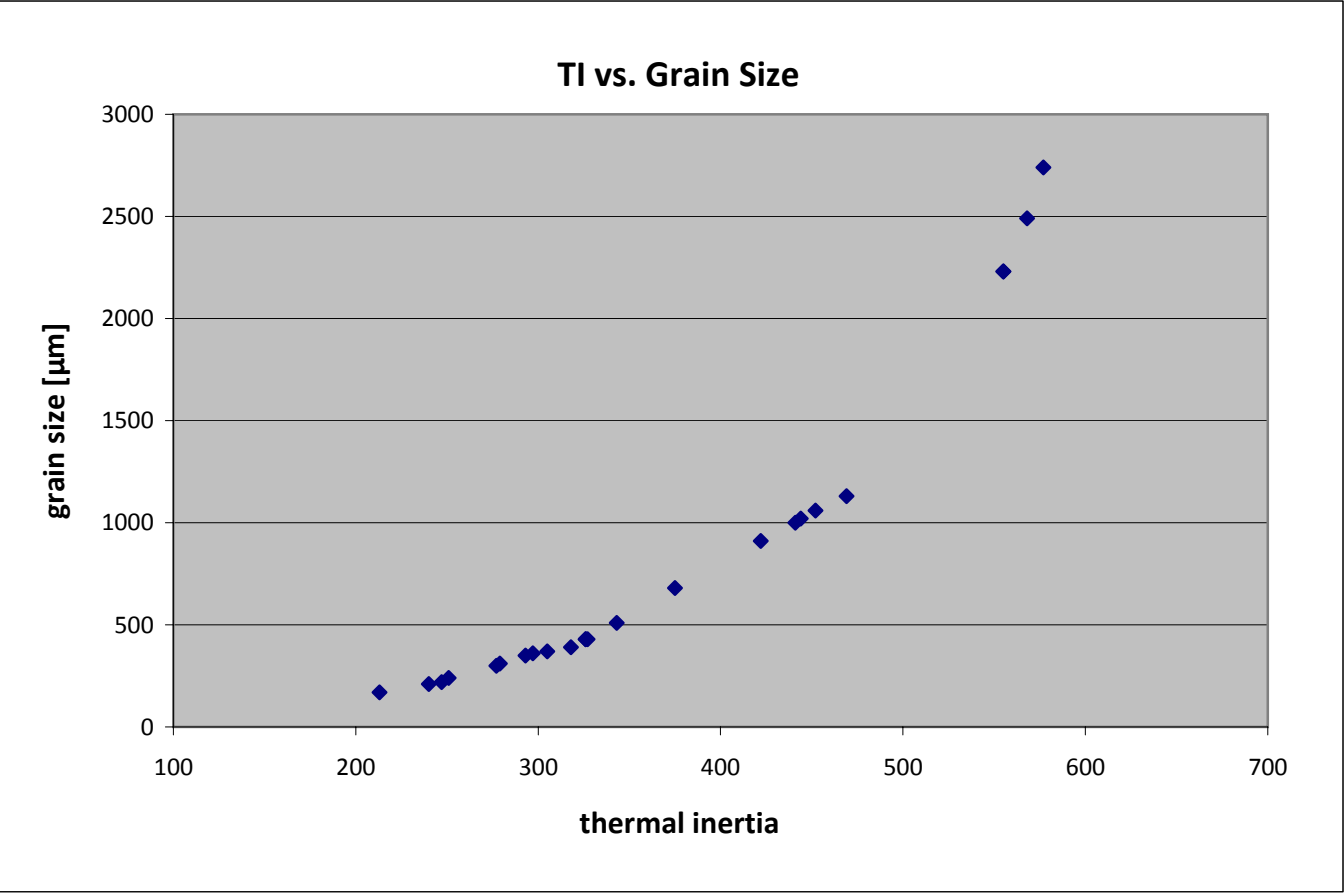


Thermal Inertia
vs.
Grain Size

Locality ID	Thermal Inertia	~ grain size
Arabia1	394	760
Arabia2		
Arcadia	449	1050
Argyre 1	392	770
Argyre2	381	720
Barnard	282	320
Chaos 1	562	2340
Chaos 2		
Chaos 3		
Chaos 4	388	790
Cimmeria 1	255	250
Cimmeria 2	248	230
Cimmeria_Sirenum		
Dawes	271	290
Elysium	333	460
Fesenkov	341	500
Gale	290	340
Gill	395	780
Gill2	450	1050
Hellas	532	1940
Hesperia	260	260
Holden	231	200
Kaiser	328	440
Kunowsky	480	1200
Liu Hsin	286	330
Lyot	292	350
Ma'adim Vallis		
Maja Valles	428	940
Mamers Valles	437	980

Maraldi2	243	220
Marte Vallis	257	250
Mawrth Vallis	460	1100
Melas Dorsa	259	260
Meridiani	501	1510
Molesworth	286	330
Moreux	310	380
Morpheos Rupes	230	200
Newton2	302	370
Nier		
Nili Fossae	300	370
Nili Patera	230	200
Ophir 1	320	400
Ophir 2	568	2490
Oudemans	251	240
Peridier	444	1020
Perrotin	213	170
Porter2	318	390
Proctor	277	300
Rabe	327	430
Rabe2	343	510
Renaudot		
Reuyl	422	910
Richardson	279	310
Rossby2		
Russell	326	430
Sagan	555	2230
Sinus Meridiani	326	430
Sirenum1		
Sirenum2	240	210
Thaumasia 1	577	2740

Thaumasia2	452	1060
Tolstoy2		
Trouvelot	469	1130
Tyrrhena 1	293	350
Tyrrhena 2	305	370
Tyrrhena 3	297	360
Vastitas		500
Verrier2	247	220
Xante1	441	1000
Xante 2	375	680



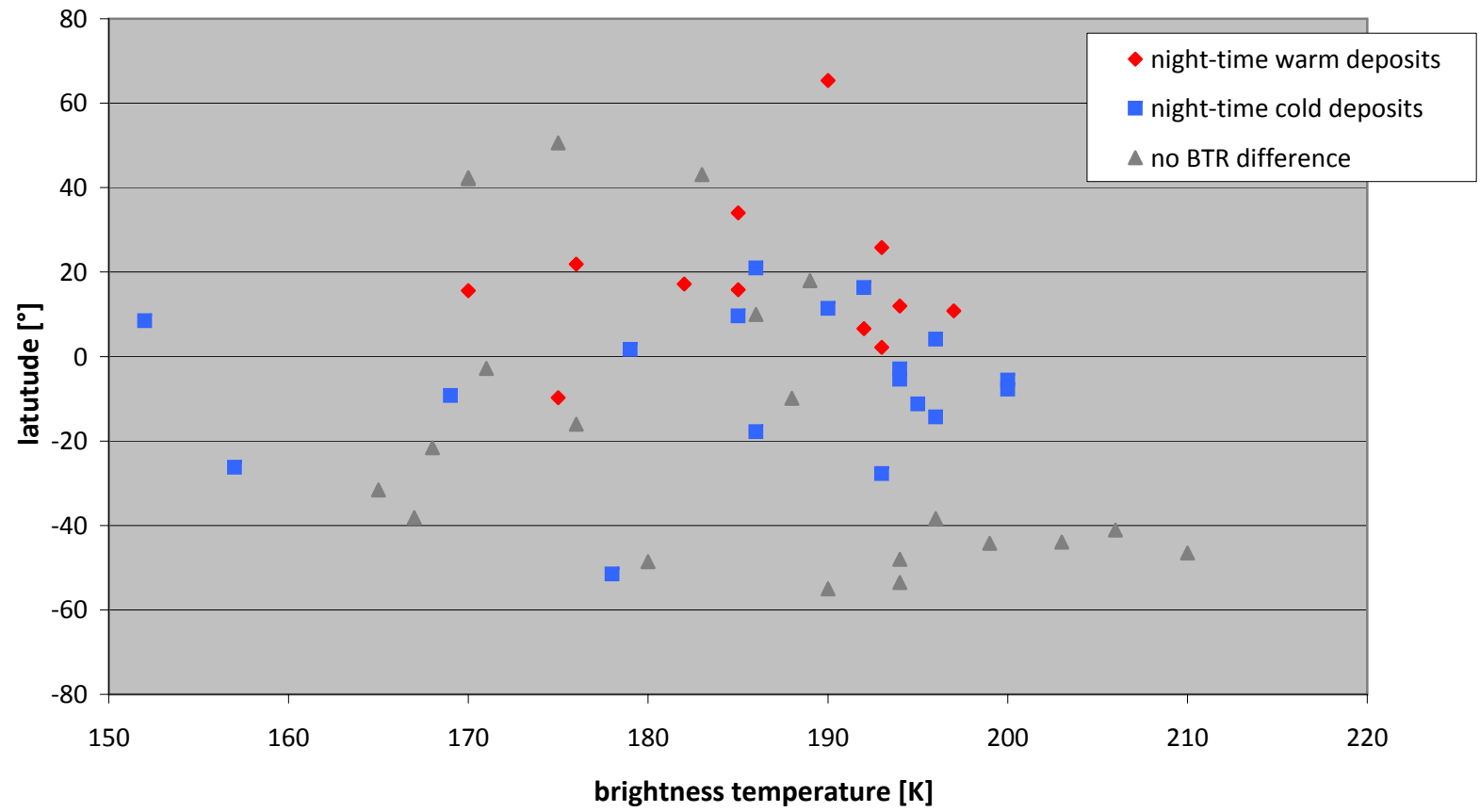
Brightness Temperature
vs.
Latitude

Locality ID	BTR	BTR bright	BTR dark	BTR light-grey
Arabia1				
Arabia2	186			9,97
Arcadia	190	65,37		
Argyre1	199			-44,23
Argyre2	199			
Barnard				
Chaos 1	200		-5,63	
Chaos 2	196		4,11	
Chaos 3	190		11,39	
Chaos 4	152		8,47	
Cimmeria 1				
Cimmeria 2	167			-38,13
Cimmeria_Sirenum	148			-40,39
Dawes	169		-9,23	
Elysium	185		9,63	
Fesenkov	176	21,91		
Gale	194		-5,40	
Gill	185	15,80		
Gill2	182	17,19		
Hellas	178		-51,49	
Hesperia	165			-31,61
Holden	157		-26,21	
Kaiser	210			-46,52
Kunowsky				
Liu Hsin	194			-53,51
Lyot	175			50,60
Ma'adim Vallis				
Maja Valles	192	6,58		

Mamers Valles	185	34,03		
Maraldi2				
Marte Vallis	170	15,58		
Mawrth Vallis				
Melas Dorsa	168			-21,60
Meridiani	193	2,15		
Molesworth	193		-27,73	
Moreux	170			42,12
Morpheos Rupes				
Newton2	196			-38,37
Nier	183			43,11
Nili Fossae	186		20,98	
Nili Patera	185		185	
Ophir 1	194		-2,98	
Ophir 2	200		-7,76	
Oudemans	188			-9,88
Peridier	193	25,78		
Perrotin	171			-2,85
Porter2				
Proctor	194			-47,99
Rabe	203			-43,96
Rabe2	206			-41,07
Renaudot	170			42,40
Reuyl	175	-9,76		
Richardson				
Rossby2				
Russell	190			-54,99
Sagan	197	10,82		
Sinus Meridiani	179		1,67	
Sirenum1				
Sirenum2				

Thaumasia 1	186		-17,83	
Thaumasia2	176			-16,01
Tolstoy2	180			-48,56
Trouvelot	192		16,30	
Tyrrhena 1	196		-14,34	
Tyrrhena 2	195		-11,22	
Tyrrhena 3				
Vastitas				
Verrier2				
Xante1	194	11,95		
Xante2	189			17,97

BTR vs. Latitude



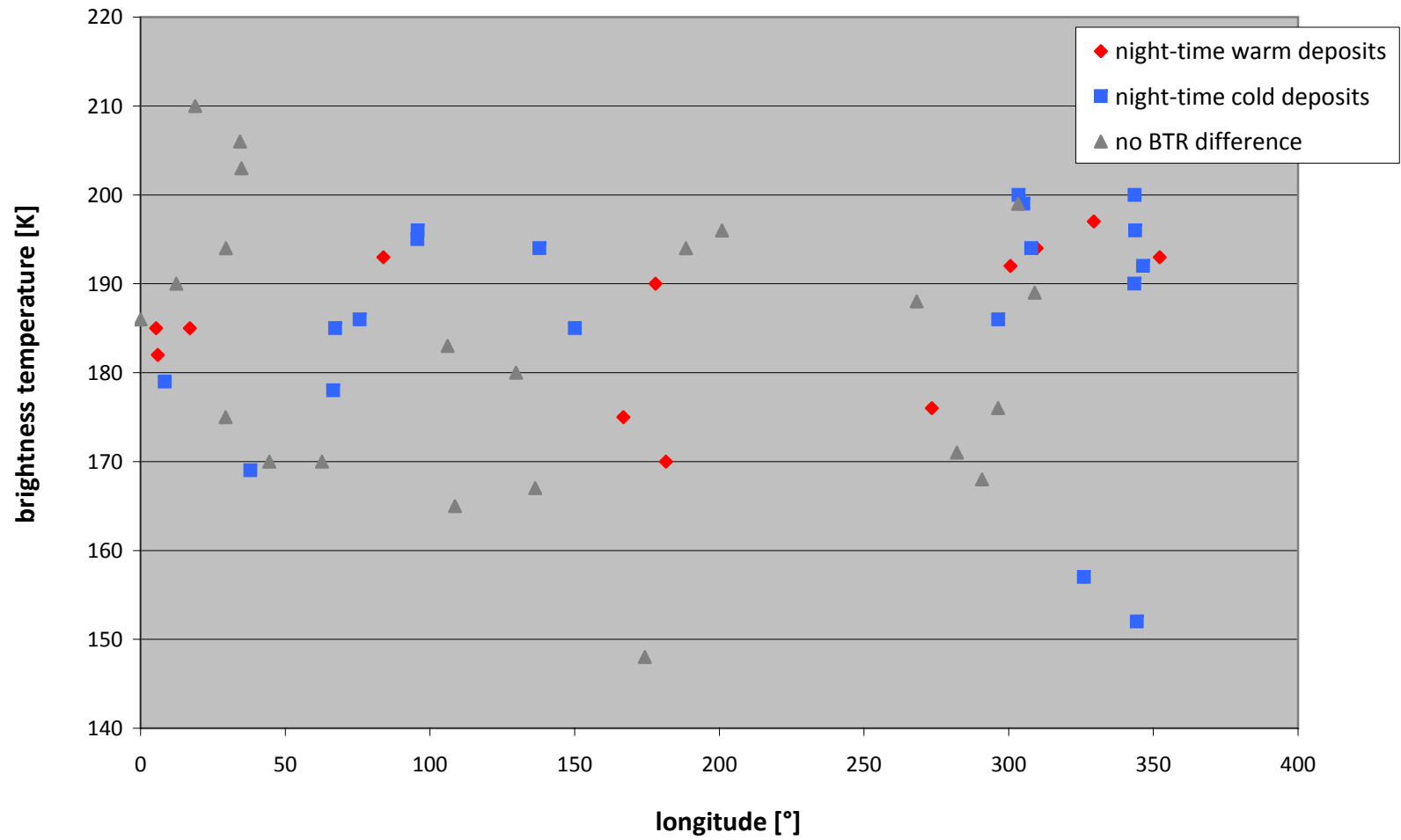
Brightness Temperature
vs.
warm/cold Dunes & Longitude

Locality ID	Lon [E]	BTR bright	BTR dark	BTR light-grey
Arabia1	0,06			
Arabia2	0,01			186
Arcadia	177,97	190		
Argyre1	303,25			199
Argyre2	305,1		199,00	
Barnard	61,65			
Chaos 1	343,49		200	
Chaos 2	343,76		196	
Chaos 3	343,44		190	
Chaos 4	344,28		152	
Cimmeria 1	154,13			
Cimmeria 2	136,42			167
Cimmeria_Sirenum	174,27			148
Dawes	38,01		169	
Elysium	150,13		185	
Fesekov	273,48	176		
Gale	137,83		194	
Gill	5,4	185		
Gill2	5,9	182		
Hellas	66,59		178	
Hesperia	108,65			165
Holden	326,02		157	
Kaiser	18,84			210
Kunowsky	350,34			
Liu Hsin	188,42			194
Lyot	29,4			175
Ma'adim Vallis	177,98			
Maja Valles	300,59	192		
Mamers Valles	17,08	185		

Maraldi2	331,76			
Marte Vallis	181,58	170		
Mawrth Vallis	345,5			
Melas Dorsa	290,75			168
Meridiani	352,16	193		
Molesworth	149,84			
Moreux	44,51			170
Morpheos Rupes	131,6			
Newton2	200,88			196
Nier	106,09			183
Nili Fossae	75,78		186	
Nili Patera	67,26		185	
Ophir 1	307,81		194	
Ophir 2	303,47		200	
Oudemans	268,22			188
Peridier	83,91	193		
Perrotin	282,07			171
Porter2	246,63			
Proctor	29,52			194
Rabe	34,84			203
Rabe2	34,41			206
Renaudot	62,66			170
Reuyl	166,9	175		
Richardson	180			
Rossby2	168,85			
Russell	12,33			190
Sagan	329,39	197		
Sinus Meridiani	8,38		179	
Sirenum1	195,93			
Sirenum2	225,4			
Thaumasias1	296,43		186	

Thaumasia2	296,32			176
Tolstoy2	129,79			180,00
Trouvelot	346,5		192	
Tyrrhena 1	95,79		196	
Tyrrhena 2	95,72		195	
Tyrrhena 3	81,81			
Vastitas	352,1			
Verrier2	13,16			
Xante1	309,68	194		
Xante2	308,99			189

BTR vs. night-time warm/cold dunes and longitude



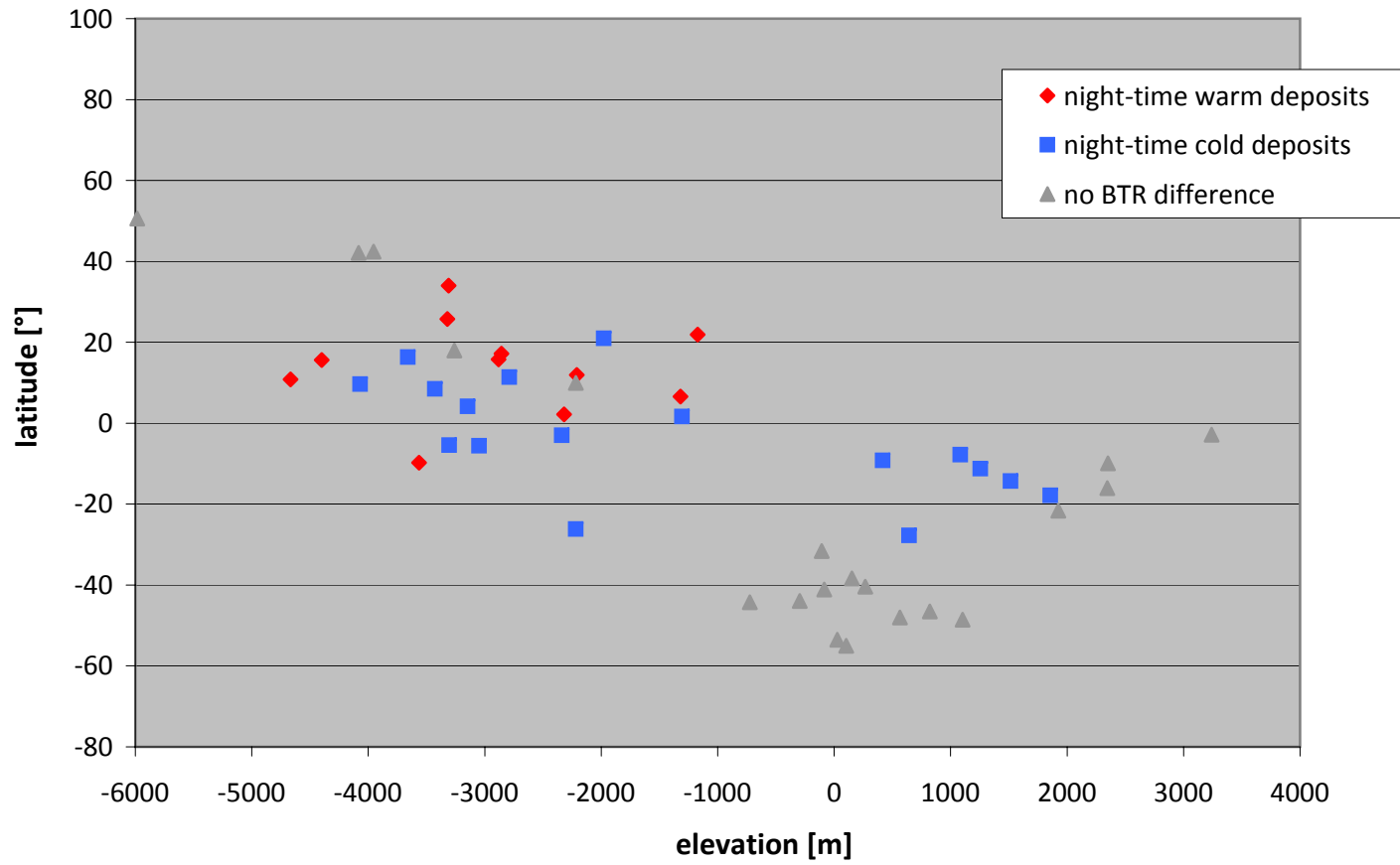
Brightness Temperature
vs.
Latitude & Elevation

Locality ID	MOLA Altitude Crater Floor	BTR bright	BTR dark	BTR light- grey
Arabia1	-1907			
Arabia2	-2218			9,97
Arcadia	-6553	65,37		
Argyre1	-723			-44,23
Argyre2	1114			
Barnard	-276			
Chaos 1	-3047		-5,63	
Chaos 2	-3147		4,11	
Chaos 3	-2788		11,39	
Chaos 4	-3428		8,47	
Cimmeria 1	95			
Cimmeria 2	-6347			-38,13
Cimmeria_Sirenum	268			-40,39
Dawes	417		-9,23	
Elysium	-4068		9,63	
Fesenkov	-1173	21,91		
Gale	-3305		-5,40	
Gill	-2882	15,80		
Gill2	-2858	17,19		
Hellas	-6833		-51,49	
Hesperia	-107			-31,61
Holden	-2217		-26,21	
Kaiser	821			-46,52
Kunowsky	-6124			
Liu Hsin	26			-53,51
Lyot	-5984			50,60
Ma'adim Vallis	-415			
Maja Valles	-1320	6,58		

Mamers Valles	-3309	34,03		
Maraldi2	119			
Marte Vallis	-4400	15,58		
Mawrth Vallis	-3210			
Melas Dorsa	1924			-21,60
Meridiani	-2320	2,15		
Molesworth	643		-27,73	
Moreux	-4083			42,12
Morpheus Rupes	1928			
Newton2	153			-38,37
Nier	-6140			43,11
Nili Fossae	-1977		20,98	
Nili Patera	212		185	
Ophir 1	-2338		-2,98	
Ophir 2	1083		-7,76	
Oudemans	2351			-9,88
Peridier	-3321	25,78		
Perrotin	3241			-2,85
Porter2	-27			
Proctor	566			-47,99
Rabe	-296			-43,96
Rabe2	-85			-41,07
Renaudot	-3955			42,40
Reuhl	-3564	-9,76		
Richardson	1162			
Rossby2	975			
Russell	102			-54,99
Sagan	-4667	10,82		
Sinus Meridiani	-1307		1,67	
Sirenum1	455			
Sirenum2	69			

Thaumasia 1	1855		-17,83	
Thaumasia2	2346			-16,01
Tolstoy2	1102			-48,56
Trouvelot	-3661		16,30	
Tyrrhena 1	1514		-14,34	
Tyrrhena 2	1255		-11,22	
Tyrrhena 3	355			
Vastitas	-6487			
Verrier2	223			
Xante1	-2209	11,95		
Xante2	-3260			17,97

BTR vs. Lat & Elevation



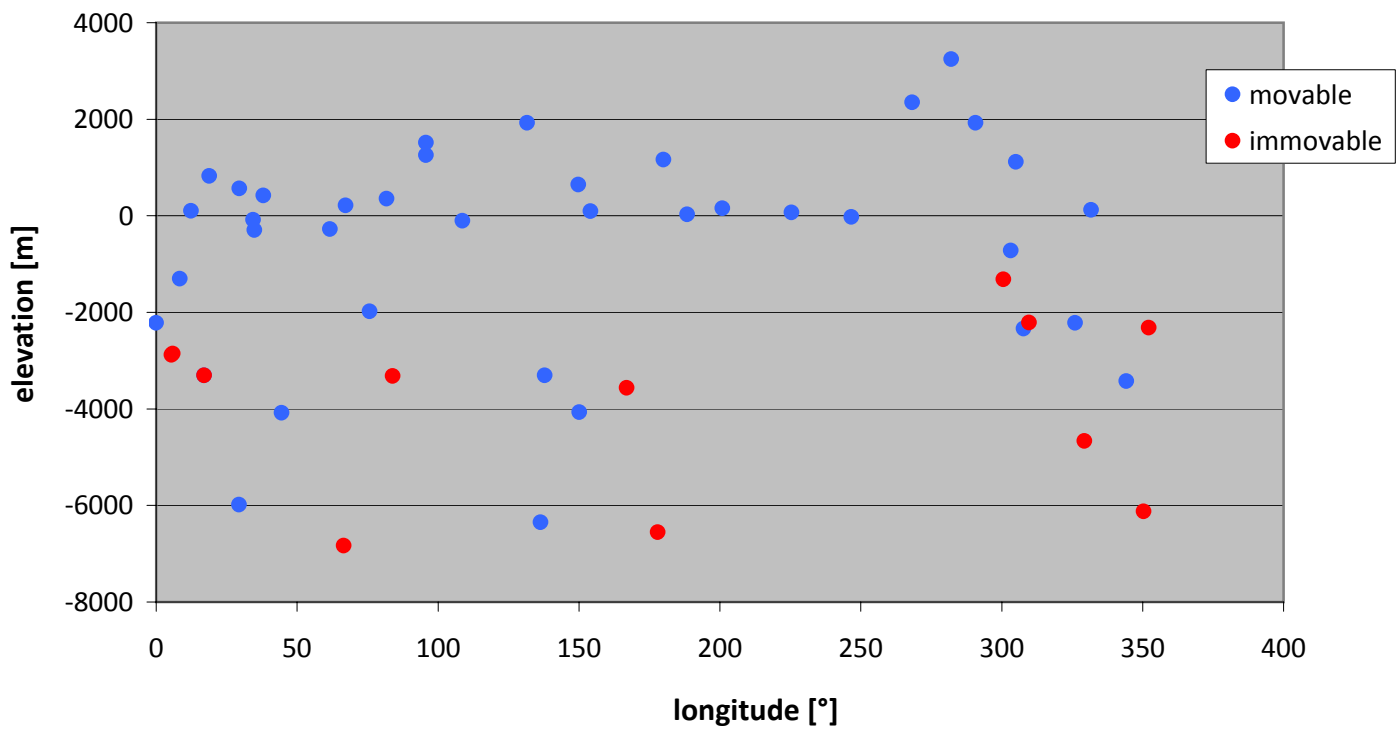
Mobility
vs.
Elevation

Locality ID	Lon [E]	MOLA elevation movable	MOLA elevation immovable	MOLA Altitude Crater Floor [m]
Arabia1	0,06			-1907
Arabia2	0,01	-2218		-2218
Arcadia	177,97		-6553	-6553
Argyre1	303,25	-723		-723
Argyre2	305,1	1114		1114
Barnard	61,65	-276		-276
Chaos 1	343,49			-3047
Chaos 2	343,76			-3147
Chaos 3	343,44			-2788
Chaos 4	344,28	-3428		-3428
Cimmeria 1	154,13	95		95
Cimmeria 2	136,42	-6347		-6347
Cimmeria_Sirenum	174,27			268
Dawes	38,01	417		417
Elysium	150,13	-4068		-4068
Fesekov	273,48			-1173
Gale	137,83	-3305		-3305
Gill	5,4		-2882	-2882
Gill2	5,9		-2858	-2858
Hellas	66,59		-6833	-6833
Hesperia	108,65	-107		-107
Holden	326,02	-2217		-2217
Kaiser	18,84	821		821
Kunowsky	350,34		-6124	-6124
Liu Hsin	188,42	26		26
Lyot	29,4	-5984		-5984
Ma'adim Vallis	177,98			-415
Maja Valles	300,59		-1320	-1320

Mamers Valles	17,08	-3309	-3309	-3309
Maraldi2	331,76	119		119
Marte Vallis	181,58			-4400
Mawrth Vallis	345,5			-3210
Melas Dorsa	290,75	1924		1924
Meridiani	352,16		-2320	-2320
Molesworth	149,84	643		643
Moreux	44,51	-4083		-4083
Morpheos Rupes	131,6	1928		1928
Newton2	200,88	153		153
Nier	106,09			-6140
Nili Fossae	75,78	-1977		-1977
Nili Patera	67,26	212		212
Ophir 1	307,81	-2338		-2338
Ophir 2	303,47			1083
Oudemans	268,22	2351		2351
Peridier	83,91		-3321	-3321
Perrotin	282,07	3241		3241
Porter2	246,63	-27		-27
Proctor	29,52	566		566
Rabe	34,84	-296		-296
Rabe2	34,41	-85		-85
Renaudot	62,66			-3955
Reuyl	166,9		-3564	-3564
Richardson	180	1162		1162
Rossby2	168,85			975
Russell	12,33	102		102
Sagan	329,39		-4667	-4667
Sinus Meridiani	8,38	-1307		-1307
Sirenum1	195,93			455
Sirenum2	225,4	69		69

Thaumasia 1	296,43			1855
Thaumasia2	296,32			2346
Tolstoy2	129,79			1102
Trouvelot	346,5			-3661
Tyrrhena 1	95,79	1514		1514
Tyrrhena 2	95,72	1255		1255
Tyrrhena 3	81,81	355		355
Vastitas	352,1			-6487
Verrier2	13,16			223
Xante1	309,68		-2209	-2209
Xante2	308,99			-3260

Mobility vs. Elevation



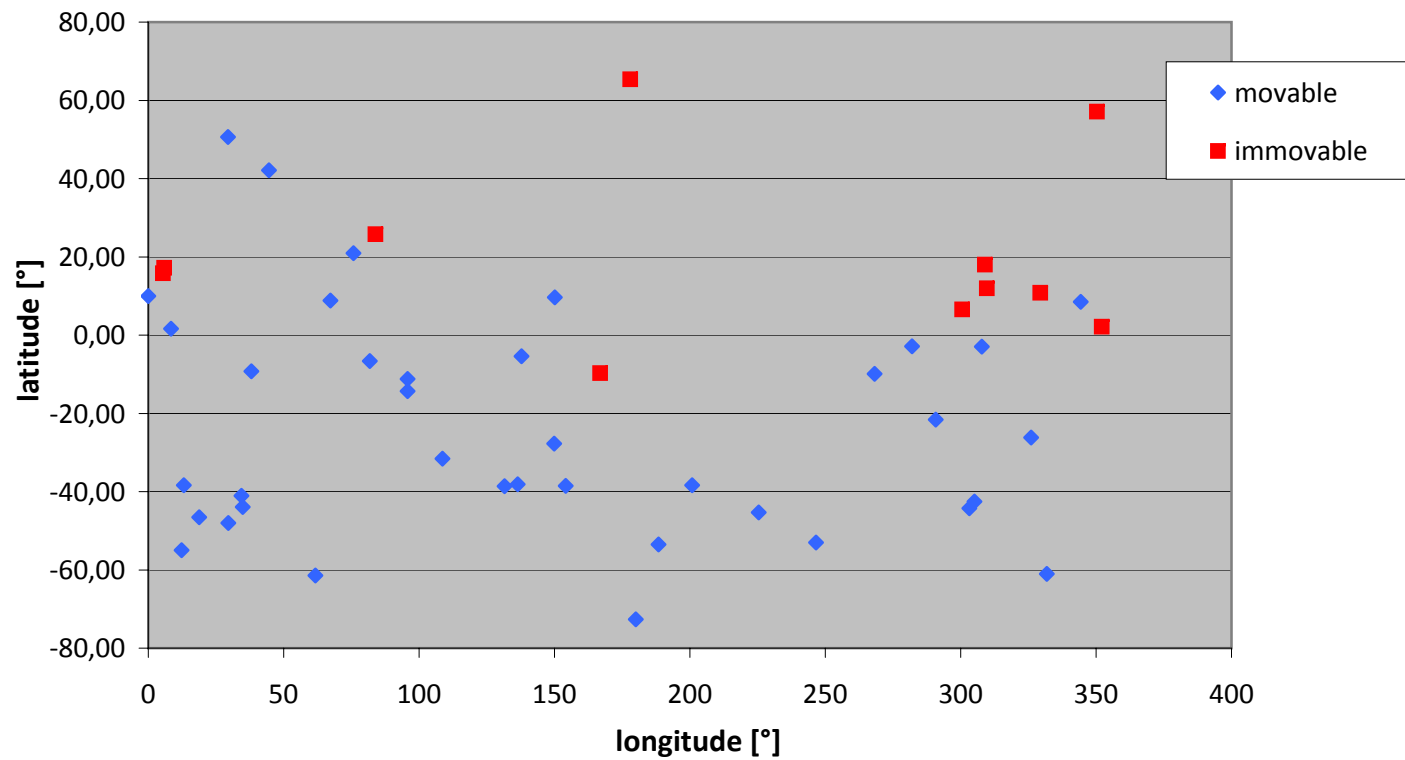
Mobility
vs.
Latitude

Locality ID	Lon [E]	movable	immovable	Lat
Arabia1	0,06			5,54
Arabia2	0,01	9,97		9,97
Arcadia	177,97		65,37	65,37
Argyre1	303,25	-44,23		-44,23
Argyre2	305,1	-42,50		-42,50
Barnard	61,65	-61,41		-61,41
Chaos 1	343,49			-5,63
Chaos 2	343,76			4,11
Chaos 3	343,44			11,39
Chaos 4	344,28	8,47		8,47
Cimmeria 1	154,13	-38,52		-38,52
Cimmeria 2	136,42	-38,13		-38,13
Cimmeria_Sirenum	174,27			-40,39
Dawes	38,01	-9,23		-9,23
Elysium	150,13	9,63		9,63
Fesekov	273,48			21,91
Gale	137,83	-5,40		-5,40
Gill	5,4		15,80	15,80
Gill2	5,9		17,19	17,19
Hellas	66,59			-51,49
Hesperia	108,65	-31,61		-31,61
Holden	326,02	-26,21		-26,21
Kaiser	18,84	-46,52		-46,52
Kunowsky	350,34		57,08	57,08
Liu Hsin	188,42	-53,51		-53,51
Lytot	29,4	50,60		50,60
Ma'adim Vallis	177,98			-23,16
Maja Valles	300,59		6,58	6,58
Mamers Valles	17,08			34,03

Maraldi2	331,76	-60,99		-60,99
Marte Vallis	181,58			15,58
Mawrth Vallis	345,5			18,89
Melas Dorsa	290,75	-21,60		-21,60
Meridiani	352,16		2,15	2,15
Molesworth	149,84	-27,73		-27,73
Moreux	44,51	42,12		42,12
Morpheos Rupes	131,6	-38,62		-38,62
Newton2	200,88	-38,37		-38,37
Nier	106,09			43,11
Nili Fossae	75,78	20,98		20,98
Nili Patara	67,26	8,85		8,85
Ophir 1	307,81	-2,98		-2,98
Ophir 2	303,47			-7,76
Oudemans	268,22	-9,88		-9,88
Peridier	83,91		25,78	25,78
Perrotin	282,07	-2,85		-2,85
Porter2	246,63	-52,97		-52,97
Proctor	29,52	-47,99		-47,99
Rabe	34,84	-43,96		-43,96
Rabe2	34,41	-41,07		-41,07
Renaudot	62,66			42,40
Reuyl	166,9		-9,76	-9,76
Richardson	180	-72,60		-72,60
Rosby2	168,85			-50,16
Russell	12,33	-54,99		-54,99
Sagan	329,39		10,82	10,82
Sinus Meridiani	8,38	1,67		1,67
Sirenum1	195,93			-39,33
Sirenum2	225,4	-45,30		-45,30
Thaumasias1	296,43			-17,83

Thaumasia2	296,32			-16,01
Tolstoy2	129,79			-48,56
Trouvelot	346,5			16,30
Tyrrhena 1	95,79	-14,34		-14,34
Tyrrhena 2	95,72	-11,22		-11,22
Tyrrhena 3	81,81	-6,65		-6,65
Vastitas	352,1			70,26
Verrier2	13,16	-38,37		-38,37
Xante1	309,68		11,95	11,95
Xante2	308,99		17,97	17,97

Mobility vs. Lat.



Mobility Statistics

Locality ID	movable	immovable	unclear condition	no or no clear TES data
Arabia1	1			
Arabia2			1	
Arcadia		1		
Argyre1	1			
Argyre2	1			
Barnard	1			
Chaos 1			1	
Chaos 2				1
Chaos 3				1
Chaos 4	1			
Cimmeria 1	1			
Cimmeria 2	1			
Cimmeria_Sirenum				1
Dawes	1			
Elysium	1			
Fesenkov			1	
Gale	1			
Gill		1		
Gill2		1		
Hellas			1	
Hesperia	1			
Holden	1			
Kaiser	1			
Kunowsky		1		
Liu Hsin	1			
Lyot	1			
Ma'adim Vallis				1
Maja Valles		1		

Mamers Valles			1	
Maraldi2	1			
Marte Vallis			1	
Mawrth Vallis			1	
Melas Dorsa	1			
Meridiani		1		
Molesworth	1			
Moreux	1			
Morpheus Rupes	1			
Newton2	1			
Nier				1
Nili Fossae	1			
Nili Patera	1			
Ophir 1	1			
Ophir 2			1	
Oudemans	1			
Peridier		1		
Perrotin	1			
Porter2	1			
Proctor	1			
Rabe	1	7		
Rabe2	1			
Renaudot				1
Reuhl		1		
Richardson	1			
Rossby2				1
Russell	1			
Sagan		1		
Sinus Meridiani	1			
Sirenum1				1
Sirenum2	1			

Thaumasia1			1	
Thaumasia2			1	
Tolstoy2			1	
Trouvelot			1	
Tyrrhena 1	1			
Tyrrhena 2	1			
Tyrrhena 3	1			
Vastitas			1	
Verrier2	1		1	
Xante1		1		
Xante2		1	1	

Sum	38	18	15	8
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Statistics of Mobility Analysis

