

CALENDAR OF EVENTS -- MARS, 2020-2021

DATE	PHYSICAL	REMARKS
2019 Sep 02	Ls 74.3°	Conjunction. Mars is behind the Sun ~2.675 AU.
2019 Oct 08	Ls 90° De 25.0° Ds 24.8° RA 12:10 Dec 0.0° A. Dia 3.6"	Solstice - Northern Summer/Southern Winter. Orographic clouds over the Tharsis volcanoes – W-Cloud? Local seasonal clouds should wrap around Syrtis Major and be prominent in Lybia. White cloud and Ice-fog activity? Discrete clouds? NPC remnant? Lemuria (210° W, 82° N) detached from NPC? Any other detachments (projections at 135° W and 290° W) near NPC remnant, NPC Width ~18° ±4°.
2020 Mar 19	Ls 168.6° De -11.8° Ds 4.8° RA 19:34 Dec -22.4° A.Dia 6"	Apparition begins for observers using 4-inch to 8-inch apertures telescopes and up. Begin low-resolution CCD imaging. Views of surface details not well defined. Is the North Polar Hood present? Does SPH or frost cover should begin to clear and darken. Are W-clouds present? South cap emerges from darkness of Winter. SPH thinning and forms "Life Saver Effect"?
2020 Apr 15	Ls 183.6° De -18.1 Ds -1.5° RA 20:53 Dec -18.8° A.Dia 6.9"	Be on the look out for an early dust storm as occurred during the same seasonal period in 2001 and 2018.
2020 May 09	Ls 197.6° De -21.7° Ds -7.3° RA 21:59 Dec -14.2° A.Dia 8"	SPC shrinking. Syrtis Major darkens and continues to shrink. W-clouds possible. Surface details increasing in contrast Hellas the features Zea Locus and dark? SPC Novissima Thyle (300°-330°W) projection present? (SPC width ~52° ±6°).
2020 Jun 06	Ls 215.0° De -24.0° Ds -14.1° RA 23:14 Dec -7.6° A.Dia 9.6"	Mars at Western Quadrature. Bright SPC projection Novissima Thyle (300°W - 330°W) Areographic longitude. Dark rift Rima Augusta connected from 60° to 270° longitude. Rima Australis visible in SPC (290°-350°W)? W-clouds possible. SPC bright projection Argenteus Mons (10°W-20°W). SPC Dust clouds in Serpentis-Hellespontus, in Noachis? (SPC width ~44° ±3°).
2020 Jun 12	Ls 218.2° De -23.6° Ds -15.0° RA 23:27 Dec -6.4° A. Dia 10"	Bright SPC projection Novissima Thyle (300°W - 330°W) Areographic longitude. Dark rift Rima Augusta connected from 60° to 270° longitude. Rima Australis visible in SPC (290°-350°W)? W-clouds possible. SPC bright projection Argenteus Mons (10°W-20°W). SPC Dust clouds in Serpentis-Hellespontus, in Noachis? (SPC width ~44° ±3°).
2020 Jul 07	Ls 233.7° De -22.8° Ds -20.1° RA 00:24 Dec -0.9° A.Dia 12"	SPC rapid retreat. Novus Mons small, bright, and high-contrast. Rima Australis widens. SPC isolated bright spot at 155° longitude? Any white patches near -20° latitude may brighten. Atmosphere of Mars very clear during Ls 240°- 250°. Occasional morning limb hazes. Dust clouds? Note: Several "planet-encircling dust storms have been reported during this season at 24° Ls. (SPC width ~28° ±3°).
2020 Aug 03	Ls 251° De -20.2°	Mars at Perihelion . SPC in rapid retreat. Novus Mons smaller. Dust clouds expected over Serpentis-Hellaspontus (Ls 250° - 270°).

	Ds -23.7° RA 01:14 Dec 3.9° A.Dia 14.8"	Syrtis Major beginning to narrow. Frost in bright deserts? Orographic clouds (W-clouds) possible. Elysium and Arsia Mons bright? Note: Several "planet-encircling dust storms have been reported during this season. High probability 255° Ls. (SPC width ~ 24° ±3°).
2020 Sep 03	Ls 270° De -17.6° Ds -25.2° RA 01:49 Dec 6.7° A.Dia 19.2"	Solstice - Northern Winter/Southern Summer. W-clouds present? NPH extends 50° N? Decreased number of White clouds. "Syrtis Blue Cloud"? White areas in deserts? Dust clouds in south until 270° Ls? Watch for planetary system clouds bands. Orographic cloud over Arsia Mons? Syrtis Major is narrow. (SPC width ~ 17° ±2°).
2020 Sep 09	Ls 274.2° De -17.5° Ds -25.2° RA 01:50 Dec 6.8° A.Dia 20.1"	Retroggression Begins. W-clouds present? NPH extends 50° N? Decreased number of White clouds. "Syrtis Blue Cloud"? White areas in deserts? Dust clouds in south until 270° Ls? Watch for planetary system clouds bands. Orographic cloud over Arsia Mons? Syrtis Major is narrow. (SPC width ~ 17° ±2°).
2020 Oct 06	Ls 291.0° De -19.1° Ds -23.0° RA 01:32 Dec 6.0° A.Dia 22.6"	Mars at Closest Approach. Bright SPC projection Novissima Thyle (300°W - 330°W) Areographic longitude. Dark rift Rima Augusta connected from 60° to 270° longitude. Rima Australis visible in SPC (290°-350°W)? W-clouds possible. SPC bright projection Argenteus Mons (10°W-20°W). SPC Dust clouds in Serpentin-Hellespontus, in Noachis? (SPC width ~10° ±2°).
2020 Oct 13	Ls 295.2° De -20.0° Ds -22.3° RA 01:23 Dec 5.5° A.Dia 22.4"	Mars at Opposition . Bright SPC projection Novissima Thyle (300°W - 330°W) Areographic longitude. Dark rift Rima Augusta connected from 60° to 270° longitude. Rima Australis visible in SPC (290°-350°W)? W-clouds possible. SPC bright projection Argenteus Mons (10°W-20°W). SPC Dust clouds in Serpentin-Hellespontus, in Noachis? (SPC width ~10° ±2°).
2020 Nov 14	Ls 314.1° De -23.7° Ds -17.9° RA 00:57 Dec 5.2° A.Dia 17.7"	Retroggression Ends. bright? Is SPC remnant visible in mid-summer? High probability of dusty storm at 315° Ls. Orographic cloud over Arsia Mons? Topographic cloud over (SPC width ~10° ±2°).
2020 Dec 18	Ls 333.2° De -23.4° Ds -10.9° RA 01:20 Dec 9.0° A.Dia 12'	Hellas Ice-fog activity? Topographic cloud over NPC large hood present. W-Cloud? Orographic cloud over Arsia Mons? (SPC width ~10° ±2°).
2021 Jan 05	Ls 342.9° De -21.9° Ds 7.1° RA 01:47 Dec 12.1° A.Dia 10'	Hellas Ice-fog activity? Topographic cloud over NPC large hood present. W-Cloud? Orographic cloud over Arsia Mons? (SPC width ~10° ±2°).
2021 Jan 30	Ls 355.8° De -18.3° Ds 1.8°	NPC large hood (NPH) present. Discrete (white) clouds and white areas should be seen. Syrtis Major begins to expand to its east. Topographic cloud over Libya?

	RA 02:34 Dec 16.5° A.Dia 8'	
2021 Feb 02	Ls 356.9° De -18.2° Ds -1.3° RA 02:39 Dec 16.9° A.Dia 7.8'''	Mars at Eastern Quadrature. North Polar Hood (NPH) breaking up, North Polar Cap (NPC) should be exposed. Discrete (white) clouds and white areas should be seen. Syrtis Major begins to expand to its east. Topographic cloud over Libya?;
2021 Feb 08	Ls 0° De -16.6° Ds 0.1° RA 02:53 Dec 19.9° A.Dia 7.4'''	Equinox - Northern Spring/Southern Autumn . North Polar Hood (NPH) breaking up, North Polar Cap (NPC) should be exposed. ("Areo-" is a prefix often employed when referring to Mars or "Ares.")
2021 Mar 10	Ls 14.9° De -10.1° Ds 6.3° RA 04:04 Dec 22.3° A.Dia 6'''	North Polar Hood (NPH) breaking up and North Polar Cap (NPC) should be exposed. and Argyre bright?
2021 Oct 08	Ls 109.8°	Conjunction. Mars is behind the Sun ~2.629AU.