

CAMS Meteoroid Orbit Database v3.0

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When using this data, please refer to:

P. Jenniskens, J. Baggaley, I. Crumpton, P. Aldous, P. Pokorny, D. Janches, P. S. Gural, D. Samuels, J. Albers, A. Howell, C. Johannink, M. Breukers, M. Odeh, N. Moskovitz, J. Collison, S. Ganju, 2018. A survey of southern hemisphere meteor showers. Planetary Space Science 154, 21–29.

Meaning of columns:

CAMS v1.6 #	- Catalog entry number. The data were calculated with CAMS Coincidence version 1.6.
Daily #	- Reference index for the meteor from a nights collection of trajectories
Date	- Date in [month, day, year]
Time	- Universal Time (UTC) of zero point of trajectory solution [hh:mm:ss.ss]
T Begin	- Time from zero point to begin point (in seconds)
T End	- Time from zero point to end point (in seconds)
R.A. Apparent	- Right Ascension of radiant, as observed with no zenith correction applied, in J2000 (degrees)
Decl. Apparent	- Declination of radiant, as observed (degrees)
V Apparent	- Entry speed after fitting velocity profile, as observed (km/s)
Acc1	- Acceleration parameter a1 (km/s) [see: Jenniskens et al., 2011]
Acc2	- Acceleration parameter a2 (/s) [see: Jenniskens et al., 2011]
Lat. Begin	- Geodetic latitude of the beginning point (+ to North)
Long. Begin	- Geodetic longitude of the beginning point (+ to West)
H Begin	- Altitude of the beginning point above WGS84 Earth geoid (km)
Lat. End	- Geodetic latitude of the end point (+ to N)
Long. End	- Geodetic longitude of the end point (+ to W)
H End	- Altitude of the beginning point above WGS84 Earth geoid (km)
Q	- Highest convergence angle between planes (°)
Az Radiant	- Azimuth of the radiant measured west from south (°)
Z Radiant	- Zenith angular distance of the radiant measured from zenith (°)
H Max.	- Altitude of peak brightness above WGS84 Earth geoid (km)
Max. Mv	- Peak brightness in V-magnitudes (zero = 3.67×10^{-11} W/m ² /nm)
Integr. Mv	- Integrated brightness in magnitude (zero = 3.67×10^{-11} W/m ² /nm)
F-skew	- Skew factor of light curve (0 = peak at beginning, 1 = peak at end point)
Stations	- Contributing cameras numbers
Shower I.D.	- Shower identification number (IAU number)
Component I.D.	- Shower component identification number (IAU number)
Daily #	- Reference index for the meteor from a nights collection of trajectories (repeated)
Date	- Date [month, day, year] (repeated)
Time	- Time of zero point (hh:mm:ss.ss) in UTC (repeated)

R.A. Geo.	- Right Ascension of the geocentric radiant ($^{\circ}$), after correction for Earth's gravitational attraction and Earth's rotation
Decl. Geo.	- Declination of the geocentric radiant ($^{\circ}$)
V Geocentric	- Geocentric speed, after correction for Earth's gravitational attraction and Earth's rotation (km/s)
Lambda Geo.	- Ecliptic longitude of the radiant ($^{\circ}$)
Beta Geo.	- Ecliptic latitude of the radiant ($^{\circ}$)
V Heliocentric	- Heliocentric entry speed, after removal of Earth's velocity around the Sun (km/s)
Lambda Hel.	- Ecliptic longitude of the heliocentric radiant ($^{\circ}$)
Beta Hel.	- Ecliptic latitude of the heliocentric radiant ($^{\circ}$)
Sol. Long. ($^{\circ}$)	- Solar longitude at the time of the entry in J2000 ($^{\circ}$)
q	- Perihelion distance (AU)
1/a	- Inverse semi-major axis (1/AU)
a	- Semi-major axis (AU)
e	- Eccentricity
i	- Inclination ($^{\circ}$)
w	- Argument of perihelion ($^{\circ}$)
Node	- Ascending node of the orbit ($^{\circ}$)
Pi	- Longitude of perihelion ($^{\circ}$)
Stations	- Participating camera numbers (repeated from previous)
Flag Vg=0	- Flag =1 when entry speed less than escape speed of Earth
T_J	- Tisserand parameter with respect to Jupiter
Pairs Flag	- Flag= 1 when meteor already listed from prior fitting of unrelated cameras
Network	- Network number. 1 = CAMS California; 2 = CAMS Florida; 3 = CAMS BeNeLux; 4 = CAMS Mid Atlantic; 5 = CAMS New Zealand; 6 = Lowell Observatory CAMS, Arizona; 7 = UAE Astronomical Camera Network.
Sol. long ($^{\circ}$)	- Solar longitude at the time of the entry ($^{\circ}$)
Ecliptic Long.	- Sun-centered ecliptic longitude ($^{\circ}$) = Longitude - Solar Longitude of the radiant.
Ecliptic Lat.	- Sun-centered ecliptic latitude ($^{\circ}$) = Latitude of the radiant.

Instrumental details can be found in:

P. Jenniskens, P. S. Gural, L. Dynneson, B. J. Grigsby, K. E. Newman, M. Borden, M. Koop, D. Holman. 2011. CAMS: Cameras for Allsky Meteor Surveillance to establish minor meteor showers. Icarus 216, 40–61.

P. S. Gural, 2012. A new method of meteor trajectory determination applied to multiple unsynchronized video cameras. MAPS, 47 1405–1418.

Contact: *P. Jenniskens*

Address: SETI Institute, 189 Bernardo Ave, Mountain View, CA 94043, USA

Email: Petrus.M.Jenniskens@nasa.gov

Tel.: 1-650-8100216