ANNEX W TO
MARS CORRECT: CRITIQUE OFF ALL NASA MARS WEATHER DATA
MSL Year 3 Fall Weather Data (LS 0 to 90, Sols 1,687 to 1,881)

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 1,687 to 1,881 are Year 2.

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, and the third year "Year 2"):

Column A (Sol). The Martian day is about 39 minutes longer than the terrestrial day.

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.

Column C shows the pressure reported by the REMS Team.

Column D shows the date on Earth.

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

Column F shows minimum air temperature.

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.**

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.

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.

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**.

Column K. Drop in ground temperature from day to night.

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 in indicated with a dark blue background.

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.

Column N shows the pressure for the same Ls in MSL Year 1.

Column O shows the absolute value of the change in pressure in Pascals from the same Ls in the previous year (Column [M] - [C]).

Column P shows the original pressure for the same Ls in MSL Year 1 before JPL revised their data.

Column Q shows the Ls during Year 1.

Column R shows the UV for the sol in Year 2.

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.

Column T shows comments, if any

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C	AIR TEMP RANGE °C/40	MAX GROUND TEMP °C	MIN GROUND TEMP °C	Δ GROUND TEMP DAY TO NIGHT	DAYTIME CHANGE IN TEMP °C AIR TO GROUND	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR 3	UV YR 2	MSL YEAR 2 SOL FOR THIS LS/ COMMENTS
						YELLOW IF <60 °C	GREEN IF<1.5	RED IF > 0 °C	PURPLE = >-90°C OR COLDER	Yellow numbers = -80 to -89 °C, red background = -90°C or colder drop	BLUE = >10°C	PURPLE = >10°C		YELLOW = > 7 Pa)					
1687	359	838	5/5/2017	-11	-75	64	1.6	6	-82	-88	17	-7	853	-15	0	819	H	M. Year 1 was H.	(1019) Last day of summer (included for reference)
1688	0	840	5/6/2017	-13	-76	63	1.575	5	-95	-100	18	-19	832	+8	0	No revision but 832 seemed too low.	H	H. Year 1 was H.	(1020) First day of fall.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR TEMP °C	MIN AIR TEMP °C	AIR TEMP RANGE °C	AIR TEMP RANGE °C/40	MAX GROUND TEMP °C	MIN GROUND TEMP °C	Δ GROUND TEMP DAY TO NIGHT	DAYTIME CHANGE IN TEMP °C AIR TO GROUND	NIGHTTIME CHANGE IN TEMP °C AIR TO GROUND	PRESSURE AT SAME LS IN MSL YEAR 2	Δ PRESSURE YEAR 3 TO YEAR 2 SAME LS	~LS year 2	PRESSURE YEAR 1 BEFORE REVISION	UV YR 3	UV YR 2	MSL YEAR 2 SOL FOR THIS LS/ COMMENTS
1689	0	840	5/7/2017	-10	-75	65	1.625	5	-89	-94	15	-14	850	-10 (originally -8)	1	848	H	L changed to H. Year 1 was H.	(1021)
1690	1	840	5/8/2017	-14	-76	62	1.55	2	-81	-83	16	-5	852	-12	1	N/A	H	H. Year 1 was H.	(1022)
1691	1	N/A	5/9/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	827	N/A	2	N/A	N/A	H. Year 1 was H.	(1023)
1692	2	820	5/10/2017	-11	-62	51	1.275	5	-64	-69	16	-2	851	-31 (apparent error year 2)	2	N/A	H	H. Year 1 was H.	(1024)
1693	2	840	5/11/2017	-12	-76	64	1.6	6	-82	-88	18	-6	851	-11	3	N/A	H	H. Year 1 was H.	(1025)
1694	3	840	5/12/2017	-12	-76	64	1.6	5	-118	-123	17	-42	868	-28 (possible error year 2)	3	N/A	H	N/A (was L). Year 1 was H.	(1026)
1695	3	840	5/13/2017	-13	-77	64	1.6	5	-97	-102	18	-20	N/A	N/A	4	N/A	H	N/A and N/A	(1027)
1696	4	841	5/14/2017	-13	-75	62	1.55	5	-85	-90	18	-10	853	-12	4	N/A	H	H. Year 1 was N/A.	(1028)

1697	4	841	5/15/2017	-15	-77	62	1.55	3	-113	-118	18	-36	856	-15	5	N/A	H	H. Year 1 was N/A.	(1029)
1698	5	842	5/16/2017	-12	-77	62	1.55	4	-104	-107	16	-27	855	-13	5	N/A	H	H. Year 1 was N/A.	(1030)
1699	5	843	5/17/2017	-12	-77	62	1.55	4	-112	-116	16	-27	856	-13	6	N/A	H	H. Year 1 was N/A.	(1031)
1700	6	842	5/18/2017	-14	-76	62	1.55	6	-106	-112	20	-30	854	-12	6	N/A	H	H. Year 1 was N/A.	(1032)
1701	6	841	5/19/2017	-12	-76	64	1.6	5	-85	-90	17	-9	856	-15	7	N/A	H	H. Year 1 was N/A.	(1033)
1702	7	842	5/20/2017	-12	-75	63	1.575	4	-87	-91	16	-12	859	-17	7	N/A	H	H. Year 1 was N/A.	(1034)
1703	7	830	5/21/2017	-12	-68	56	1.4	8	-78	-86	20	-10	857	-27	8	N/A	H	H. Year 1 was H.	(1035)
1704	8	844	5/22/2017	-14	-77	63	1.575	7	-86	-93	21	-9	860	-16	8	N/A	H	H. Year 1 was H.	(1036)
1705	8	850	5/23/2017	-20	-76	56	1.4	6	-86	-92	26	-10	856	-6	9	N/A	H	H. Year 1 was H.	(1037)
1706	9	845	5/24/2017	-17	-77	60	1.5	4	-106	-110	21	-29	858	-13	9	N/A	H	H. Year 1 was H.	(1038)
1707	9	860	5/26/2017	-22	-77	55	1.375	3	-105	-108	25	-28	858	+2	9	N/A	H	H. Year 1 was H.	(1038 again) For the last Martian month the Ls from MSL Year 2 has differed from the Ls in Year 3 by one half degree.

																		Therefore instead of using Ls 10 data from Sol 1039 of Year 2 here, the data from Sol 1038 is repeated. frokm f
1708	10	846	5/27/2017	-13	-76	63	1.575	5	-87	-92	18	-11	857	-11	10	N/A	H	H. Year 1 was H.	(1039)
1709	10	847	5/28/2017	-14	-76	62	1.55	6	-128	-134	20	-52	858	-11	10	N/A	H	H. Year 1 was H.	(1040) Another insane record ground temp low. Note that for Sols 1708, 1709 anf 1710, the low air temps were all -76°C, but the ground temp lows varied from -87°C to -128°C (-198.4° F) and then went back up to -86° (-122.8 F). We are asked to believe that while air temps were consistent, on Sol 1709 in 1.5 meters the temperature fell by 52°C which is 93.6 °F. See Figure 2 below.

1710	11	848	5/29/2017	-12	-76	64	1.6	5	-86	-91	17	-10	859	-11	11	N/A	H	H. Year 1 was H.	(1041)
1711	11	848	5/30/2017	-13	-75	62	1.55	5	-91	-96	18	-16	859	-11	11	N/A	H	M. Year 1 was H.	(1042)
1712	12	849	5/31/2017	-11	-77	66	1.65	5	-108	-113	16	-31	860	-11	12	N/A	H	M. Year 1 was H.	(1043)
1713	12	850	6/1/2017	-10	-75	65	1.625	6	-101	-107	16	-26	860	-10	12	N/A	H	M. Year 1 was H.	(1044)
1714	13	849	6/2/2017	-13	-77	64	1.6	6	-124	-130	19	-47	861	-12	13	N/A	H	H. Year 1 was H.	(1045)
1715	13	851	6/3/2017	-10	-77	67	1.675	5	-119	-124	15	-42	862	-11	13	N/A	H	H. Year 1 was H.	(1046)
1716	14	850	6/4/2017	-10	-76	66	1.65	6	-87	-93	16	-11	863	-13	14	N/A	H	H. Year 1 was H.	(1047)
1717	14	851	6/5/2017	-12	-76	64	1.6	2	-94	-96	14	-18	864	-13	14	N/A	H	H. Year 1 was H.	(1048)
1718	15	852	6/6/2017	-16	-77	61	1.525	5	-111	-116	21	-34	864	-12	15	N/A	H	H. Year 1 was H.	(1049)
1719	15	853	6/7/2017	-19	-77	58	1.45	3	-113	-116	22	-36	863	-10	15	N/A	H	H. Year 1 was H.	(1050)
1720	16	853	6/8/2017	-17	-76	59	1.475	4	-92	-96	21	-16	864	-11	16	N/A	H	H. Year 1 was H.	(1051)

1721	16	852	6/9/2017	-16	-76	60	1.5	4	-136	-140	20	-60	865	-13	16	N/A	H	M. Year 1 was H.	(1052) New record ground temp. low. -136 C = -212.8 F. See Figure 3.
1722	17	854	6/10/2017	-13	-77	64	1.6	2	-122	-124	15	-45	865	-11	17	N/A	H	H. Year 1 was H.	(1053)
1723	17	854	6/11/2017	-16	-76	60	1.5	2	-94	-96	18	-18	867	-13	17	N/A	H	H. Year 1 was H.	(1054)
1724	18	856	6/12/2017	-21	-77	56	1.4	5	-85	-90	26	-8	868	-12	17	N/A	H	H. Year 1 was H.	(1055)
1725	18	857	6/13/2017	-18	-79	61	1.525	5	-105	-110	23	-26	868	-11	18	N/A	H	H. Year 1 was H.	(1056)
1726	19	855	6/14/2017	-17	-76	59	1.475	5	-92	-97	22	-16	867	-12	18	N/A	H	H. Year 1 was H.	(1057)
1727	19	855	6/15/2017	-13	-75	62	1.55	2	-92	-94	15	-17	868	-13	19	N/A	H	H. Year 1 was H.	(1058)
1728	20	855	6/16/2017	-16	-76	60	1.5	5	-93	-98	21	-17	870	-15	19	N/A	H	H. Year 1 was H.	(1059)
1729	20	858	6/17/2017	-19	-76	57	1.425	4	-92	-96	23	-16	870	-12	20	N/A	H	H. Year 1 was H.	(1060)

1730	21	858	6/18/2017	-20	-77	57	1.425	3	-93	-96	23	-16	871	-13	20	N/A	H	H. Year 1 was H.	(1061)
1731	21	857	6/19/2017	-24	-78	54	1.35	6	-95	-101	30	-17	871	-14	21	N/A	H	H. Year 1 was H.	(1062)
1732	22	858	6/20/2017	-24	-78	54	1.35	7	-92	-99	31	-14	871	-13	21	N/A	H	H. Year 1 was H.	(1063)
1733	22	859	6/21/2017	-21	-77	56	1.4	2	-122	-124	23	-45	871	-12	22	N/A	H	H. Year 1 was H.	(1064)
1734	23	859	6/22/2017	-22	-78	56	1.4	1	-121	-122	23	-43	873	-14	22	N/A	H	H. Year 1 was H.	(1065)
1735	23	861	6.23.2017	-22	-78	56	1.4	5	-133	-138	27	-55	875	-14	23	N/A	H	H. Year 1 was H.	(1066)
1736	23	860	6/24/2017	-16	-77	61	1.525	6	-91	-97	22	-14	875	-15	23	N/A	H	M. Year 1 was H.	(1067)
1737	24	861	6/25/2017	-19	-78	59	1.475	5	-108	-113	24	-30	874	-13	24	N/A	H	H. Year 1 was H.	(1068)
1738	24	861	6/26/2017	-22	-78	56	1.4	4	-98	-102	26	-20	876	-15	24	N/A	H	H. Year 1 was H.	(1069)

1739	25	861	6/27/2017	-22	-77	55	1.375	4	-133	-137	26	-56	877	-16	25	N/A	H	H. Year 1 was H.	(1070) See Figure 4 for topography. Altitude for Sol 1739 = -4243 m.
1740	25	861	6/28/2017	-21	-78	57	1.425	4	-86	-90	25	-8	878	-17	25	N/A	H	H. Year 1 was H.	(1071)
1741	26	863	6/29/2017	-18	-78	60	1.5	7	-85	-92	25	-7	879	-16	26	N/A	H	H. Year 1 was H.	(1072)
1742	26	865	6/30/2017	-12	-77	65	1.625	7	-86	-93	19	-9	879	-14	26	N/A	H	M. Year 1 was M.	(1073)
1743	27	863	7/2/2017	-21	-78	57	1.425	7	-90	-97	28	-12	878	-15	27	N/A	H	H. Year 1 was M.	(1074)
1744	27	863	7/3/2017	-22	-78	56	1.4	7	-89	-96	29	-11	879	-16	27	N/A	H	M. Year 1 was H.	(1075)
1745	28	865	7/4/2017	-19	-78	59	1.475	6	-88	-94	25	-10	880	-15	28	N/A	H	M. Year 1 was M.	(1076)
1746	28	866	7/5/2017	-16	-76	60	1.5	9	-89	-98	25	-13	880	-14	28	N/A	H	M. Year 1 was M.	(1077) Altitude on Sol 1746 = -4,241 m (sand/rock)
1747	29	866	7/6/2017	-16	-79	63	1.575	6	-88	-94	22	-9	881	-15	29	N/A	H	M. Year 1 was M.	(1078) Altitude on Sol 1747 = -4,240 m (sand)
1748	29	867	7/7/2017	-19	-79	60	1.5	7	-89	-96	26	-10	882	-15	29	N/A	H	M. Year 1 was H.	(1079) Altitude on Sol 1748 = -4,239

																			m (sand)
1749	30	867	7/8/2017	-21	-76	57	1.425	6	-90	-96	27	-14	882	-15	29	N/A	M	M. Year 1 was M.	(1080)
1750	30	867	7/9/2017	-17	-77	60	1.5	4	-91	-95	21	-14	882	-15	30	N/A	M	M. Year 1 was M.	(1081)
1751	31	867	7/10/2017	-23	-78	55	1.375	6	-91	-97	29	-13	882	-15	30	N/A	H	M. Year 1 was H.	(1082) Altitude on Sol 1751 = -4,238 m (rock)
1752	31	867	7/11/2017	-16	-80	64	1.6	2	-90	-92	18	-10	883	-16	31	N/A	H	M. Year 1 was H.	(1083) Altitude on Sol 1752 = -4,238 m (rock)
1753	32	868	7/12/2017	-16	-76	60	1.5	3	-88	-91	1119q1	-12	885	-17	31	N/A	H	H. Year 1 was H.	(1084)
1754	32	870	7/13/2017	-20	-78	58	1.45	3	-85	-88	23	-7	886	-16	32	N/A	H	M. Year 1 was H.	(1085) Altitude on Sol 1754 = 4,233 m below areoid
1755	32	870	7/14/2017	-22	-77	55	1.375	3	-86	-89	25	-9	885	-15	32	N/A	H	H. Year 1 was H.	(1086)
1756	33	871	7/15/2017	-23	-78	55	1.375	4	-87	-91	27	-9	885	-14	33	N/A	H	H. Year 1 was H.	(1087) Curiosity is about to enter conjunction (go

																			behind the sun) for 3 weeks.
1757	33	871	7/16/2017	-21	-78	57	1.425	2	-85	-87	23	-7	885	-14	33	N/A	H	H. Year 1 was H.	(1088) In conjunction Yr 3
1758	34	871	7/17/2017	-22	-78	56	1.4	3	-85	-88	25	-7	885	-14	34	N/A	H	H. Year 1 was H.	(1089)
1759	34	871	7/18/2017	-20	-77	57	1.425	4	-84	-88	24	-7	886	-15	34	N/A	H	H. Year 1 was H.	(1090)
1760	35	872	7/19/2017	-18	-78	60	1.5	3	-85	-88	21	-7	886	-14	35	N/A	H	H. Year 1 was M.	(1091)
1761	35	872	7/20/2017	-20	-77	57	1.425	2	-86	-88	22	-9	886	-14	35	N/A	H	H. Year 1 was M.	(1092)
1762	36	872	7/21/2017	-20	-77	57	1.425	3	-86	-89	23	-9	887	-15	36	N/A	H	H. Year 1 was M.	(1093)
1763	36	873	7/22/2017	-20	-78	58	1.45	2	-86	-88	22	-8	888	-15	36	N/A	H	H. Year 1 was M.	(1094)
1764	37	872	7/23/2017	-18	-79	61	1.525	2	-89	-91	20	-10	888	-16	36	N/A	H	M. Year 1 was M.	(1095)
1765	37	873	7/24/2017	-20	-77	57	1.425	2	-90	-92	22	-13	888	-15	37	N/A	H	M. Year 1 was M.	(1096)
1766	38	873	7/25/2017	-17	-79	62	1.55	2	-85	-87	-19	-6	889	-16	37	N/A	H	M. Year 1 was M.	(1097)
1767	38	874	7/26/2017	-22	-77	55	1.375	3	-86	-89	25	-9	890	-16	38	N/A	H	M. Year 1 was M.	(1098)

1768	39	875	7/27/2017	-22	-78	56	1.4	3	-88	-91	25	-10	891	-16	38	N/A	H	M. Year 1 was M.	(1099)
1769	39	875	7/28/2017	-23	-76	53	1.325	2	-91	-93	25	-15	890	-15	39	N/A	H	M. Year 1 was M.	(1100)
1770	39	875	7/29/2017	-19	-79	60	1.5	1	-85	-86	20	-6	891	-16	39	N/A	H	M. Year 1 was M.	(1101)
1771	40	876	7/30/2017	-22	-79	57	1.425	2	-89	-91	24	-10	892	-16	40	N/A	H	M. Year 1 was M.	(1102)
1772	40	876	7/31/2017	-20	-78	58	1.45	2	-85	-87	22	-7	893	-17	40	N/A	H	M. Year 1 was M.	(1103)
1773	41	876	8/1/2017	-22	-78	56	1.4	2	-88	-90	24	-10	893	-17	41	N/A	H	M. Year 1 was M.	(1104)
1774	41	877	8/2/2017	-18	-79	61	1.525	2	-88	-90	20	-9	892	-15	41	N/A	H	M. Year 1 was M.	(1105) Out of conjunction in Yr 3. Altitude likely similar to before conjunction..
1775	42	877	8/3/2017	-22	-80	58	1.45	2	-88	-90	24	-8	893	-16	42	N/A	H	M. Year 1 was M.	(1106)
1776	42	878	8/4/2017	-24	-79	55	1.375	2	-86	-88	26	-7	893	-15	42	N/A	H	M. Year 1 was M.	(1107)
1777	43	877	8/5/2017	-22	-79	57	1.425	2	-87	-89	24	-8	895	-18	42	N/A	H	M. Year 1 was M.	(1108)
1778	43	877	8/6/2017	-23	-81	58	1.45	2	-87	-89	25	-6	895	-18	43	N/A	H	M. Year 1 was M.	(1109)

1779	44	878	8/7/2017	-23	-78	55	1.375	0	-87	-87	23	-9	895	-17	43	N/A	H	M. Year 1 was M.	(1110)
1780	44	879	8/9/2017	-20	-77	57	1.425	1	-88	-89	21	-11	896	-17	44	N/A	H	H. Year 1 was H.	(1111)
1781	45	879	8/10/2017	-22	-78	56	1.4	1	-87	-88	23	-9	895	-16	45	N/A	H	H. Year 1 was H.	(1112)
1782	45	878	8/11/2017	-22	-78	56	1.4	1	-87	-88	23	-9	895	-17	45	N/A	H	M. Year 1 was N/A.	(1113)
1783	45	879	8/12/2017	-23	-79	56	1.4	0	-86	-86	23	-7	896	-17	45	N/A	H	M. Year 1 was N/A.	(1114)
1784	46	1294	8/13/2017	-22	-80	58	1.45	0	-88	-88	22	-8	897	+397	46	N/A	H	M. Year 1 was N/A.	(1115) See Figure 5 for pressure increase anomaly.
1784 revised	46	883	8/13/2017	-22	-80	58	1.45	0	-88	-88	22	-8	897	-14	46	N/A	H	M. Year 1 was N/A.	(1115) Revised back to the expected curve. See Figure 5
1785	46	881	8/14/2017	-20	-77	57	1.425	-1	-88	-87	-19	-11	898	-17	46	N/A	H	M. Year 1 was N/A.	(1116)
1786	47	N/A	8/15/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	898	N/A	47	N/A	N/A	M. Year 1 was N/A.	(1117)
1787	47	881	8/16/2017	-26	-79	53	1.325	3	-90	-87	23	-8	898	-17	47	N/A	H	M. Year 1 was N/A.	(1118)

1788	48	881	8/17/2017	-21	-79	58	1.45	4	-89	-91	25	-10	898	-17	48	908	H	L changed to M. Year 1 was N/A.	(1119)
1789	48	881	8/18/2017	-19	-79	60	1.5	1	-88	-89	20	-9	900	-19	48	N/A	H	M. Year 1 was N/A.	(1120)
1790	49	882	8/19/2017	-22	-81	59	1.475	2	-88	-90	24	-7	901	-19	48	N/A	H	M. Year 1 was N/A.	(1121)
1791	49	882	8/20/2017	-23	-79	56	1.4	2	-89	-91	25	-10	901	-19	49	N/A	H	M. Year 1 was N/A.	(1122)
1792	50	883	8/21/2017	-27	-80	53	1.325	2	-90	-92	29	-10	900	-18	49	N/A	H	M. Year 1 was N/A.	(1123)
1793	50	883	8/22/2017	-22	-80	58	1.45	2	-90	-92	24	-10	900	-17	50	N/A	H	H. Year 1 was M.	(1124)
1794	50	883	8/23/2017	-25	-80	55	1.375	2	-92	-94	27	-12	900	-17	50	N/A	H	H. Year 1 was H.	(1125)
1795	51	882	8/24/2017	-19	-81	62	1.55	2	-88	-90	21	-7	901	-19	51	N/A	H	M. Year 1 was N/A	(1126)
1796	51	883	8/25/2017	-23	-80	57	1.425	2	-88	-90	25	-8	902	-27 changed to -19	51	910	H	M. Year 1 was N/A	(1127)
1797	52	884	8/26/2017	-27	-79	52	1.3	-2	-90	-88	25	-11	902	-18	52	N/A	H	M. Year 1 was N/A	(1128)
1798	52	883	8/27/2017	-25	-79	54	1.35	-3	-89	-86	22	-10	902	-19	52	N/A	H	M. Year 1 was N/A	(1129)

1799	53	883	8/28/2017	-24	-78	54	1.35	1	-90	-91	25	-12	902	-19	53	N/A	H	M. Year 1 was N/A	(1130)
1800	53	881	8/29/2017	-24	-80	56	1.4	-1	-87	-86	23	-7	902	-21	53	N/A	H	M. Year 1 was N/A	(1131)
1801	54	882	8/30/2017	-21	-80	59	1.475	-3	-87	-84	18	-7	902	-20	53	N/A	H	H. Year 1 was M.	(1132)
1802	54	882	8/31/2017	-26	-79	53	1.325	-3	-84	-81	23	-5	902	-20	54	N/A	H	M. Year 1 was M.	(1133)
1803	55	882	9/1/2017	-25	-78	53	1.325	-1	-91	-90	24	-13	902	-20	54	N/A	M	M. Year 1 was H.	(1134)
1804	55	883	9/2/2017	-29	-78	49	1.225	-1	-88	-87	28	-10	901	-18	55	N/A	H	M. Year 1 was M.	(1135)
1805	55	883	9/3/2017	-27	-78	51	1.275	-2	-91	-89	25	-13	901	-18	55	N/A	H	M. Year 1 was M.	(1136)
1806	56	884	9/4/2017	-25	-80	55	1.375	-1	-89	-88	24	-9	901	-17	56	N/A	M	M. Year 1 was M.	(1137)
1807	56	884	9/5/2017	-23	-78	55	1.375	-2	-88	-86	21	-10	901	-17	56	N/A	M	M. Year 1 was M.	(1138)
1808	57	884	9/6/2017	-26	-79	53	1.325	-1	-89	-88	25	-10	901	-17	57	N/A	H	M. Year 1 was M.	(1139)
1809	57	889	9/7/2017	-29	-80	51	1.275	-1	-88	-87	28	-8	901	-12	57	N/A	H	M. Year 1 was M.	(1140)
1810	58	883	9/8/2017	-25	-78	53	1.325	-5	-85	-82	20	-7	902	-19	57	N/A	H	M. Year 1 was M.	(1141)

1811	58	882	9/9/2017	-25	-79	54	1.35	-5	-88	-83	20	-9	902	-20	58	N/A	H	M. Year 1 was M.	(1142)
1812	59	882	9/10/2017	-23	-79	56	1.4	-5	-88	-83	18	-9	901	-19	58	N/A	H	M. Year 1 was M.	(1143)
1813	59	881	9/11/2017	-27	-80	53	1.325	-8	-84	-76	19	-4	902	-21	59	N/A	H	M. Year 1 was M.	(1144)
1814	59	881	9/12/2017	-26	-80	54	1.35	-9	-86	-77	17	-6	903	-26 revised to -22	59	907	H	M. Year 1 was M.	(1145)
1815	60	881	9/13/2017	-29	-81	52	1.3	-11	-86	-75	18	-5	902	-21	60	N/A	H	M. Year 1 was M.	(1146)
1816	60	882	9/15/2017	-30	-82	52	1.3	-12	-87	-75	18	-5	901	-19	60	N/A	M	M. Year 1 was N/A.	(1147)
1817	61	882	9/16/2017	-29	-80	51	1.275	-12	-85	-73	17	-5	901	-19	61	N/A	M	M. Year 1 was N/A.	(1148)
1818	61	881	9/17/2017	-25	-81	55	1.375	-12	-87	-75	13	-6	902	-21	61	N/A	M	M. Year 1 was N/A.	(1149)
1819	62	880	9/18/2017	-28	-82	54	1.35	-12	-86	-76	16	-4	902	-22	62	N/A	H	M. Year 1 was N/A.	(1150)
1820	62	881	9/19/2017	-29	-79	50	1.25	-10	-87	-77	19	-8	902	-21	62	N/A	M	M. Year 1 was N/A.	(1151)
1821	63	882	9/20/2017	-29	-81	52	1.3	-11	-83	-72	18	-2	901	-19	62	N/A	M	M. Year 1 was N/A.	(1152)
1822	63	881	9/21/2017	-27	-78	51	1.275	-10	-86	-76	17	-8	900	-19	63	N/A	M	M. Year 1 was N/A.	(1153)

1823	64	879	9/22/2017	-28	-80	52	1.3	-11	-89	-78	17	-9	900	-21	63	N/A	H	M. Year 1 was N/A.	(1154)
1824	64	879	9/23/2017	-28	-80	52	1.3	-9	-85	-76	19	-5	900	-21	64	N/A	H	M. Year 1 was M.	(1155)
1825	64	878	9/24/2017	-27	-80	53	1.325	-11	-86	-75	16	-6	900	-22	64	N/A	M	M. Year 1 was M.	(1156)
1826	65	878	9/25/2017	-26	-80	54	1.35	-10	-86	-75	16	-6	900	-22	65	N/A	H	M. Year 1 was M.	(1157)
1827	65	879	9/26/2017	-28	-80	52	1.3	-12	-87	-75	16	-7	898	-19	65	N/A	H	M. Year 1 was M.	(1158)
1828	66	878	9/27/2017	-27	-80	53	1.325	-7	-85	-78	20	-5	898	-20	66	N/A	H	M. Year 1 was M.	(1159)
1829	66	877	9/28/2017	-29	-78	49	1.225	-5	-84	-79	24	-6	899	-22 (300 without revision)	66	1177	H	M. Year 1 was M.	(1160)
1830	67	877	9/29/2017	-23	-80	57	1.425	-9	-85	-76	14	-5	898	-21 (323 without revision)	66	1200	H	M. Year 1 was M.	(1161) Altitude for Sol 1830 = 4,184 meters below areoid. Back at Sol 1161 the altitude was 4,432 meters below areoid. It has thus climbed 248 meters in a Martian year.
1831	67	876	9/30/2017	-26	-80	54	1.35	-9	-86	-77	17	-6	897	-21	67	N/A	H	M. Year 1 was M.	(1162)

1832	68	875	10/1/2017	-30	-84	54	1.35	-9	-85	-76	21	-1	896	-21	67	N/A	H	M. Year 1 was M.	(1163)
1833	68	875	10/2/2017	-30	-81	51	1.275	-11	-86	-75	19	-5	896	-21	68	N/A	H	M. Year 1 was M.	(1164)
1834	68	875	10/3/2017	-25	-80	55	1.375	-10	-86	-76	15	-6	897	-22	68	N/A	H	M. Year 1 was M.	(1165)
1835	69	873	10/4/2017	-31	-80	49	1.225	-15	-85	-70	16	-5	895	-22	69	N/A	H	M. Year 1 was M.	(1166)
1836	69	873	10/5/2017	-29	-81	52	1.3	-14	-85	-71	15	-4	894	-21	69	N/A	H	M. Year 1 was M.	(1167)
1837	70	872	10/6/2017	-28	-81	53	1.325	-11	-84	-73	17	-3	894	-22	70	N/A	H	M. Year 1 was M.	(1168)
1838	70	872	10/7/2017	-27	-79	52	1.3	-10	-84	-74	17	-5	894	-22	70	N/A	H	H. Year 1 was M.	(1169)
1839	71	872	10/8/2017	-30	-80	50	1.25	-10	-103	-93	20	-23	893	-21	71	N/A	H	H. Year 1 was M.	(1170) Low ground temperature is unusally low. See Figure 6.
1840	71	871	10/9/2017	-29	-77	48	1.2	-16	-124	-113	13	-47	892	-21	71	N/A	H	H. Year 1 was M.	(1171) Low ground temperature is extremely low. See Figure 6.
1841	72	870	10/10/2017	-32	-77	45	1.125	-15	-104	-89	17	-27	892	-22	71	N/A	H	H. Year 1 was M.	(1172) Low ground temperature is unusally low.

1842	72	869	10/11/2017	-27	-79	52	1.3	-11	-86	-75	16	-7	892	-23	72	N/A	H	M. Year 1 was M.	(1173)
1843	72	869	10/12/2017	-29	-80	51	1.275	-11	-84	-73	18	-4	891	-22	72	N/A	H	M. Year 1 was M.	(1174)
1844	73	869	10/13/2017	-28	-81	53	1.325	-10	-87	-77	18	-6	890	-21	73	N/A	H	M. Year 1 was M.	(1175)
1845	73	866	10/14/2017	-29	-80	51	1.275	-8	-87	-79	21	-7	890	-24	73	N/A	H	M. Year 1 was M.	(1176)
1846	73	868	10/15/2017	-30	-80	50	1.25	-15	-88	-73	15	-8	888	-20	74	N/A	H	M. Year 1 was M.	(1177)
1847	74	866	10/16/2017	-30	-80	50	1.25	-15	-88	-73	15	-8	888	-22	74	N/A	H	M. Year 1 was M.	(1178)
1848	75	865	10/17/2017	-28	-80	52	1.3	-15	-86	-71	13	-6	887	-22	75	N/A	H	M. Year 1 was M.	(1179)
1849	75	864	10/18/2017	-24	-80	56	1.4	-10	-85	-75	14	-5	886	-22	75	N/A	H	M. Year 1 was M.	(1180)
1850	76	864	10/19/2017	-30	-80	50	1.25	-8	-85	-77	22	-5	885	-21	75	N/A	H	M. Year 1 was M.	(1181)
1851	76	864	10/20/2017	-30	-87	57	1.425	-14	-85	-71	16	+2	884	-20	76	N/A	H	M. Year 1 was M.	(1182) Note night ground temperature warmer than night air temperature.
1852	77	863	10/22/2017	-31	-80	49	1.225	-12	-85	-73	19	-5	883	-20	76	N/A	H	M. Year 1 was M.	(1183)

1853	77	862	10/23/2017	-32	-80	48	1.2	-14	-85	-71	18	-5	882	-20	77	N/A	M	M. Year 1 was M.	(1184)
1854	77	861	10/24/2017	-26	-80	54	1.35	-12	-84	-72	14	-4	881	-20	77	N/A	M	H. Year 1 was M.	(1185)
1855	78	861	10/25/2017	-32	-78	46	1.15	-61	-82	-21	-29	+17	881	-20	78	N/A	M	H. Year 1 was M.	(1186) The low of -61 is like an error. This is more likely the low in Fahrenhet than Celsius.
1856	78	859	10/26/2017	-28	-80	52	1.3	-16	-76	-60	12	+4	881	-22	78	N/A	H	M. Year 1 was M.	(1187)
1857	79	858	10/27/2017	-30	-80	50	1.25	-13	-84	-71	17	-4	881	-23	79	N/A	H	M. Year 1 was M.	(1188)
1858	79	857	10/28/2017	-28	-81	53	1.325	-13	-85	-72	15	-4	879	-22	79	N/A	H	M. Year 1 was M.	(1189)
1859	80	857	10/29/2017	-30	-79	49	1.225	-13	-85	-72	17	-6	877	-20	79	N/A	H	H. Year 1 was M.	(1190)
1860	80	857	10/30/2017	-31	-80	49	1.225	-12	-84	-72	19	-4	876	-19	80	N/A	H	H. Year 1 was M.	(1191)
1861	81	855	10/31/2017	-29	-79	50	1.25	-13	-85	-72	16	-6	875	-20	80	N/A	H	H. Year 1 was M.	(1192)
1862	81	854	11/1/2017	-31	-81	50	1.25	-13	-85	-72	18	-4	875	-21	81	N/A	H	M. Year 1 was M.	(1193)

1863	81	853	11/2/2017	-30	-80	50	1.25	-13	-86	-73	17	-6	873	-20	81	N/A	M	M. Year 1 was M.	(1194)
1864	82	852	11/3/2017	-22	-82	60	1.5	-11	-83	-72	11	-1	871	-19	82	N/A	H	M. Year 1 was M.	(1195)
1865	82	852	11/4/2017	-31	-80	49	1.225	-13	-91	-78	18	-11	871	-19	82	N/A	H	M. Year 1 was H.	(1196)
1866	83	850	11/5/2017	-28	-80	52	1.3	-12	-98	-86	16	-18	869	-19	83	N/A	H	M. Year 1 was M.	(1197)
1867	84	848	11/6/2017	-24	-78	54	1.35	-9	-83	-74	15	-5	868	-20	83	N/A	H	M changed from L. Year 1 was M.	(1198)
1868	84	848	11/7/2017	-24	-80	56	1.4	-10	-87	-77	14	-7	868	-20	84	N/A	H	M changed from L. Year 1 was M.	(1199)
1869	84	846	11/8/2017	-24	-81	57	1.425	-9	-87	-78	15	-6	866	-20	84	N/A	H	M changed from L. Year 1 was M.	(1200)
1870	85	845	11/9/2017	-29	-81	52	1.3	-10	-87	-77	19	-6	866	-21	84	N/A	H	M. Year 1 was M.	(1201)
1871	85	844	11/10/2017	-30	-80	50	1.25	-5	-87	-82	25	-7	864	-20	85	N/A	H	M. Year 1 was M.	(1202)
1872	86	843	11/11/2017	-29	-79	50	1.25	-4	-84	-80	25	-5	863	-20	85	N/A	H	M. Year 1 was M.	(1203)
1873	86	842	11/12/2017	-25	-79	54	1.35	-5	-85	-80	20	-6	862	-20	86	N/A	H	M. Year 1 was M.	(1204) Elevation Sol 1873 = -4,168 meters = 249

																			meters higher than previous Martian year (Elevation Sol 1204 was -4,417 meter)
1874	86	840	11/13/2017	-29	-80	51	1.275	-5	-84	-79	24	-4	861	-21	86	N/A	H	M. Year 1 was M.	(1205)
1875	87	839	11/14/2017	-23	-79	56	1.4	-5	-84	-79	18	-5	859	-20	87	N/A	H	M. Year 1 was M.	(1206)
1876	87	838	11/15/2017	-29	-79	50	1.25	-5	-84	-79	24	-5	858	-20	87	N/A	H	M. Year 1 was M.	(1207)
1877	88	837	11/16/2017	-30	-79	49	1.225	-7	-84	-77	23	-5	857	-20	88	N/A	H	M. Year 1 was M.	(1208)
1878	88	835	11/17/2017	-29	-79	50	1.25	-7	-84	-77	22	-5	855	-20	88	N/A	M	M. Year 1 was M.	(1209)
1879	89	842	11/18/2017	-31	-79	48	1.2	-9	-83	-74	22	-4	854	-12	88	N/A	M	M. Year 1 was M.	(1210)
1880	89	831	11/19/2017	-30	-79	49	1.225	-7	-83	-76	23	-4	853	-22	89	N/A	M	M. Year 1 was M	(1211)
1881 Winter begins	90	832	11/20/2017	-29	-79	50	1.25	-8	-83	-75	21	-4	851	-19	89	N/A	M	M. Year 1 was M	(1212)
SOL	~LS	PRESSURE Pa	EARTH DATE	MAX AIR	MIN AIR	AIR TEMP	AIR TEMP	MAX GROUND	MIN GROUND	Δ GROUND TEMP	DAYTIME CHANGE	NIGHTTIME CHANGE	PRESSURE AT SAME LS IN MSL YEAR	Δ PRESSURE YEAR 2 TO YEAR 3 SAME LS	~LS Year 1	PRESSURE YEAR 1 BEFORE REVISION	UV YR 3	UV YR 2	

					TEMP °C	TEMP °C	RANGE °C	RANGE °C/40	TEMP °C	TEMP °C	DAY TO NIGHT	IN TEMP °C AIR TO GROUND	IN TEMP °C AIR TO GROUND	2					