

FIGURE 3—2024 OCCULTATIONS BY SPECIAL MAIN-BELT ASTEROIDS

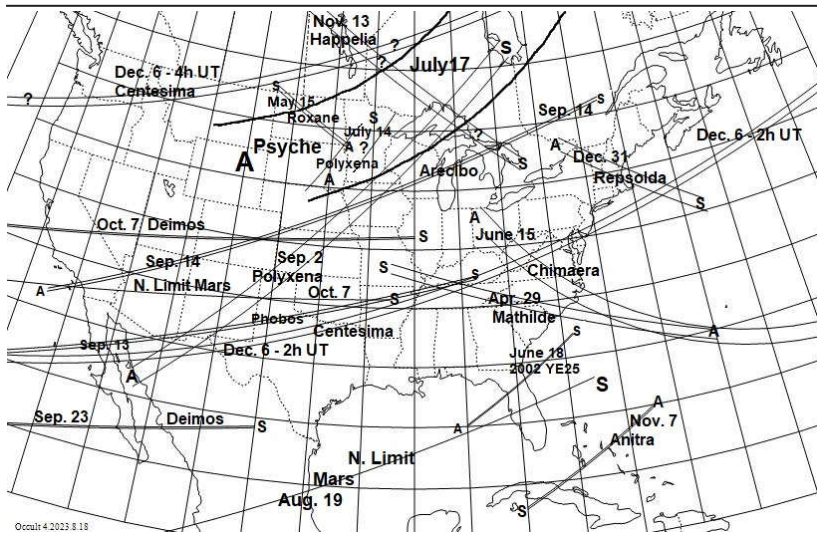


TABLE 3—2024 OCCULTATIONS BY SPECIAL MAIN-BELT ASTEROIDS

Date	UT	Occulting Body	Star	RA (2000)			Dec		Dur.	Path	
				Mag.	h	m	s	°			'
Apr. 29	01:43	253 Mathilde	El Tauri	8.9	05 46	56.5	+17 54	31	7.3	1.8	NC-MO
May 15	03:59	317 Roxane	UCAC4 562-032446	11.7	06 37	28.7	+22 20	04	3.4	0.5	SK-ND
Jun. 15	05:15	623 Chimaera	TYC 7404-03568-1	11.7	18 16	13.8	-37 24	58	3.0	3.5	NC-OH
Jun. 18	08:56	172376 2002 YE25	UCAC4 580-006816	12.0	02 59	29.9	+25 58	44	8.8	0.1	FL
Jul. 14	09:21	595 Polyxena	TYC 2413-00257-1	10.1	05 49	14.7	+35 15	53	4.3	2.5	NE-MN
Jul. 17	05:37	16 Psyche	UCAC4 381-166238	11.3	21 18	39.7	-13 54	58	0.3	29.1	QC-WY
Sep. 2	09:21	595 Polyxena	UCAC4 635-039699	11.0	07 04	54.3	+36 59	43	3.4	3.3	Mex-ON
Sep. 13	10:27	Phobos	UCAC4 568-026971	11.7	06 20	48.5	+23 29	40	1.8	1.0	Baja-KY
Sep. 14	09:14	4337 Arcibo	TYC 1895-00394-1	10.8	07 00	15.7	+24 13	20	8.1	0.8	CA-QC
Sep. 23	11:48	Deimos	TYC 1893-01034-1	11.0	07 17	36.4	+22 55	57	3.4	0.6	Baja-Mex
Sep. 23	11:17	Deimos	TYC 1909-00533-1	9.8	07 17	36.4	+22 55	57	4.4	0.6	CA-IL
Oct. 7	23:38	1016 Anitra	UCAC4 309-164338	11.9	18 05	35.6	-28 12	43	5.2	0.3	Cuba-BS
Nov. 13	11:06	578 Happelia	UCAC4 599-026750	11.9	05 58	11.2	+29 44	42	2.7	7.1	ON-MB
Dec. 6	02:53	513 Centesima	UCAC4 476-004159	11.9	02 47	26.8	+05 00	10	2.1	6.3	NJ-Baja
Dec. 6	04:32	513 Centesima	TYC 0053-01328-1	11.9	02 47	24.8	+05 00	02	2.1	6.3	ON-OR
Dec. 31	10:30	906 Repsolda	TYC 6192-00868-1	12.0	15 31	28.8	-19 22	47	3.4	1.8	QC-MA

slightly or take other steps to avoid saturation of the combined image of the objects so you can detect the 0.3 magnitude change. Because of its wide path, larger fonts than usual were used to label it. Since four other paths cross it, the location is not clear like for the other narrower paths, so the track is shown slightly darker than the rest. The northern limit for the Jul. 17 event extends from far northwestern Ontario to southern Montana, while the southern limit goes from western Québec (east of James Bay) to central Nebraska. The “A” in Wyoming marks the western end of the path, where the event altitude becomes too low to observe.

(253) Mathilde: NEAR imaged half the asteroid in 1997; occultations could probe the other half. The star, El Tauri, occulted on Apr. 29, is a Mira variable, spectral type S, with range 10.4 → 15 with a 389-d period. Since its maximum is expected on May 15, only 17 days after the occultation, it should be near maximum. Its *Gaia* number is G054656.5+175431.

(317) Roxane: This has a 5-km moon, Olympias, with separation of 245 km.

(513) Centesima: This asteroid has an unusual shape.