

* NOVA *

N. 1593 - 4 SETTEMBRE 2019

ASSOCIAZIONE ASTROFILI SEGUSINI

COMETA C/2018 W2 (AFRICANO)

Scoperta il 27 novembre 2018 da B.M. Africano (Mount Lemmon Survey) quando era di magnitudine 18.2, la cometa C/2018 W2 raggiungerà il perielio il 6 settembre 2019, con un picco intorno alla magnitudine 9. Sarà visibile la sera, con un piccolo telescopio; attraverserà la costellazione di Andromeda, transitando il 19 settembre a circa 1.5° da NGC 404 (*Fantasma di Mirach*), galassia di 10^a magnitudine a soli 7' dalla stella β Andromedae (Mirach). Attraverserà poi la costellazione di Pegaso e passerà alla minima distanza dalla Terra (0.49 UA) il 27 settembre 2019 (v. anche <https://theskylive.com/c2018w2-info>). La cometa ha un'orbita iperbolica e quindi non tornerà nel nostro sistema solare.

Ecco le effemeridi, dal 2 settembre al 2 ottobre c.a. alle ore 5 CEST, calcolate dal JPL per il nostro Grange Observatory.

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*****
Ephemeris / WWW_USER Wed Sep  4 08:16:15 2019 Pasadena, USA      / Horizons
*****
Target body name: Africano (C/2018 W2)           {source: JPL#6}
Center body name: Earth (399)                   {source: DE431}
Center-site name: Grange Observatory, Bussoleno
*****
Start time      : A.D. 2019-Sep-02 03:00:00.0000 UT
Stop time       : A.D. 2019-Oct-02 03:00:00.0000 UT
Step-size       : 1440 minutes
*****
*****
Date__(UT)__HR:MN   R.A._(ICRF/J2000.0)_DEC Azi_(a-appr)_Elev T-mag N-mag S-O-T /r
*****
2019-Sep-02 03:00   03 10 25.81 +54 44 04.7 39.1525 76.4654 11.87 15.20 96.2193 /L
2019-Sep-03 03:00   03 05 09.60 +54 19 57.8 36.5157 77.7301 11.81 15.13 97.8680 /L
2019-Sep-04 03:00   02 59 37.47 +53 53 12.6 33.0305 79.0083 11.75 15.06 99.5792 /L
2019-Sep-05 03:00   02 53 49.12 +53 23 30.3 28.3231 80.2800 11.68 14.99 101.3575 /L
2019-Sep-06 03:00   02 47 44.32 +52 50 30.0 21.8205 81.5081 11.62 14.92 103.2081 /L
2019-Sep-07 03:00   02 41 22.95 +52 13 48.9 12.6908 82.6247 11.56 14.84 105.1366 /L
2019-Sep-08 03:00   02 34 45.01 +51 33 01.6 359.9733 83.5100 11.49 14.76 107.1489 /L
2019-Sep-09 03:00   02 27 50.66 +50 47 40.7 343.3903 83.9826 11.42 14.67 109.2515 /L
2019-Sep-10 03:00   02 20 40.22 +49 57 16.2 324.8385 83.8565 11.36 14.58 111.4511 /L
2019-Sep-11 03:00   02 13 14.19 +49 01 16.2 307.9205 83.0735 11.29 14.49 113.7547 /L
2019-Sep-12 03:00   m 02 05 33.27 +47 59 06.7 294.7937 81.7315 11.22 14.39 116.1698 /L
2019-Sep-13 03:00   m 01 57 38.39 +46 50 12.0 285.3345 79.9701 11.16 14.29 118.7037 /L
2019-Sep-14 03:00   m 01 49 30.68 +45 33 55.6 278.5978 77.8923 11.09 14.19 121.3636 /L
2019-Sep-15 03:00   m 01 41 11.50 +44 09 40.9 273.7261 75.5586 11.03 14.08 124.1563 /L
2019-Sep-16 03:00   m 01 32 42.41 +42 36 52.4 270.1220 73.0017 10.96 13.97 127.0877 /L
2019-Sep-17 03:00   m 01 24 05.18 +40 54 57.2 267.3949 70.2391 10.90 13.86 130.1621 /L
2019-Sep-18 03:00   m 01 15 21.74 +39 03 27.3 265.2902 67.2802 10.84 13.74 133.3816 /L
2019-Sep-19 03:00   m 01 06 34.14 +37 02 01.6 263.6392 64.1311 10.79 13.63 136.7450 /L
2019-Sep-20 03:00   m 00 57 44.54 +34 50 28.8 262.3268 60.7975 10.74 13.51 140.2463 /L
2019-Sep-21 03:00   m 00 48 55.15 +32 28 50.2 261.2729 57.2863 10.69 13.39 143.8731 /L
2019-Sep-22 03:00   m 00 40 08.18 +29 57 22.4 260.4202 53.6074 10.65 13.28 147.6038 /L
2019-Sep-23 03:00   m 00 31 25.79 +27 16 39.8 259.7269 49.7749 10.61 13.17 151.4034 /L
2019-Sep-24 03:00   m 00 22 50.04 +24 27 35.9 259.1615 45.8071 10.59 13.06 155.2168 /L
2019-Sep-25 03:00   m 00 14 22.87 +21 31 23.7 258.7004 41.7273 10.57 12.97 158.9559 /L
2019-Sep-26 03:00   m 00 06 06.05 +18 29 34.0 258.3252 37.5634 10.56 12.89 162.4737 /T
2019-Sep-27 03:00   23 58 01.16 +15 23 52.2 258.0216 33.3468 10.56 12.82 165.5162 /T
2019-Sep-28 03:00   23 50 09.56 +12 16 13.4 257.7782 29.1111 10.57 12.78 167.6605 /T
2019-Sep-29 03:00   23 42 32.40 +09 08 36.5 257.5858 24.8909 10.59 12.78 168.3802 /T
2019-Sep-30 03:00   23 35 10.59 +06 02 57.6 257.4370 20.7196 10.63 12.83 167.4601 /T
2019-Oct-01 03:00   23 28 04.84 +03 01 04.0 257.3256 16.6277 10.67 12.90 165.2675 /T
2019-Oct-02 03:00   23 21 15.64 +00 04 29.4 257.2467 12.6419 10.71 13.00 162.3478 /T
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NEWSLETTER TELEMATICA APERIODICA DELL'A.A.S. PER SOCI E SIMPATIZZANTI - ANNO XIV

La Nova è pubblicazione telematica aperiodica dell'A.A.S. - Associazione Astrofili Segusini di Susa (TO) riservata a Soci e Simpatizzanti.

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www.astrofilisusa.it

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 by introduction of integer leap-seconds for 1972 and later.

Conversion from the internal Barycentric Dynamical Time (TDB) 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 on Earth regardless of where the observer is located in the solar system. For example, if an observation from the surface of another body has an output time-tag of 12:31:00 UT, it refers to a time-scale conversion from TDB to UT valid at the center of the Earth at that instant, not the observer's location elsewhere in the solar system, where clock rates may differ slightly due to the local gravity field and there is no precisely defined or adopted "UT" analog.

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.

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 =

Astrometric right ascension and declination of the TARGET CENTER with respect to the observing site in the coordinates of the ICRF/J2000 inertial reference frame. Compensated for down-leg light-time.

Units: RA in hours-minutes-seconds of time (HH MM SS.ff),

DEC in angular degrees-minutes-seconds (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

T-mag N-mag =

Comet's approximate apparent visual total magnitude ("T-mag") and nuclear magnitude ("N-mag") by following standard IAU definitions:

T-mag = $M1 + 5 \cdot \log_{10}(\Delta) + k1 \cdot \log_{10}(r)$

N-mag = $M2 + 5 \cdot \log_{10}(\Delta) + k2 \cdot \log_{10}(r) + \text{phcof} \cdot \beta$

Units: MAGNITUDES

S-O-T /r =

Sun-Observer-Target angle; target's apparent SOLAR ELONGATION seen from the observer location at print-time. Angular units: DEGREES

The '/r' column indicates the target's apparent position relative to the Sun in the observer's sky, as described below:

For an observing location on the surface of a rotating body (considering its rotational sense):

/T indicates target TRAILS Sun (evening sky; rises and sets AFTER Sun)

/L indicates target LEADS Sun (morning sky; rises and sets BEFORE Sun)

For an observing point NOT on a rotating body (such as a spacecraft), the "leading" and "trailing" condition is defined by the observer's heliocentric orbital motion: if continuing in the observer's current direction of heliocentric motion would encounter the target's apparent longitude first, followed by the Sun's, the target LEADS the Sun as seen by the observer. If the Sun's apparent longitude would be encountered first, followed by the target's, the target TRAILS the Sun.

NOTE: 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 are defined in the equator of a spherical coordinate system.

Computations by Solar System Dynamics Group, Horizons On-Line Ephemeris System

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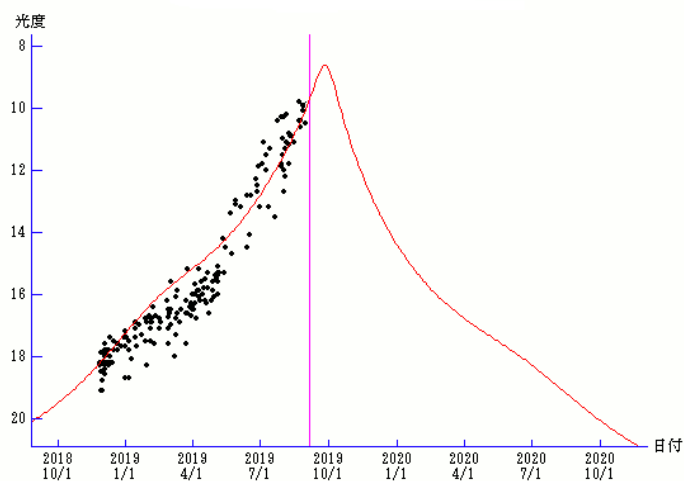
Information: <http://ssd.jpl.nasa.gov/>

Connect : telnet://ssd.jpl.nasa.gov:6775 (via browser)

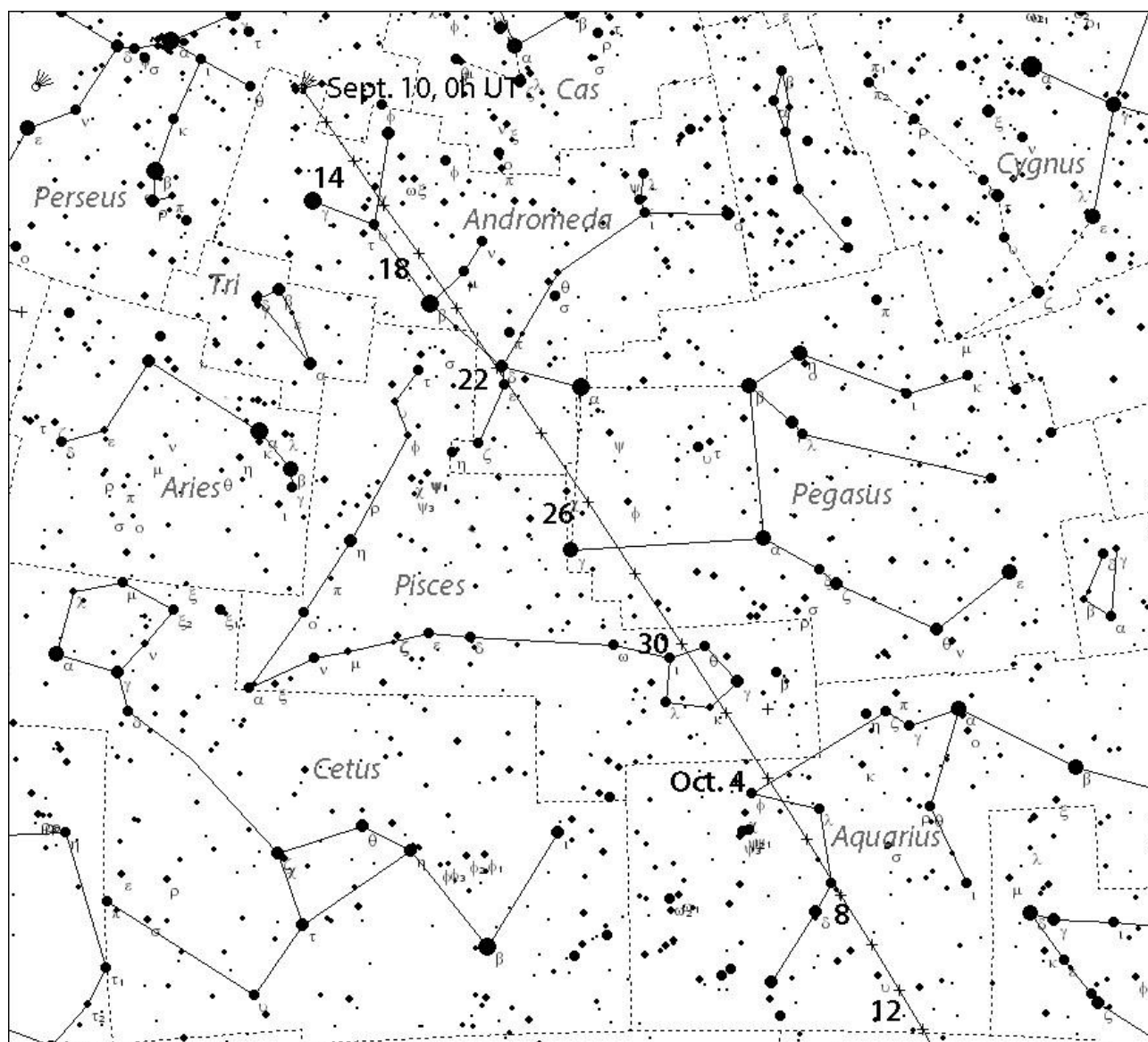
telnet ssd.jpl.nasa.gov 6775 (via command-line)

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Curva di luce della cometa C/2018 W2 (Africano), dal sito di Seiichi Yoshida
<http://www.aerith.net/comet/catalog/2018W2/2018W2.html>



La cometa C/2018 W2 (Africano), ben posizionata per la visione nel cielo serale autunnale. Sono mostrate le stelle fino alla magnitudine 6.5. - Carta tratta da Bob King, "Comets to Catch in 2019", *Sky and Telescope*, January 16, 2019: Chris Marriott's SkyMap with additions by the author, <https://www.skyandtelescope.com/observing/comets-in-2019/>