

* NOVA *

N. 598 - 4 MARZO 2014

ASSOCIAZIONE ASTROFILI SEGUSINI

PASSAGGIO ASTEROIDE 2014 DX 110

Scoperto all'osservatorio Pan-STARRS il 28 febbraio u.s., l'asteroide 2014 DX 110 passerà domani a 0.9 volte la distanza media tra la Terra e la Luna (circa 346.000 km) alle ore 22 CET.

2014 DX 110, stimato di appena 31 m, raggiungerà una luminosità di 15.6 magn. visibile con telescopi di 300 mm ma fotografabile con strumenti di almeno 150 mm: dalla Valsusa l'asteroide sarà visibile verso Nord ad una altezza di 48 gradi sull'orizzonte nel momento del massimo avvicinamento.

E' previsto che la Luna crescente disturberà poco le osservazioni.

Pubblichiamo le effemeridi calcolate dal JPL per la posizione del Grange Obs. di Bussoleno, calcolate per ogni ora UT (CET-1h) fino al 6 c.m., quando 2014 DX 110 diventerà sempre più debole in luminosità.

Date (UT) HR:MN	R.A. (ICRF/J2000.0) DEC	Azi. (a-appr) Elev	APmag	delta	deldot	S-O-T /r
2014-Mar-04 20:00	m 09 23 11.99 +13 36 58.1	129.9123 48.7329	16.67	0.00921047618317	-14.4901542	154.8870 /T
2014-Mar-04 21:00	m 09 22 27.61 +14 10 59.8	151.1078 56.1002	16.60	0.00886312168010	-14.3736801	154.5248 /T
2014-Mar-04 22:00	09 21 38.43 +14 47 35.0	178.3038 59.5770	16.52	0.00851870829096	-14.2465935	154.1235 /T
2014-Mar-04 23:00	09 20 44.77 +15 27 00.2	206.7509 57.8704	16.45	0.00817742790236	-14.1141925	153.6816 /T
2014-Mar-05 00:00	09 19 47.03 +16 09 35.5	230.1854 51.7624	16.37	0.00783934539227	-13.9816534	153.1974 /T
2014-Mar-05 01:00	09 18 45.61 +16 55 45.2	247.8358 43.1062	16.29	0.00750440740131	-13.8535447	152.6683 /T
2014-Mar-05 02:00	09 17 40.85 +17 45 58.9	261.7135 33.2881	16.21	0.00717246274124	-13.7333508	152.0905 /T
2014-Mar-05 03:00	09 16 32.95 +18 40 53.0	273.6139 23.1226	16.12	0.00684329385695	-13.6230343	151.4582 /T
2014-Mar-05 04:00	09 15 21.86 +19 41 11.6	284.7316 13.1422	16.04	0.00651665813413	-13.5226582	150.7632 /T
2014-Mar-05 05:00	N 09 14 07.17 +20 47 49.2	295.8772 3.7906	15.95	0.00619233743939	-13.4300804	149.9937 /T
2014-Mar-05 06:00	C 09 12 47.97 +22 01 51.9	307.6339 -4.4730	15.86	0.00587019413709	-13.3407197	149.1337 /T
2014-Mar-05 07:00	* 09 11 22.71 +23 24 41.0	320.3803 -11.1253	15.76	0.00555023205300	-13.2473748	148.1619 /T
2014-Mar-05 08:00	* 09 09 49.00 +24 57 55.9	334.1960 -15.5932	15.67	0.00523266144040	-13.1400656	147.0502 /T
2014-Mar-05 09:00	*m 09 08 03.34 +26 43 38.1	348.7249 -17.3554	15.57	0.00491796798507	-13.0058473	145.7627 /T
2014-Mar-05 10:00	*m 09 06 00.74 +28 44 16.4	3.1917 -16.1116	15.47	0.00460698721118	-12.8285364	144.2540 /T
2014-Mar-05 11:00	*m 09 03 34.14 +31 02 52.0	16.6973 -11.9041	15.37	0.00430098720642	-12.5882828	142.4672 /T
2014-Mar-05 12:00	*m 09 00 33.45 +33 43 03.9	28.5876 -5.0732	15.27	0.00400176480815	-12.2609344	140.3322 /T
2014-Mar-05 13:00	*m 08 56 43.90 +36 49 12.3	38.5636 3.9032	15.18	0.00371175519080	-11.8172053	137.7641 /T
2014-Mar-05 14:00	*m 08 51 43.16 +40 26 16.2	46.5144 14.5458	15.09	0.00343417333123	-11.2218197	134.6629 /T
2014-Mar-05 15:00	*m 08 44 55.64 +44 39 35.7	52.2299 26.4096	15.03	0.00317315685981	-10.4331801	130.9157 /T
2014-Mar-05 16:00	*m 08 35 20.95 +49 34 03.9	54.9926 39.0048	14.98	0.00293390974242	-9.4048306	126.4047 /T
2014-Mar-05 17:00	*m 08 21 07.97 +55 12 12.2	52.7285 51.5260	14.98	0.00272276243605	-8.0910556	121.0257 /T
2014-Mar-05 18:00	Nm 07 58 30.91 +61 30 04.5	40.2693 62.0211	15.02	0.00254701679311	-6.4597251	114.7217 /T
2014-Mar-05 19:00	Am 07 18 58.04 +68 08 03.9	13.2087 65.8280	15.13	0.00241437632435	-4.5137008	107.5301 /T
2014-Mar-05 20:00	m 06 02 26.81 +74 06 48.1	349.5309 59.7380	15.32	0.00233181002228	-2.3144490	99.6285 /T
2014-Mar-05 21:00	m 03 44 44.74 +76 57 21.8	341.5718 48.3758	15.61	0.00230399377019	0.0101941	91.3450 /T
2014-Mar-05 22:00	m 01 25 04.72 +74 24 05.0	343.1593 36.2302	15.99	0.00233195643837	2.2924775	83.1000 /T
2014-Mar-05 23:00	00 06 18.72 +68 39 38.1	349.8529 25.5168	16.45	0.00241274066869	4.3784082	75.2977 /T
2014-Mar-06 00:00	23 25 19.12 +62 15 30.1	359.6635 17.4810	16.97	0.00254033735194	6.1733363	68.2268 /T
2014-Mar-06 01:00	23 01 31.45 +56 10 38.9	11.4024 12.8233	17.53	0.00270731425389	7.6522477	62.0252 /L
2014-Mar-06 02:00	22 46 09.53 +50 43 25.3	24.0744 11.7577	18.00	0.00290629875852	8.8406141	56.7048 /L
2014-Mar-06 03:00	22 35 23.34 +45 56 59.9	36.8523 14.0511	19.00	0.00313086793148	9.7877697	52.2000 /L
2014-Mar-06 04:00	22 27 21.48 +41 48 41.5	49.2442 19.1600	19.00	0.00337586550786	10.5471813	48.4109 /L
2014-Mar-06 05:00	N 22 21 04.85 +38 13 50.9	61.1886 26.4175	20.00	0.00363736090378	11.1661934	45.2310 /L
2014-Mar-06 06:00	C 22 15 59.86 +35 07 32.7	73.0513 35.1687	20.00	0.00391244880868	11.6824395	42.5607 /L
2014-Mar-06 07:00	* 22 11 46.34 +32 25 16.9	85.6822 44.8003	21.00	0.00419900954620	12.1237198	40.3135 /L
2014-Mar-06 08:00	* 22 08 11.74 +30 03 11.7	100.7725 54.6454	21.00	0.00449548645507	12.5092934	38.4157 /L
2014-Mar-06 09:00	*m 22 05 07.95 +27 58 04.4	121.8554 63.6553	21.00	0.00480070034858	12.8515584	36.8064 /L
2014-Mar-06 10:00	*m 22 02 29.54 +26 07 17.1	154.6979 69.5473	22.00	0.00511370449667	13.1576983	35.4350 /L
2014-Mar-06 11:00	*m 22 00 12.78 +24 28 41.4	195.3440 68.8333	22.00	0.00543367722329	13.4311510	34.2596 /L
2014-Mar-06 12:00	*m 21 58 14.89 +23 00 32.5	225.6899 61.8056	22.00	0.00575984735235	13.6728689	33.2458 /L
2014-Mar-06 13:00	*m 21 56 33.74 +21 41 24.7	244.7143 51.7940	23.00	0.00609144750967	13.8823756	32.3655 /L
2014-Mar-06 14:00	*m 21 55 07.50 +20 30 07.5	258.0591 40.6757	23.00	0.00642769051696	14.0586304	31.5953 /L
2014-Mar-06 15:00	*m 21 53 54.54 +19 25 41.9	268.8543 29.2196	23.00	0.00676776439086	14.2007119	30.9167 /L
2014-Mar-06 16:00	*m 21 52 53.32 +18 27 18.6	278.6309 17.8167	23.00	0.00711084170189	14.3083293	30.3146 /L
2014-Mar-06 17:00	*m 21 52 02.32 +17 34 15.3	288.2751 6.7520	23.00	0.00745609926741	14.3821721	29.7769 /L
2014-Mar-06 18:00	Nm 21 51 20.03 +16 45 55.9	298.4322 -3.6859	24.00	0.00780274440852	14.4241072	29.2945 /L
2014-Mar-06 19:00	Am 21 50 44.98 +16 01 48.9	309.6635 -13.1415	24.00	0.00815004426138	14.4372386	28.8601 /L
2014-Mar-06 20:00	m 21 50 15.73 +15 21 26.5	322.4636 -21.1451	24.00	0.00849735499470	14.4258426	28.4683 /L

Column meaning:

TIME

Prior to 1962, times are UT1. Dates thereafter are UTC. Any 'b' symbol in the 1st-column denotes a B.C. date. First-column blank (" ") denotes an A.D. date. Calendar dates prior to 1582-Oct-15 are in the Julian calendar system. Later calendar dates are in the Gregorian system.

Time tags refer to the same instant throughout the universe, regardless of where the observer is located.

The dynamical Coordinate Time scale is used internally. It is equivalent to the current IAU definition of "TDB". Conversion between CT and the selected non-uniform UT output scale has not been determined for UTC times after the next July or January 1st. The last known leap-second is used over any future interval.

NOTE: "n.a." in output means quantity "not available" at the print-time.

SOLAR PRESENCE (OBSERVING SITE)

Time tag is followed by a blank, then a solar-presence symbol:

'*' Daylight (refracted solar upper-limb on or above apparent horizon)
'C' Civil twilight/dawn
'N' Nautical twilight/dawn
'A' Astronomical twilight/dawn
' ' Night OR geocentric ephemeris

LUNAR PRESENCE (OBSERVING SITE)

The solar-presence symbol is immediately followed by a lunar-presence symbol:

'm' Refracted upper-limb of Moon on or above apparent horizon
' ' Refracted upper-limb of Moon below apparent horizon OR geocentric ephemeris

R.A._(ICRF/J2000.0)_DEC =

J2000.0 astrometric right ascension and declination of target center. Adjusted for light-time. Units: HMS (HH MM SS.ff) and DMS (DD MM SS.f)

Azi_(a-appr)_Elev =

Airless apparent azimuth and elevation of target center. Adjusted for light-time, the gravitational deflection of light, stellar aberration, precession and nutation. Azimuth measured North(0) -> East(90) -> South(180) -> West(270) -> North (360). Elevation is with respect to plane perpendicular to local zenith direction. TOPOCENTRIC ONLY. Units: DEGREES

APmag =

Asteroid's approximate apparent visual magnitude from the standard IAU H-G magnitude relationship:
 $APmag = H + 5 \cdot \log_{10}(\Delta) + 5 \cdot \log_{10}(r) - 2.5 \cdot \log_{10}((1-G) \cdot \phi_1 + G \cdot \phi_2)$.
For solar phase angles > 90 deg, the error could exceed 1 magnitude. For phase angles > 120 degrees, output values are rounded to the nearest integer to indicate error could be large and unknown.
Units: MAGNITUDE

delta deldot =

Range ("delta") and range-rate ("delta-dot") of target center with respect to the observer at the instant light seen by the observer at print-time would have left the target center (print-time minus down-leg light-time); the distance traveled by a light ray emanating from the center of the target and recorded by the observer at print-time. "deldot" is a projection of the velocity vector along this ray, the light-time-corrected line-of-sight from the coordinate center, and indicates relative motion. A positive "deldot" means the target center is moving away from the observer (coordinate center). A negative "deldot" means the target center is moving toward the observer.
Units: AU and KM/S

S-O-T /r =

Sun-Observer-Target angle; target's apparent solar elongation seen from observer location at print-time. If negative, the target center is behind the Sun. Angular units: DEGREES.

The '/r' column is a Sun-relative code, output for observing sites with defined rotation models only.

/T indicates target trails Sun (evening sky)
/L indicates target leads Sun (morning sky)

NOTE: The S-O-T solar elongation angle is the total separation in any direction. It does not indicate the angle of Sun leading or trailing.

