* NOVA *

N. 2640 - 8 OTTOBRE 2024

ASSOCIAZIONE ASTROFILI SEGUSINI

COMETA C/2024 S1 (ATLAS)

Scoperta il 27 settembre 2024, quando era di 15.3 magnitudini, dall'Asteroid Terrestrial-Impact Last Alert System (ATLAS), la cometa C/2024 S1 è stata attribuita – in base alle caratteristiche dell'orbita – alla famiglia delle comete Kreutz sungrazers (verosimilmente frammenti di un'unica grande cometa di molti secoli fa). Passerà al perielio il 28 ottobre a poco più di un milione di chilometri dal Sole: questo potrebbe distruggerla. Attualmente è visibile al mattino alle ore 6 CEST. Le effemeridi mostrano che dai primi giorni di novembre potremo osservarla sopra l'orizzonte se supererà il perielio. Oggi la cometa è di 15ª magnitudine e la sua altezza sull'orizzonte è di soli 7 gradi, mentre quando sarà di maggior magnitudine, il 28 ottobre, sarà a –23 gradi alle 5 CET quando già avremo cambiato l'ora. Il Minor Planet Center (MPC) prevede sia di 5ª magnitudine al massimo: non sarà possibile osservarla a giorno fatto.

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Ephemeris / WWW_USER Sun Oct  6 08:55:49 2024 Pasadena, USA      / Horizons
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Target body name: ATLAS (C/2024 S1)               {source: JPL#2}
Center body name: Earth (399)                     {source: DE441}
Center-site name: Grange Observatory, Bussoleno
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Start time      : A.D. 2024-Oct-07 04:00:00.0000 UT
Stop  time      : A.D. 2024-Nov-10 04:00:00.0000 UT
Step-size       : 1440 minutes
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*******************************************************************************************************
 Date__(UT)__HR:MN     R.A._____(ICRF)_____DEC  Azi____(a-app)___Elev    T-mag   N-mag      S-O-T /r
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 2024-Oct-07 04:00 A   09 53 58.73 -14 51 24.0  118.048893   5.802618   14.851    n.a.    44.6226 /L
 2024-Oct-08 04:00     10 00 31.60 -15 13 38.5  117.808162   5.111812   14.697    n.a.    43.8749 /L
 2024-Oct-09 04:00     10 07 26.28 -15 36 03.9  117.506075   4.361701   14.537    n.a.    43.0433 /L
 2024-Oct-10 04:00     10 14 44.49 -15 58 33.1  117.137412   3.548927   14.372    n.a.    42.1216 /L
 2024-Oct-11 04:00     10 22 28.00 -16 20 57.2  116.696494   2.670093   14.201    n.a.    41.1035 /L
 2024-Oct-12 04:00     10 30 38.70 -16 43 05.1  116.177150   1.721824   14.022    n.a.    39.9821 /L
 2024-Oct-13 04:00     10 39 18.54 -17 04 43.1  115.572676   0.700865   13.836    n.a.    38.7504 /L
 2024-Oct-14 04:00     10 48 29.52 -17 25 34.6  114.875796  -0.395809   13.642    n.a.    37.4012 /L
 2024-Oct-15 04:00     10 58 13.61 -17 45 19.6  114.078616  -1.570830   13.438    n.a.    35.9271 /L
 2024-Oct-16 04:00  m  11 08 32.75 -18 03 33.9  113.172576  -2.826257   13.224    n.a.    34.3208 /L
 2024-Oct-17 04:00  m  11 19 28.77 -18 19 49.0  112.148387  -4.163334   12.997    n.a.    32.5752 /L
 2024-Oct-18 04:00  m  11 31 03.30 -18 33 31.5  110.995945  -5.582219   12.756    n.a.    30.6835 /L
 2024-Oct-19 04:00  m  11 43 17.69 -18 44 02.7  109.704207  -7.081681   12.498    n.a.    28.6392 /L
 2024-Oct-20 04:00  m  11 56 12.97 -18 50 37.9  108.260971  -8.658767   12.218    n.a.    26.4365 /L
 2024-Oct-21 04:00  m  12 09 49.75 -18 52 26.2  106.652517 -10.308482   11.912    n.a.    24.0699 /L
 2024-Oct-22 04:00  m  12 24 08.29 -18 48 29.1  104.862913 -12.023510   11.570    n.a.    21.5339 /L
 2024-Oct-23 04:00  m  12 39 08.61 -18 37 39.1  102.872692 -13.794017   11.179    n.a.    18.8222 /L
 2024-Oct-24 04:00  m  12 54 50.95 -18 18 34.3  100.656118 -15.607627   10.717    n.a.    15.9251 /L
 2024-Oct-25 04:00  m  13 11 16.79 -17 49 26.6   98.175088 -17.449613   10.141    n.a.    12.8249 /L
 2024-Oct-26 04:00  m  13 28 31.38 -17 07 27.4   95.363539 -19.303261    9.363    n.a.     9.4829 /L
 2024-Oct-27 04:00  m  13 46 51.62 -16 06 47.7   92.076321 -21.148732       8.    n.a.     5.8013 /L
 2024-Oct-28 04:00  m  14 07 23.95 -14 24 42.6   87.785615 -22.911051       5.    n.a.     1.4616 /L
 2024-Oct-29 04:00  m  13 56 59.86 -13 28 23.9   89.621945 -19.738277    6.796    n.a.     4.2069 /L
 2024-Oct-30 04:00  m  13 44 01.20 -14 28 39.3   93.368107 -17.447864    8.898    n.a.     8.3088 /L
 2024-Oct-31 04:00     13 34 22.00 -15 24 30.1   96.425625 -15.699162    9.954    n.a.    11.6029 /L
 2024-Nov-01 04:00     13 26 16.91 -16 17 17.5   99.144022 -14.203259   10.662    n.a.    14.5058 /L
 2024-Nov-02 04:00     13 19 09.69 -17 07 53.3  101.649899 -12.866353   11.195    n.a.    17.1630 /L
 2024-Nov-03 04:00     13 12 42.40 -17 56 49.1  104.007625 -11.643785   11.621    n.a.    19.6472 /L
 2024-Nov-04 04:00     13 06 44.47 -18 44 25.8  106.255757 -10.510161   11.977    n.a.    22.0011 /L
 2024-Nov-05 04:00     13 01 09.00 -19 30 58.0  108.419808  -9.449442   12.282    n.a.    24.2528 /L
 2024-Nov-06 04:00     12 55 51.12 -20 16 36.5  110.517835  -8.450772   12.548    n.a.    26.4219 /L
 2024-Nov-07 04:00     12 50 47.23 -21 01 29.3  112.563257  -7.506447   12.785    n.a.    28.5227 /L
 2024-Nov-08 04:00     12 45 54.55 -21 45 42.8  114.566418  -6.610808   12.998    n.a.    30.5663 /L
 2024-Nov-09 04:00     12 41 10.86 -22 29 21.8  116.535521  -5.759596   13.191    n.a.    32.5613 /L
 2024-Nov-10 04:00     12 36 34.34 -23 12 30.4  118.477221  -4.949558   13.367    n.a.    34.5147 /L
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Column meaning:

TIME
  Times PRIOR to 1962 are UT1, a mean-solar time closely related to the prior but now-deprecated GMT. Times AFTER 1962 are in UTC, the current civil or "wall-clock" time-scale. UTC is kept within 0.9 seconds of UT1 using integer leap-seconds for 1972 and later
years. Conversion from the internal Barycentric Dynamical Time (TDB) of solar system dynamics to the non-uniform civil UT time-scale requested for output has not been determined for UTC times after the next July or January 1st. Therefore, the last known leap-second is used as a constant over future intervals. Time tags refer to the UT time-scale conversion from TDB on Earth regardless of observer location within the solar system, although clock rates may differ due to the local gravity field and no analog to "UT" may be defined for that location.
  Any 'b' symbol in the 1st-column denotes a B.C. date. First-column blank(" ") denotes an A.D. date.

CALENDAR SYSTEM
  Mixed calendar mode was active such that calendar dates after AD 1582-Oct-15 (if any) are in the modern Gregorian system. Dates prior to 1582-Oct-5 (if any) are in the Julian calendar system, which is automatically extended for dates prior to its adoption on 45-Jan-1 BC. The Julian calendar is useful for matching historical dates. The Gregorian calendar more accurately corresponds to the Earth's orbital motion and seasons. A "Gregorian-only" calendar mode is available if such physical events are the primary interest.
  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)_____DEC' =
  Astrometric right ascension and declination of the target center with respect to the observing site (coordinate origin) in the reference frame of the planetary ephemeris (ICRF). Compensated for down-leg light-time delay aberration.
  Units: RA in hours-minutes-seconds of time,   HH MM SS.ff{ffff}
         DEC in degrees-minutes-seconds of arc, sDD MN SC.f{ffff}

 'Azi____(a-app)___Elev' =
  Airless apparent azimuth and elevation of target center. Compensated for light-time, the gravitational deflection of light, stellar aberration, precession and nutation. Azimuth is measured clockwise from north: North(0) -> East(90) -> South(180) -> West(270) -> North (360)
Elevation angle is with respect to a plane perpendicular to the reference surface local zenith direction. TOPOCENTRIC ONLY. Units: DEGREES

 'T-mag   N-mag' =
   Comets' apparent visual total magnitude ("T-mag") and nuclear magnitude ("N-mag") using the standard IAU model:
   T-mag= M1 + 5*log10(delta) + k1*log10(r)
   N-mag= M2 + 5*log10(delta) + k2*log10(r) + phcof*beta
   Units: MAGNITUDES

 'S-O-T /r' =
   Sun-Observer-Target apparent SOLAR ELONGATION ANGLE seen from the observers' location at print-time.
   The '/r' column provides a code indicating the targets' apparent position relative to the Sun in the observers' sky, as described below:
   Case A: For an observing location on the surface of a rotating body, thatM body rotational sense is considered:
    /T indicates target TRAILS Sun   (evening sky: rises and sets AFTER Sun)
    /L indicates target LEADS Sun   (morning sky: rises and sets BEFORE Sun)
   Case B: For an observing point that does not have a rotational model (such as a spacecraft), the "leading" and "trailing" condition is defined by the observers' heliocentric ORBITAL motion:
    * If continuing in the observers' current direction of heliocentric motion would encounter the targets' apparent longitude first, followed by the Sun's, the target LEADS the Sun as seen by the observer.
    * If the Sun's apparent longitudini would be encountered first, followed by the targets', the target TRAILS the Sun.
   Two other codes can be output:
    /* indicates observer is Sun-centered   (undefined)
    /? Target is aligned with Sun center   (no lead or trail)
   The S-O-T solar elongation angle is numerically the minimum separation angle of the Sun and target in the sky in any direction. It does NOT indicate the amount of separation in the leading or trailing directions, which would be defined along the equator of a spherical coordinate system.
   Units: DEGREES

Computations by Solar System Dynamics Group, Horizons On-Line Ephemeris System
                4800 Oak Grove Drive, Jet Propulsion Laboratory, Pasadena, CA 91109   USA
                General site: https://ssd.jpl.nasa.gov/   Mailing list: https://ssd.jpl.nasa.gov/email_list.html
                System news : https://ssd.jpl.nasa.gov/horizons/news.html
                User Guide : https://ssd.jpl.nasa.gov/horizons/manual.html
                Connect   : browser   https://ssd.jpl.nasa.gov/horizons/app.html#/x
                              API   https://ssd-api.jpl.nasa.gov/doc/horizons.html
                              command-line   telnet ssd.jpl.nasa.gov 6775
                              e-mail/batch   https://ssd.jpl.nasa.gov/ftp/ssd/hrzn_batch.txt
                              scripts   https://ssd.jpl.nasa.gov/ftp/ssd/SCRIPTS
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V. anche: https://theskylive.com/c2024s1-info - http://www.aerith.net/comet/catalog/2024S1/2024S1.html