

IOTA/IOTA-ES occultation update for (345) Tercidina/omega_1 Tau (43 Tau) event on 2002 Sep 17

visible from France, southern Germany, Austria, parts of Eastern Europe

Summary

Shortly after midnight (UT) of 2002 September 16/17 the about 90 km large asteroid (345) Tercidina will occult the 5.5 mag star omega_1 Tau (43 Tau) along a roughly 110 km wide path from the French Atlantic coast over southern Germany, Austria, Slovakia, northern Hungaria, northern Romania, Ukraine, to Southern Russia.

In case of an occultation the combined light of the target star and the asteroid will drop by 7.3 mag to 12.8 mag for at most 11 seconds.

OBSERVATIONS ARE STRONGLY ENCOURAGED FOR THIS VERY FAVOURABLE EVENT, especially with video equipment and near the limits of the event. Also observers up to two path widths outside the predicted path should observe the event and report if an occultation occurred or not.

This update is based on UNSO (kindly provided by Ron Stone) , TMO (Bill Owen) , Geneva (Raoul Behrend) , and Gnosca (Stefano Sposetti) astrometry for the asteroid and the Hipparcos position for the star.

The event at one glimpse:

* date and approx. UT time of event: 2002 September 17 between 0:44 UTC and

0:50 UTC

- * magnitude of target star: 5.5
- * magnitude drop [mag]: 7.3
- * estimated maximum duration [s]: 11
- * rough path description: France, southern Germany, Austria, parts of Eastern Europe
- * Goffin nominal prediction map: A02_0936
- * complete update including maps on the internet:
<http://www.sternfreunde-breisgau.de/tercidina.html>

The occultation path:

- * approximate projected width [km]: 110
- * more detailed path description: French Atlantic coast near Nantes (0:44:23), Angers, Tours (0:44:40), Mulhouse, Freiburg i.Br. (0:45:22), Munich (0:45:46), Linz (0:46:5), Vienna (0:46:19), Bratislava, northern Hungaria, northern Romania, Ukraine, Southern Russia.
- * uncertainty [path widths]: 0.9
- * maps: available at <http://www.sternfreunde-breisgau.de/tercidina.html>
- * remarks: The updated path is almost identical to the preliminarily updated path published by Jan Manek

Data for the target star:

- * name: omega1 Tau = 43 Tau = FK6 1115 = HIP 19388 = SAO 93785 = PPM 119655 = TYC 1259-00984-1
- * constellation: Taurus

* J2000 position [h,m,s; °, ', "]: 04h 09m 09.9884s; +19° 36' 33.096"
 * position source: Hipparcos
 * estimated accuracy ["]: 0.01
 * V mag [mag]: 5.5
 * remarks: label omegal Tau is not used in all star atlases - do not confuse with omega Tau = 50 Tau 2 degrees farther to the north east; target star has spectral type G5 and should have a yellow-orange colour

Data for the minor planet:

* general information:
 number, name: (345) Tercidina
 approx. diameter [km]: 90
 * orbital information
 orbit source: calculation Federspiel
 source of used astrometry: USNO, TMO, Geneva, Gnosca
 number of used observations: 79
 number of rejected observations: 2 UNSO
 time covered by the observations: 1998 Jul 15 - 2002 Sep 13
 rms residuals ["] (RA,DE): 0.07, 0.07
 estimated positional accuracy at epoch of event ["]: 0.07
 remarks: serveral observation per night and observer were averaged to a mean observation for that night (TMO, Gnosca, Geneva)

Data for the event:

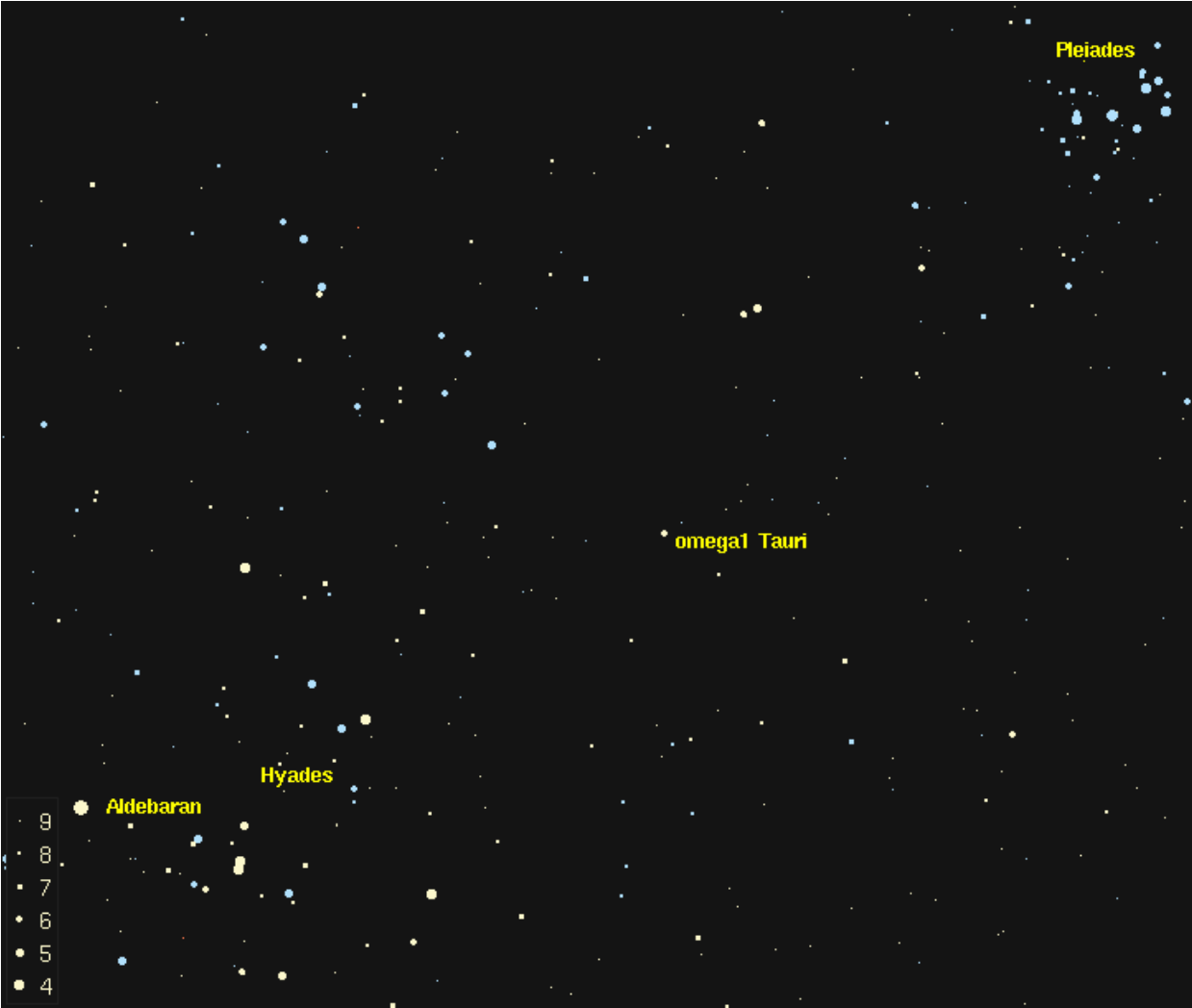
* UT date and time of least geocentric approach: 2002 Sep 17 @ 0h 52m 43s
 UT
 * least geocentric distance ["]: 2.09
 * uncertainty in time [s]: 9
 * approx. V mag of minor planet at event [mag]: 12.8
 * geocentric parallax of minor planet ["]: 5.28
 * magnitude drop [mag]: 7.3
 * estimated maximum duration [s]: 11
 * apparent motion of minor planet ["/h]: 26.67
 * angular distance to moon, phase of moon [°, %]: 121, 81%+
 * remarks:

Path coordinates:

Lat.	Long.	hh:mm:ss	UT	StarAlt°	StarAzi°	SunAlt°	SunAzi°
41.26	-33.05	0:42:10.	!	13.6	75.6	-42.3	330.8
42.40	-28.87	0:42:22.	!	16.9	78.5	-42.7	336.6
43.28	-25.30	0:42:34.	!	19.6	81.1	-42.8	341.7
44.01	-22.10	0:42:46.	!	22.0	83.5	-42.7	346.2
44.63	-19.16	0:42:58.	!	24.2	85.8	-42.5	350.3
45.16	-16.41	0:43: 9.	!	26.2	87.9	-42.3	354.2
45.63	-13.81	0:43:21.	!	28.1	90.1	-42.0	357.8
46.03	-11.34	0:43:33.	!	29.8	92.1	-41.6	1.2
46.38	-8.96	0:43:45.	!	31.5	94.1	-41.1	4.4
46.69	-6.68	0:43:57.	!	33.1	96.1	-40.7	7.4
46.96	-4.47	0:44: 9.	!	34.6	98.1	-40.2	10.3
47.20	-2.32	0:44:21.	!	36.0	100.0	-39.6	13.1
47.40	-.24	0:44:33.	!	37.4	101.9	-39.1	15.8
47.57	1.79	0:44:44.	!	38.7	103.8	-38.5	18.4
47.72	3.78	0:44:56.	!	40.0	105.7	-37.9	20.8
47.84	5.72	0:45: 8.	!	41.3	107.6	-37.3	23.2
47.94	7.61	0:45:20.	!	42.5	109.5	-36.6	25.5
48.02	9.47	0:45:32.	!	43.6	111.4	-36.0	27.8
48.08	11.30	0:45:44.	!	44.8	113.3	-35.3	29.9
48.12	13.08	0:45:56.	!	45.9	115.3	-34.7	32.0
48.14	14.84	0:46: 8.	!	46.9	117.2	-34.0	34.1
48.14	16.57	0:46:19.	!	48.0	119.1	-33.3	36.0
48.13	18.27	0:46:31.	!	49.0	121.1	-32.6	37.9
48.10	19.94	0:46:43.	!	50.0	123.0	-31.9	39.8

48.06	21.58	0:46:55. !	50.9	125.0	-31.2	41.6
48.00	23.20	0:47: 7. !	51.9	127.0	-30.5	43.4
47.93	24.79	0:47:19. !	52.8	129.0	-29.8	45.1
47.84	26.37	0:47:31. !	53.7	131.1	-29.1	46.7
47.75	27.91	0:47:43. !	54.5	133.2	-28.4	48.3
47.64	29.44	0:47:54. !	55.4	135.3	-27.6	49.9
47.52	30.95	0:48: 6. !	56.2	137.4	-26.9	51.5
47.38	32.43	0:48:18. !	57.0	139.6	-26.2	53.0
47.24	33.90	0:48:30. !	57.7	141.8	-25.4	54.4
47.09	35.34	0:48:42. !	58.5	144.1	-24.7	55.9
46.92	36.77	0:48:54. !	59.2	146.4	-23.9	57.2
46.75	38.18	0:49: 6. !	59.9	148.7	-23.2	58.6
46.56	39.57	0:49:18. !	60.5	151.1	-22.4	59.9
46.37	40.95	0:49:29. !	61.1	153.5	-21.6	61.2
46.17	42.31	0:49:41. !	61.7	156.0	-20.9	62.5
45.96	43.65	0:49:53. !	62.3	158.5	-20.1	63.7
45.74	44.98	0:50: 5. !	62.8	161.1	-19.3	64.9
45.51	46.29	0:50:17. !	63.3	163.7	-18.6	66.1
45.28	47.59	0:50:29. !	63.8	166.4	-17.8	67.3
45.04	48.87	0:50:41. !	64.3	169.1	-17.0	68.4
44.78	50.14	0:50:53. !	64.7	171.9	-16.2	69.5
44.53	51.40	0:51: 4. !	65.0	174.7	-15.4	70.6
44.26	52.65	0:51:16. !	65.3	177.6	-14.7	71.6
43.99	53.88	0:51:28. !	65.6	180.5	-13.9	72.7
43.71	55.10	0:51:40. !	65.9	183.4	-13.1	73.7
43.42	56.31	0:51:52. !	66.1	186.4	-12.3	74.7
43.13	57.51	0:52: 4. !	66.3	189.4	-11.5	75.6
42.83	58.70	0:52:16. !	66.4	192.4	-10.7	76.6
42.52	59.88	0:52:28. !	66.5	195.4	-9.8	77.5
42.21	61.05	0:52:39. !	66.5	198.4	-9.0	78.4
41.89	62.21	0:52:51. !	66.5	201.4	-8.2	79.3
41.57	63.36	0:53: 3. !	66.4	204.4	-7.4	80.1
41.24	64.50	0:53:15. !	66.4	207.3	-6.6	81.0
40.90	65.64	0:53:27. !	66.2	210.3	-5.7	81.8
40.56	66.76	0:53:39. !	66.0	213.1	-4.9	82.6
40.21	67.88	0:53:51. !	65.8	216.0	-4.1	83.4
39.85	69.00	0:54: 3. !	65.6	218.8	-3.2	84.2
39.49	70.10	0:54:14. !	65.3	221.5	-2.4	85.0

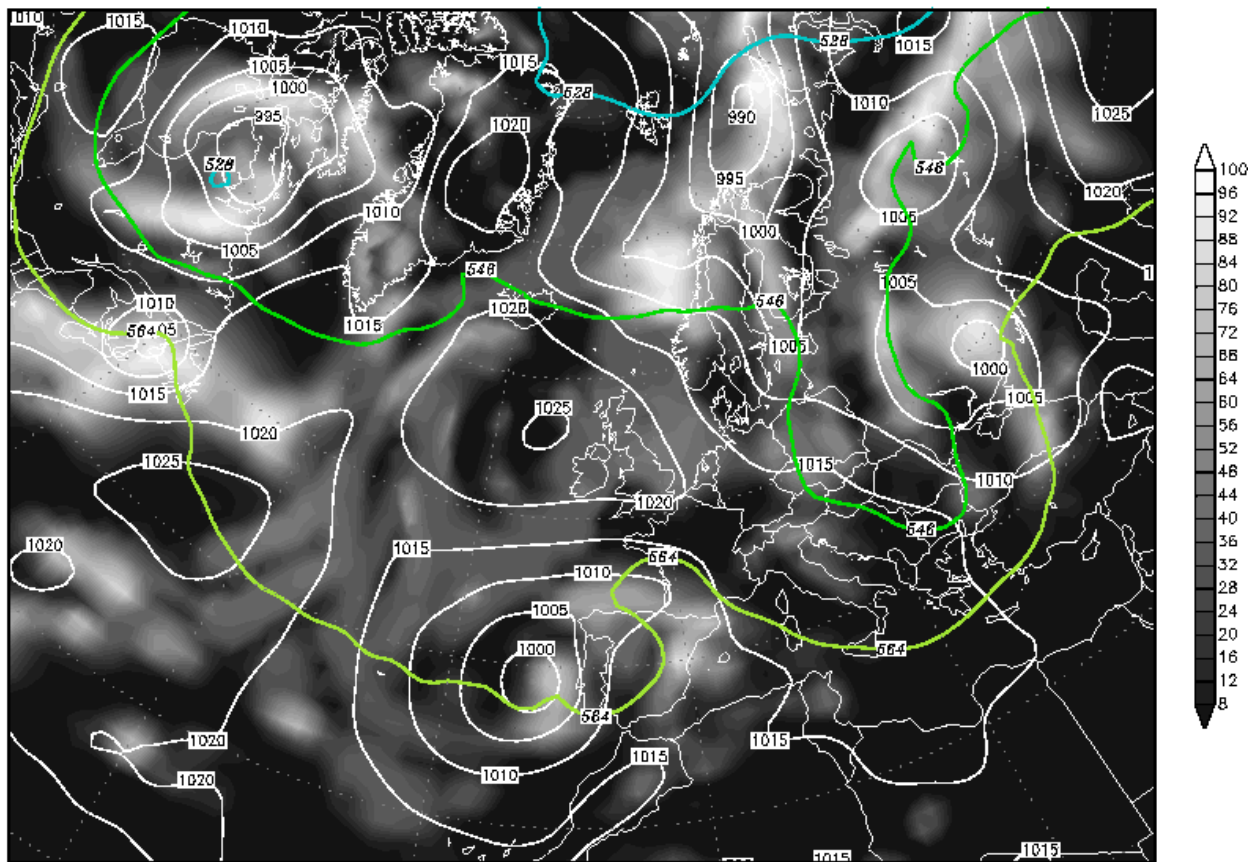
Calculator(s): Martin Federspiel



Init : Mon,16SEP2002 00Z

Valid: Tue,17SEP2002 00Z

Bodendruck, Wolken in %, ReTop 500/1000 (gpdam)



Daten: 00z-Lauf des MRF/AVN-Modells des amerikanischen Wetterdienstes
Wetterzentrale Karlsruhe
Top Karten : <http://www.wetterzentrale.de/topkarten/>

[Zurück zur Hauptseite Sternfreunde Breisgau](#)

Martin Federspiel martin@astro.unibas.ch