

**ANNEX Y TO
MARS CORRECT: CRITIQUE OFF ALL NASA MARS WEATHER DATA
MSL Year 4 Spring Weather Data (LS 180 to 270, Sols 2,060 to 2204)**

This Annex reveals all Mars Science Laboratory (MSL) weather data for MSL's Mars Year 3 autumn. It shows what was published by the Rover Environmental Monitoring Station (REMS) Team and JPL. It also reveals what the Roffman Team sees as weather anomalies, and how the REMS Team and JPL altered their data after we color-highlighted what was off the expected temperature and pressure curves. Note: Some sources refer to the first year that MSL was on Mars as Year 0. For those using that system sols 2,260 to 2,204 are Year 3.

On Table 1 column subjects and color codings are as follows (Note: JPL calls the first year of MSL on Mars "Year 0," the second year Year 1, the third year "Year 2" and the fourth year "Year 3.")

<p>Column A (Sol). The Martian day is about 39 minutes longer than the terrestrial day.</p> <p>Column B is solar longitude (Ls). MSL is in the Southern Hemisphere on Mars. The landing was at Ls 150 (winter). Ls 180 begins the spring. Ls 270 starts summer, Ls 0 starts the fall. Ls 90 starts the winter.</p> <p>Column C shows the pressure reported by the REMS Team.</p> <p>Column D shows the date on Earth.</p> <p>Column E shows the maximum air temperature. With respect to the freezing point, from 0° C at 1 atm pressure it will increase up to 0.01° C at 0.006 atm (which is about the average pressure on Mars as given by NASA). This is the triple point of water. At pressures below this, water will never be liquid. It will change directly between solid and gas phase (sublimation). The temperature for this phase change, the sublimation point, will decrease as the pressure is further decreased</p> <p>Column F shows minimum air temperature.</p> <p>Column G shows the air temperature range for each sol. On Earth temperatures can vary by 40 °C in deserts. In column G where the range is 59 °C or less yellow background coloring points that out. The National Park Service claims the world record in a diurnal temperature variation is 102 °F (57 °C) (from 46 °F (8 °C) to -56 °F (-49 °C)) in Browning, Montana (elevation 4,377 feet/1,334 meters) on January 23 to 24, 1916. There were 2 days in Montana where the temperature changed by 57 °C.</p>	<p>Column H shows temperature range divided by 40. This allows us to compare terrestrial deserts with Gale Crater, Mars. How much cooling occurs at night is related to the density of the atmosphere. Here we see the ratio of cooling on a Mars sol to the typical 40 °C cooling figure for Earth's deserts shown with a green background when that ratio is under 1.5. For MSL Year 1 when we altered the devisor from 40 °C to 57 °C then 88 of the ratios were altered to 1 or less than 1, meaning that Martian air pressure is indeed likely much higher than NASA claims.</p> <p>Column I shows maximum ground temp. As with terrestrial deserts, the ground on Mars heats more during the day than the air does, and it cools more at night than the air does. In Column K when the maximum ground temperature is given by REMS is above 0°C it is shown with a red background.</p> <p>Column J shows the minimum ground temperature. When it is -90 °C or colder the background is in purple. The ground temperatures are not very precise. The requirement was to measure ground brightness temperature over the range from 150 to 300 K with a resolution of 2 K and an accuracy of 10 K.</p> <p>Column K. Drop in ground temperature from day to night.</p> <p>Column L shows the increase in temperature from the mast 1.5 meters above the ground down to the ground during the daylight hours. In column N anytime there is an increase in temperature of 11 °C or more this is indicated with a dark blue background.</p>	<p>Column M shows the decrease in temperature from the ground to the air at nights. If the data were valid we would expect similar heating or cooling to occur over the set distance from ground to boom. A quick survey of the data immediately shows that this was not found. In column L we see a variation in heating between 0 °C and at least 15 °C with a 54 °C anomaly on Sol 1,070. For nighttime cooling any variation from 11°C to 19°C is shown with a medium blue background. More than that is shown with a dark blue background.</p> <p>Column N shows the pressure for the same Ls in MSL Year 1.</p> <p>Column O shows the absolute value of the change in pressure in Pascals from the same Ls in the previous year (Column [M] - [C]).</p> <p>Column P shows the original pressure for the same Ls in MSL Year 1 before JPL revised their data.</p> <p>Column Q shows the Ls during Year 1.</p> <p>Column R shows the UV for the sol in Year 2.</p> <p>Column S shows the UV for the sol in Year 1. All sols in MSL Year 1 and Year 2 have opacity listed as "sunny" which seems dubious.</p> <p>Column T shows comments, if any</p>	
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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2060	180	743	5/23/2018	4	-73	77	1.925	15	-79	-94	11	-6	N/A	N/A	180	N/A	H	N/A	(1392)	-4,192
2061	180	745	5/24/2018	5	-72	77	1.925	15	-81	-96	10	-9	N/A	N/A	181	N/A	H	N/A	(1393)	-4,192
2062	181	745	5/25/2018	2	-72	74	1.85	17	-80	-97	15	-8	N/A	N/A	181	N/A	VH	N/A	(1394)	-4,192
2063	182	748	5/26/2018	3	-71	74	1.85	15	-80	-95	12	-9	N/A	N/A	182	N/A	VH	N/A	(1395)	-4,192
2064	182	748	5/27/2018	4	-71	74	1.85	18	-78	-96	14	-7	N/A	N/A	182	N/A	VH	N/A	(1396)	-4,192
2065	183	750	5/28/2018	2	-71	73	1.825	16	-81	-97	14	-10	N/A	N/A	183	N/A	VH	N/A	(1397)	-4,192
2066	183	751	5/29/2018	2	-72	74	1.85	16	-85	-101	14	-13	751	0	184	N/A	VH	H	(1398)	-4,192
2067	184	750	5/30/2018	3	-74	77	1.925	16	-80	-96	13	-6	770	-20	184	N/A	VH	H	(1399)	-4,192
2068	185	752	5/31/2018	4	-69	73	1.825	16	-78	-94	12	-9	770	-18	185	N/A	VH	H	(1400)	-4,192
2069	185	756	6/1/2018	4	-71	75	1.875	16	-84	-100	12	-13	770	-14	185	N/A	H	H	(1401)	-4,192
2070	186	757	6/2/2018	3	-70	73	1.825	16	-79	-95	13	-9	771	-14	186	N/A	VH	H	(1402)	-4,192
2071	186	755	6/4/2018	4	-71	75	1.875	17	-79	-96	13	-8	775	-20	187	N/A	VH	VH	(1403)	-4,192
2072	187	758	6/5/2018	6	-71	77	1.925	17	-80	-97	11	-9	774	-16	187	N/A	VH	H	(1404)	-4,192

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SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2073	187	756	6/6/2018	7	-74	81	2.025	18	-77	-95	11	-3	775	-19	188	N/A	VH	VH	(1405)	-4,192
2074	188	758	6/7/2018	6	-70	76	1.9	17	-75	-92	11	-5	775	-17	188	N/A	VH	H	(1406)	-4,192
2075	189	762	6/8/2018	3	-69	72	1.8	15	-79	-94	12	-10	779	-17	189	N/A	H	H	(1407)	-4,192
2076	189	764	6/9/2018	3	-71	74	1.85	13	-72	-85	10	-1	779	-15	190	N/A	H	H	(1408)	-4,192
2077	190	765	6/10/2018	0	-69	69	1.725	12	-70	-82	12	-1	781	-16	190	N/A	H	H	(1409)	-4,192
2078	190	766	6/11/2018	1	-73	74	1.85	10	-71	-81	9	+2	782	-16	191	N/A	H	H	(1410)	-4,192
2079	191	767	6/12/2018	2	-68	70	1.75	11	-69	-80	9	-1	782	-15	191	N/A	H	H	(1411)	-4,192
2080	192	768	6/13/2018	2	-67	69	1.725	11	-70	-81	9	-3	782	-14	192	N/A	H	H	(1412)	-4,192
2081	192	770	6/14/2018	-3	-69	66	1.65	6	-71	-77	9	-2	784	-14	193	N/A	M	H	(1413)	-4,192
			Dust storm																	
2082	193	768	6/15/201	-15	-64	49	1.225	0	-64	-64	15	0	785	-17	193	N/A	L	H	(1414)	-4,192
			Dust storm																	
2083	194	769	6/16/2018	-14	-63	49	1.225	-1	-63	-62	13	0	787	-18	194	N/A	L	H	(1415)	-4,192
			Dust storm																	

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SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2084	194	771	6/17/2018 Dust storm	-21	-65	44	1.1	-14	-58	-44	7	+7	791	-20	194	N/A	L	H	(1416)	-4,192
2085	195	772	6/18/2018 Dust storm	-24	-58	34	0.85	-17	-56	-39	7	+2	791	-19	195	N/A	L	H	(1417)	-4,191
2086	195	776	6/19/2018 Dust storm	-25	-57	32	0.8	-17	-58	-41	8	-1	793	-17	196	N/A	L	H	(1418)	-4,192
2087	196	780	6/20/2018 Dust storm	-28	-59	31	0.775	-15	-57	-42	13	+2	793	-13	196	N/A	L	H	(1419)	-4,193
2088	196	778	6/21/2018 Dust storm	-24	-58	34	0.85	-16	-58	-42	8	0	793	-15	197	N/A	L	H	(1420)	-4,193
2089	197	779	6/22/2018 Dust storm	-26	-59	33	0.825	-15	-59	-44	11	0	797	-18	197	N/A	L	H	(1421)	-4,192

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2090	198	778	6/23/2018 Dust storm	-23	-61	38	0.95	-14	-61	-47	9	0	800	-22	198	N/A	L	H	(1422)	-4,193
2091	198	779	6/24/2018 Dust storm	-22	-63	41	1.025	-13	-60	-47	9	+3	800	-21	199	N/A	L	H	(1423)	
2092	199	781	6/25/2018 Dust storm	-24	-67	43	1.075	-12	-62	-50	12	+5	803	-22	199	N/A	L	H	(1424)	-4,186
2093	199	780	6/26/2018 Dust storm	-24	-63	39	0.975	-14	-60	-46	10	+3	804	-24	200	N/A	L	H	(1425)	
2094	200	783	6/27/2018 Dust storm	-27	-61	34	0.85	-17	-60	-43	10	+1	803	-20	200	N/A	L	H	(1426)	-4,177
2095	201	784	6/28/2018 Dust storm	-25	-61	36	0.9	-17	-60	-43	8	+1	807	-23	201	N/A	L	VH	(1427)	-4,171
2096	201	788	6/29/2018	-22	-63	41	1.025	-15	-59	-44	7	+4	808	-20	202	N/A	L	VH	(1428)	

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			Dust storm																	
2097	202	789	6/30/2018	-23	-60	37	0.925	-16	-59	-43	7	+1	810	-21	202	N/A	L	VH	(1429)	
			Dust storm																	
2098	203	791	7/1/2018	-23	-61	38	0.95	-17	-59	-42	6	+2	810	-19	203	N/A	L	H	(1430)	-4,165
			Dust storm																	
2099	203	791	7/2/2018	-25	-61	36	0.9	-16	-58	-42	9	+3	811	-20	204	N/A	L	H	(1431)	
			Dust storm																	
2100	204	797	7/3/2018	-29	-61	32	0.8	-24	-59	-35	5	+2	813	-16	204	N/A	L	H	(1432)	
			Dust storm																	
2101	204	796	7/4/2018	-23	-61	38	0.95	-16	-59	-43	7	+2	821	-25	205	N/A	L	H	(1433)	
			Dust storm																	
2102	205	797	7/5/2018	-22	-60	38	0.95	-14	-59	-45	8	+1	820	-23	205	N/A	L	H	(1434)	-4,163
			Dust storm																	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid

2103	205	797	7/6/2018 Dust storm	-26	-58	32	0.8	-16	-58	-42	10	0	824	-27	206	N/A	L	H	(1435)	
2104	206	797	7/7/2018 Dust storm	-23	-59	36	0.9	-15	-58	-43	8	+1	824	-27	206	N/A	L	H	(1436)	-4,165
2105	207	802	7/8/2018 Dust storm	-25	-61	36	0.9	-15	-59	-44	10	+2	821	-19	207	N/A	L	H	(1437)	
2106	208	803	7/9/2018 Dust storm	-27	-63	36	0.9	-16	-59	-43	11	+4	823	-20	208	N/A	L	H	(1438)	
2107	208	807	7/11/2018 Dust storm	-21	-65	44	1.1	-15	-59	-44	6	+6	828	-21	208	N/A	L	H	(1439)	-4,164

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2108	209	806	7/12/2018 Dust storm	-24	-65	41	1.025	-15	-58	-43	9	+7	828	-22	209	N/A	L	H	(1440)	-4,164
2109	209	809	7/13/2018 Dust storm	-22	-66	44	1.1	-12	-60	-48	10	+6	828	-19	210	N/A	L	H	(1441)	-4,164
2110	210	810	7/14/2018 Dust storm	-20	-59	39	0.975	-12	-59	-47	8	0	829	-19	210	N/A	L	H	(1442)	
2111	211	813	7/15/2018 Dust storm	-20	-67	47	1.175	-12	-60	-48	8	+7	831	-18	211	N/A	L	H	(1443)	
2112	211	813	7/16/2018 Dust storm	-11	-63	52	1.3	-11	-60	-49	0	+3	833	-19	212	N/A	L	H	(1444)	
2113	212	815	7/17/2018 Dust storm	-20	-62	42	1.05	-11	-60	-49	9	+2	836	-21	212	N/A	L	H	(1445)	
2114	213	816	7/18/2018 Dust storm	-19	-61	42	1.05	-10	-60	-50	9	+1	841	19	213	N/A	L	H	(1446)	

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2115	213	818	7/19/2018 Dust storm	-21	-61	40	1.0	-12	-60	-48	9	+1	841	-25	214	N/A	L	H	(1447)	
2116	214	820	7/20/2018 Dust storm	-21	-62	41	1.025	-10	-60	-50	11	+2	841	-21	214	N/A	L	H	(1448)	-4,159
2117	214	822	7/21/2018 Dust storm	-19	-64	43	1.075	-8	-61	-53	11	+3	841	-19	215	N/A	L	H	(1449)	
2118	215	822	7/22/2018 Dust storm	-19	-68	49	1.225	-10	-62	-52	11	+6	842	-20	215	N/A	L	H	(1450)	
2119	216	824	7/23/2018 Dust storm	-16	-69	53	1.325	-8	-62	-54	8	+7	842	-18	216	N/A	L	H	(1451)	-4,159
2120	216	828	7/24/2018 Dust storm	-16	-67	51	1.275	-8	-61	-53	8	+6	845	-17	217	N/A	L	H	(1452)	
2121	217	829	7/25/2018 Dust storm	-18	-62	44	1.1	-8	-62	-54	10	0	850	-21	217	N/A	L	VH	(1453)	

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SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2122	218	830	7/26/2018 Dust storm	-14	-63	49	1.225	-6	-62	-56	8	+1	854	-24	218	N/A	L	H	(1454)	
2123	218	831	7/27/2018 Dust storm	-18	-68	50	1.25	-6	-63	-57	12	+5	858	-27	219	N/A	L	H	(1455)	
2124	219	832	7/28/2018 Dust storm	-17	-67	50	1.25	-6	-62	-56	11	+5	859	-27	220	N/A	L	H	(1456)	
2125	219	834	7/29/2018 Dust storm	-17	-66	49	1.225	-7	-62	-55	10	+4	860	-26	220	N/A	L	H	(1457)	
2126	220	837	7/30/2018 Dust storm	-18	-63	45	1.125	-8	-63	-55	10	0	859	-22	220	N/A	L	H	(1458)	-4,163
2127	221	838	7/31/2018 Dust storm	-18	-69	51	1.275	-7	-64	-57	11	+5	861	-23	221	N/A	L	H	(1459)	
2128	221	841	8/1/2018 Dust storm	-20	-65	45	1.125	-7	-62	-55	13	+3	865	-24	222	N/A	L	H	(1460)	-4,169
2129	222	843	8/2/2018 Dust Storm	-21	-66	45	1.125	-7	-63	-56	14	+3	870	-27	222	N/A	L	H	(1461)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2130	223	844	8/3/2018 Dust storm	-18	-62	44	1.1	-7	-63	-56	11	-1	871	-25	223	N/A	L	H	(1462)	
2131	223	846	8/4/2018 Dust storm	-21	-67	46	1.15	-6	-63	-57	15	+4	871	-24	223	N/A	L	H	(1463)	
2132	224	847	8/5/2018 Dust Storm	-16	-69	53	1.325	-4	-64	-60	12	+5	871	-24	224	N/A	L	H	(1464)	-4,170
2133	225	849	8/6/2018 Dust Storm	-18	-65	47	1.175	-3	-65	-62	15	0	870	-21	225	N/A	L	H	(1465)	
2134	225	851	8/7/2018 Dust Storm	-14	-65	51	1.275	-3	-66	-63	11	-1	873	-22	226	N/A	L	H	(1466)	
2135	226	854	8/8/2018 Dust Storm	-15	-66	51	1.275	-3	-66	-63	12	0	877	-23	226	N/A	L	H	(1467)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2136	227	856	8/9/2018 Dust Storm	-13	-66	53	1.325	-3	-65	-62	10	+1	879	-23	227	N/A	L	H	(1468)	
2137	227	867	8/10/2018 Dust Storm	-13	-66	53	1.325	-2	-70	-68	11	-4	881	-14	228	N/A	L	H	(1469)	
2138	228	858	8/11/2018 Dust Storm	-16	-68	52	1.3	-2	-65	-63	14	+3	879	-21	228	N/A	L	M	(1470)	
2139	228	857	8/12/2018 Dust Storm	-11	-70	59	1.475	-1	-66	65	10	+4	880	-23	229	N/A	L	M	(1471)	
2140	229	858	8/13/2018 Dust Storm Ends?	-10	-70	60	1.5	0	-67	67	10	+3	879	-21	229	N/A	M	M	(1472)	
2141	230	863	8/14/2018	-17	-66	49	1.225	0	-71	71	17	-5	881	-18	230	N/A	M	M	(1473)	
2142	230	865	8/15/2018	-10	-71	61	1.525	-1	-67	66	9	+4	889	-24	231	N/A	L	M	(1474)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid

2143	231	865	8/17/2018	-12	-71	59	1.475	0	-67	67	12	+4	890	-25	231	N/A	M	M	(1475)	
2144	232	867	8/18/2018	-11	-67	56	1.4	1	-69	71	12	-2	888	-21	232	N/A	L	H	(1476)	-4,181
2145	232	868	8/19/2018	-10	-66	56	1.4	0	-66	66	10	0	888	-20	233	N/A	L	H	(1477)	
2146	233	870	8/20/2018	-10	-67	57	1.425	1	-67	68	11	0	887	-17	233	N/A	M	M	(1478)	
2147	233	870	8/21/2018	-15	-68	53	1.325	0	-67	67	15	+1	890	-20	234	N/A	L	M	(1479)	
2148	234	872	8/22/2018	-13	-67	54	1.35	2	-67	69	15	0	893	-21	235	N/A	M	H	(1480)	
2149	235	874	8/23/2018	-10	-68	58	1.45	2	-68	70	12	0	893	-19	235	N/A	M	H	(1481)	
2150	236	874	8/24/2018	-11	-68	57	1.425	1	-68	69	12	0	893	-19	236	N/A	M	H	(1482)	
2151	236	876	8/25/2018	-12	-66	54	1.35	2	-68	70	14	-2	895	-19	237	N/A	M	H	(1483)	
2152	237	878	8/26/2018	-10	-69	59	1.475	3	-68	71	13	+1	899	-21	237	N/A	M	H	(1484)	
2153	237	880	8/27/2018	-10	-68	58	1.45	3	-67	70	13	+1	899	-19	238	N/A	M	H	(1485)	
2154	238	878	8/28/2018	-10	-73	63	1.575	2	-68	70	12	+5	901	-23	239	N/A	M	H	(1486)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid

2155	239	878	8/29/2018	-12	-76	64	1.6	3	-68	71	15	+8	901	-23	239	N/A	M	H	(1487)	
2156	239	879	8/30/2018	-6	-71	65	1.625	1	-68	69	7	+3	902	-23	240	N/A	M	VH	(1488)	-4,162
2157	240	877	8/31/2018	-5	-67	62	1.55	2	-66	68	7	+1	903	-26	240	N/A	M	H	(1489)	
2158	241	880	9/1/2018	-7	-67	60	1.5	3	-67	70	10	0	904	-24	241	N/A	M	H	(1490)	-4,156
2159	241	883	9/2/2018	-10	-68	58	1.45	3	-68	71	13	0	906	-23	242	N/A	M	H	(1491)	
2160	242	885	9/3/2018	-8	-68	60	1.5	3	-69	72	11	-1	910	-25	242	921	M	H	(1492)	
2161	243	884	9/4/2018	-5	-68	63	1.575	10	-69	79	15	-1	904	-20	243	N/A	M	H	(1493)	-4,151
2162	243	885	9/5/2018	-5	-69	64	1.6	4	-69	73	9	0	904	-19	244	N/A	M	H	(1494)	
2163	244	886	9/6/2018	-5	-70	65	1.625	3	-68	71	8	+2	903	-17	244	N/A	M	H	(1495)	-4,150
2164	245	886	9/7/2018	-8	-68	60	1.5	3	-73	76	11	-5	904	-18	245	N/A	M	H	(1496)	
2165	245	887	9/8/2018	-10	-70	60	1.5	4	-77	81	14	-7	909	-22	246		M	H	(1497)	

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SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2166	246	887	9/9/2018	-10	-72	62	1.55	5	-69	74	15	+3	907	-20 (was 10)	246	897	M	L then H	(1498)	-4,150
2167	247	885	9/10/2018	-12	-73	61	1.525	5	-69	74	17	+4	903	-18	247	N/A	M	VH	(1499)	
2168	247	889	9/11/2018	-13	-69	56	1.4	5	-70	75	18	-1	903	-14	248	N/A	M	VH	(1500)	
2169	248	882	9/12/2018	-10	70	60	1.5	5	-69	74	15	+1	903	-21	248	N/A	M	H	(1501)	
2170	249	886	9/13/2018	-12	-68	56	1.4	4	-69	73	16	-1	907	-21 (was 42)	249	928	M	L then H	(1502)	
2171	249	879	9/14/2018	-12	-65	53	1.325	5	-64	69	17	+1	909	-30	249	N/A	M	H	(1503)	
2172		Issue on Curiosity preventing it from sending science and engineering data											910		250	N/A		H	(1504)	JPL Engineers are addressing an issue on Curiosity preventing it from sending science & engineering data stored in its memory.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP >10°C	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR 3	UV YR 2	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid

2173		N/A		N/A	N/A			N/A	N/A				906		251	N/A		H	(1505)	
2174		N/A		N/A	N/A			N/A	N/A				907		252	N/A		H	(1506)	
2175		N/A		N/A	N/A			N/A	N/A				907		252	N/A		VH	(1507)	
2176		N/A		N/A	N/A			N/A	N/A				907		253	N/A		VH	(1508)	
2177		N/A		N/A	N/A			N/A	N/A				910		254	N/A		H	(1509)	
2178		N/A		N/A	N/A			N/A	N/A				908		254	N/A		H	(1510)	
2179		N/A		N/A	N/A			N/A	N/A				908		255	N/A		VH	(1511)	
2180		N/A		N/A	N/A			N/A	N/A				908		255	N/A		VH	(1512)	
2181		N/A		N/A	N/A			N/A	N/A				906		256	N/A		H	(1513)	
2182		N/A		N/A	N/A			N/A	N/A				907		257	N/A		H	(1514)	
2183		N/A		N/A	N/A			N/A	N/A				906		257	N/A		H	(1515)	
2184		N/A		N/A	N/A			N/A	N/A				909		258	N/A		H	(1516)	
2185		N/A		N/A	N/A			N/A	N/A				911		259	N/A		H	(1517)	
2186		N/A		N/A	N/A			N/A	N/A				909		259	N/A		H	(1518)	

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SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR 3	UV YR 2	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid

2187		N/A		N/A	N/A			N/A	N/A				906		260	N/A		H	(1519)	
2189		N/A		N/A	N/A			N/A	N/A				905		261	N/A		H	(1520)	
2190		N/A		N/A	N/A			N/A	N/A				905		261	N/A		H	(1521)	
2191		N/A		N/A	N/A			N/A	N/A				905		262	N/A		H	(1522)	
2192		N/A		N/A	N/A			N/A	N/A				905		263	N/A		H	(1523)	
2193		N/A		N/A	N/A			N/A	N/A				904		263	N/A		H	(1524)	
2194		N/A		N/A	N/A			N/A	N/A				902		264	N/A		H	(1525)	
2195		N/A		N/A	N/A			N/A	N/A				900		265	N/A		VH	(1526)	
2196		N/A		N/A	N/A			N/A	N/A				900		265	N/A		H	(1527)	
2197		N/A		N/A	N/A			N/A	N/A				891		266	N/A		H	(1528)	
2198		N/A		N/A	N/A			N/A	N/A				900		267	N/A		H	(1529)	
2199		N/A		N/A	N/A			N/A	N/A				899		267	N/A		H	(1530)	
2200		N/A		N/A	N/A			N/A	N/A				900		268	N/A		H	(1531)	
2201		N/A		N/A	N/A			N/A	N/A				900		268	N/A		M	(1532)	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C, YELLOW IF <60 °C	AIR TEMP RANGE °C/40, GREEN IF <1.5	MAX GROUND TEMP °C, RED IF > 0°C	MIN GROUND TEMP °C, PURPLE IF -90°C OR COLDER	Δ GROUND TEMP DAY TO NIGHT, YELLOW = -80 TO -89, RED = -90 OR COLDER DROP	DAYTIME CHANGE IN TEMP °C AIR TO GROUND, BLUE = >10°C	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND, PURPLE = >10°C	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS, YELLOW = > 7 Pa)	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR	UV YR	(MSL YEAR 2 SOL FOR THIS LS)/COMMENTS	MSL Altitude meters below areoid
2202		N/A		N/A	N/A			N/A	N/A				896		269	N/A		H	(1533)	
2203	270	Issue on Curiosity preventing it from sending science and engineering data. Spring ends, summer begins.	10/17/2018	N/A	N/A			N/A	N/A				898		270	N/A		H	(1534)	
2204	271	854	10/18/2018 DATA RESUMES	-14	-56	42	1.05	7	-60	67	21	-4	900	-46	270	N/A	M	H	(1535)	