* NOVA *

N. 765 - 22 GENNAIO 2015

ASSOCIAZIONE ASTROFILI SEGUSINI

ASTEROIDE 2004 BL86

Lunedì 26 gennaio l'asteroide 2004 BL86 transiterà a una distanza di circa 1.2 milioni di kilometri dalla Terra, circa tre volte la distanza Terra-Luna. Secondo gli scienziati della NASA sarà il suo massimo avvicinamento alla Terra nei prossimi 200 anni, quindi senza rischi per noi, anche se si tratta di una roccia di circa 680 m di diametro, scoperta il 30 gennaio 2004 con un telescopio del Lincoln Near-Earth Asteroid Research (LINEAR) in New Mexico.

«Pur non costituendo una minaccia alla Terra nel prossimo futuro», dice Don Yeomans del Near Earth Object Program Office presso il Jet Propulsion Laboratory (JPL),«si tratta comunque di un passaggio relativamente ravvicinato ed è un'occasione unica per osservarlo e conoscere qualcosa di più».

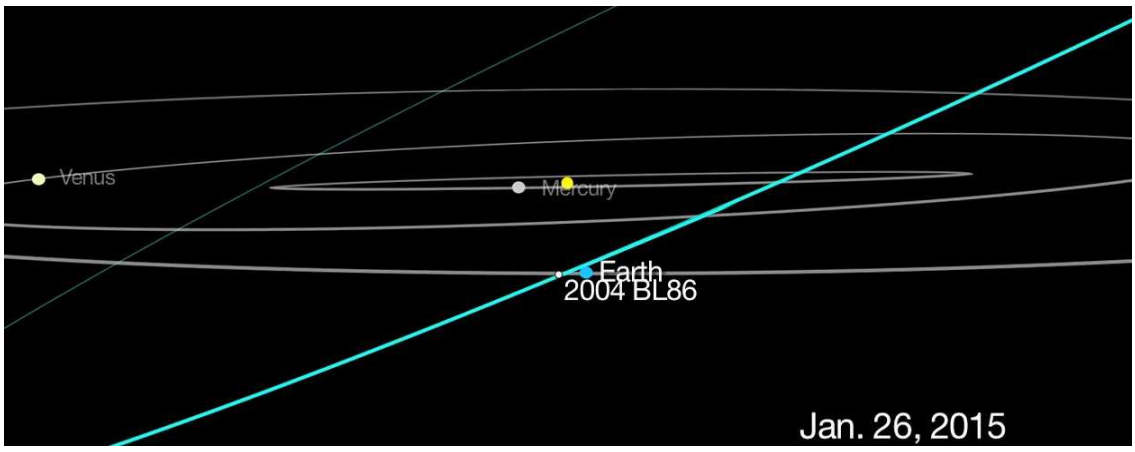
L'asteroide verrà osservato durante il flyby utilizzando, come radar, le antenne di Goldstone, in California, e dell'Osservatorio di Arecibo, a Puerto Rico. Un fascio di segnali a microonde verrà indirizzato verso l'asteroide, per rimbalzare contro il bersaglio e tornare sulla Terra. Con questa metodica sono stati già studiati oltre 200 asteroidi, identificandone forma, rotazione e anche la densità interna. Nessuno è risultato essere uguale ad un altro.

Nel suo massimo avvicinamento potrà essere osservato dall'emisfero settentrionale con piccoli telescopi o potenti binocoli, anche se la Luna disturberà le osservazioni.

«Afferrerò il mio binocolo per dare io stesso un'occhiata», dice Yeomans. «Gli asteroidi sono qualcosa di speciale. Non solo hanno portato sulla Terra i mattoni della vita e gran parte dell'acqua, ma in futuro potranno diventare preziosi per minerali e altre risorse naturali vitali. Diventeranno anche "stazioni di rifornimento" per l'umanità nei prossimi viaggi nel sistema solare. C'è qualcosa in loro che mi fa venir voglia di guardarli».

Ma se si preferisce non affrontare il freddo si può osservare online tramite il Progetto di Telescopio Virtuale:

http://www.virtualtelescope.eu/2014/12/06/potentially-hazardous-asteroid-357439-2004-bl86-close-encounter-online-event-26-jan-2015/



http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=2004_BL86&orb=1

http://www.jpl.nasa.gov/news/news.php?feature=4441

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*******************************************************************************
Ephemeris / WWW_USER Sat Jan 17 06:28:05 2015 Pasadena, USA      / Horizons
*******************************************************************************
Target body name: 357439 (2004 BL86)                {source: JPL#41}
Center body name: Earth (399)                       {source: DE-0431LE-0431}
Center-site name: Grange Observatory, Bussoleno
*******************************************************************************
Start time      : A.D. 2015-Jan-26 20:00:00.0000 UT
Stop  time      : A.D. 2015-Feb-28 20:00:00.0000 UT
Step-size       : 1440 minutes
*******************************************************************************

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 Date__(UT)__HR:MN     R.A._(ICRF/J2000.0)_DEC Azi_(a-appr)_Elev  APmag            delta      deldot    S-O-T /r
*******************************************************************************************************************
 2015-Jan-26 20:00  m  08 19 26.05 -01 23 42.8 119.8520  24.5196   9.54 0.00811986680184   2.3654009 159.5598 /T
 2015-Jan-27 20:00  m  09 14 04.18 +39 32 36.6  72.8314  43.0069  10.65 0.01313078278991  12.1913853 157.5700 /L
 2015-Jan-28 20:00  m  09 49 18.85 +53 30 20.2  52.2254  43.9771  12.11 0.02104072406431  14.3069026 142.4120 /L
 2015-Jan-29 20:00  m  10 12 50.57 +59 19 10.5  43.4005  43.3683  13.04 0.02961251611751  14.9271582 135.7665 /L
 2015-Jan-30 20:00  m  10 29 16.57 +62 20 23.9  38.8184  42.8748  13.70 0.03840639495910  15.1815852 132.1427 /L
 2015-Jan-31 20:00  m  10 41 13.33 +64 08 28.5  36.1079  42.5797  14.22 0.04729906731791  15.3094380 129.8827 /L
 2015-Feb-01 20:00  m  10 50 11.31 +65 18 54.8  34.3695  42.4353  14.63 0.05624382130473  15.3824571 128.3449 /L
 2015-Feb-02 20:00  m  10 57 05.18 +66 07 38.4  33.1972  42.3984  14.99 0.06521919657676  15.4278925 127.2329 /L
 2015-Feb-03 20:00  m  11 02 29.51 +66 42 45.1  32.3829  42.4394  15.29 0.07421397189151  15.4579370 126.3919 /L
 2015-Feb-04 20:00  m  11 06 47.07 +67 08 45.4  31.8094  42.5387  15.56 0.08322172839759  15.4787455 125.7332 /L
 2015-Feb-05 20:00  m  11 10 13.44 +67 28 20.9  31.4061  42.6829  15.79 0.09223856001600  15.4937303 125.2026 /L
 2015-Feb-06 20:00  m  11 12 59.62 +67 43 13.6  31.1276  42.8628  16.01 0.10126199458504  15.5049333 124.7651 /L
 2015-Feb-07 20:00     11 15 13.59 +67 54 30.6  30.9437  43.0717  16.20 0.11029043912489  15.5136567 124.3969 /L
 2015-Feb-08 20:00     11 17 01.31 +68 02 58.0  30.8335  43.3049  16.38 0.11932287386026  15.5207789 124.0817 /L
 2015-Feb-09 20:00     11 18 27.34 +68 09 08.0  30.7820  43.5588  16.55 0.12835867341465  15.5269214 123.8074 /L
 2015-Feb-10 20:00     11 19 35.22 +68 13 24.0  30.7782  43.8307  16.70 0.13739749707937  15.5325437 123.5654 /L
 2015-Feb-11 20:00     11 20 27.78 +68 16 03.2  30.8139  44.1184  16.85 0.14643921838240  15.5379984 123.3490 /L
 2015-Feb-12 20:00     11 21 07.29 +68 17 18.5  30.8828  44.4203  16.98 0.15548387756930  15.5435629 123.1531 /L
 2015-Feb-13 20:00     11 21 35.65 +68 17 19.7  30.9801  44.7350  17.11 0.16453164719235  15.5494579 122.9738 /L
 2015-Feb-14 20:00     11 21 54.44 +68 16 14.6  31.1019  45.0614  17.23 0.17358280436627  15.5558559 122.8079 /L
 2015-Feb-15 20:00     11 22 05.01 +68 14 08.9  31.2451  45.3986  17.35 0.18263770520507  15.5628823 122.6528 /L
 2015-Feb-16 20:00     11 22 08.54 +68 11 07.6  31.4073  45.7457  17.46 0.19169675865043  15.5706143 122.5065 /L
 2015-Feb-17 20:00     11 22 06.05 +68 07 14.4  31.5865  46.1022  17.57 0.20076039911320  15.5790799 122.3674 /L
 2015-Feb-18 20:00     11 21 58.47 +68 02 32.5  31.7809  46.4673  17.67 0.20982906020825  15.5882639 122.2339 /L
 2015-Feb-19 20:00     11 21 46.62 +67 57 04.7  31.9891  46.8405  17.76 0.21890315438546  15.5981235 122.1049 /L
 2015-Feb-20 20:00     11 21 31.23 +67 50 53.4  32.2099  47.2214  17.86 0.22798306359038  15.6086106 121.9793 /L
 2015-Feb-21 20:00  m  11 21 12.96 +67 44 00.9  32.4421  47.6095  17.95 0.23706914314044  15.6196936 121.8561 /L
 2015-Feb-22 20:00  m  11 20 52.38 +67 36 29.1  32.6849  48.0044  18.03 0.24616173619989  15.6313718 121.7346 /L
 2015-Feb-23 20:00  m  11 20 29.99 +67 28 20.0  32.9373  48.4060  18.12 0.25526119279612  15.6436771 121.6140 /L
 2015-Feb-24 20:00  m  11 20 06.22 +67 19 35.1  33.1986  48.8138  18.20 0.26436788727104  15.6566675 121.4938 /L
 2015-Feb-25 20:00  m  11 19 41.45 +67 10 16.1  33.4681  49.2278  18.28 0.27348223062163  15.6704168 121.3733 /L
 2015-Feb-26 20:00  m  11 19 16.03 +67 00 24.4  33.7451  49.6477  18.35 0.28260467713767  15.6850059 121.2522 /L
 2015-Feb-27 20:00  m  11 18 50.23 +66 50 01.2  34.0293  50.0735  18.43 0.29173572657919  15.7005163 121.1299 /L
 2015-Feb-28 20:00  m  11 18 24.32 +66 39 07.8  34.3200  50.5049  18.50 0.30087592365746  15.7170269 121.0061 /L
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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*log10(delta) + 5*log10(r) - 2.5*log10((1-G)*phi1 + G*phi2).
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.

 Computations by ...
     Solar System Dynamics Group, Horizons On-Line Ephemeris System
     4800 Oak Grove Drive, Jet Propulsion Laboratory
     Pasadena, CA  91109   USA
     Information: http://ssd.jpl.nasa.gov/
     Connect    : telnet://ssd.jpl.nasa.gov:6775  (via browser)
                  telnet ssd.jpl.nasa.gov 6775    (via command-line)
     Author     : Jon.Giorgini@jpl.nasa.gov

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