209P/LINEAR

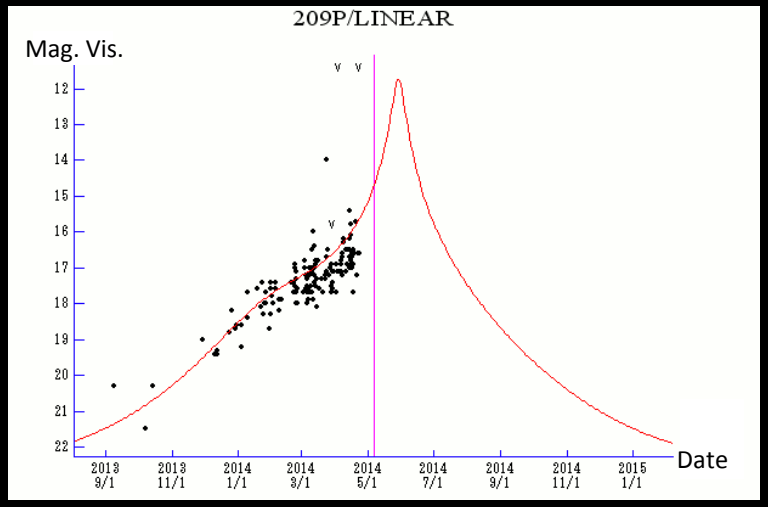
Discovered: 3 Feb 2004

Discoverer: LINEAR 1.0m reflector
(Lincoln Near Earth Asteroid Research)

Official Designation (IAU): P/2004 CB

Orbital Period: 5.09 Sidereal Earth Years

Orbital Eccentricity: 0.6726
Next Perihelion: 6 May 2014 (0.9695 AU or 144.94 million km)
Next Perigee: 29 May 2014 (0.0544 AU or 8.29 million km)
Orbital Inclination: 21° 14’ 36.24”
Aphelion Distance: 4.952 AU or 740.324 million km
<u>During perigee it will only be an 11th magnitude comet!</u>

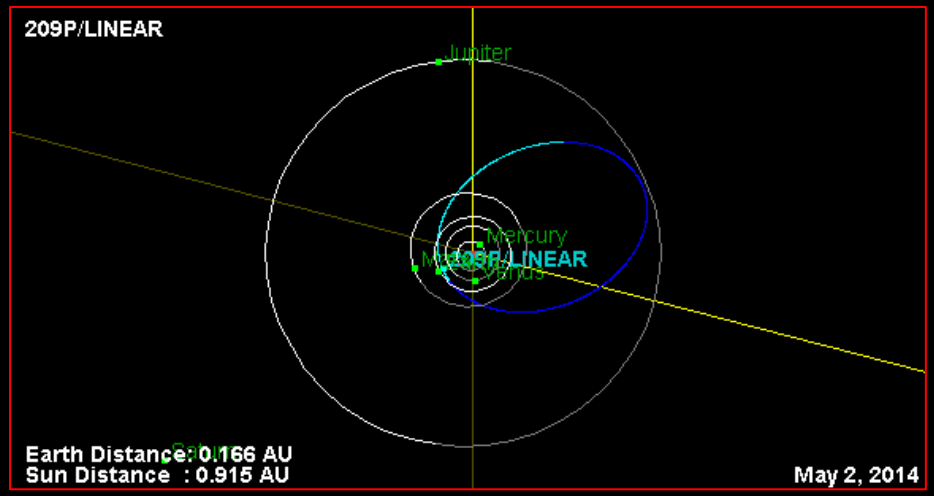


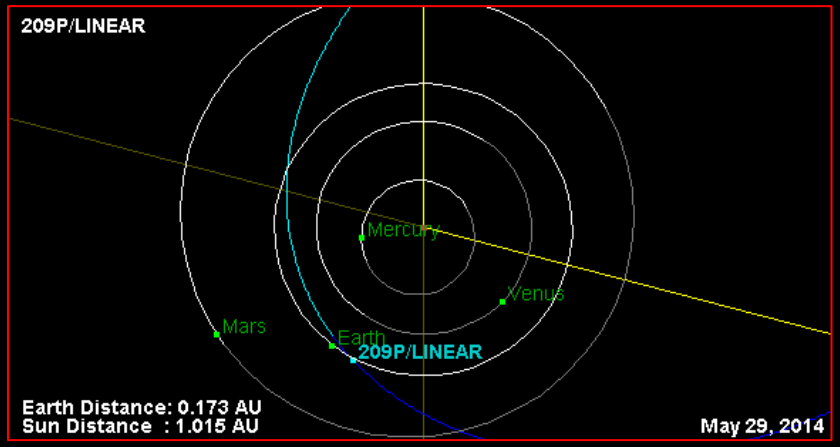


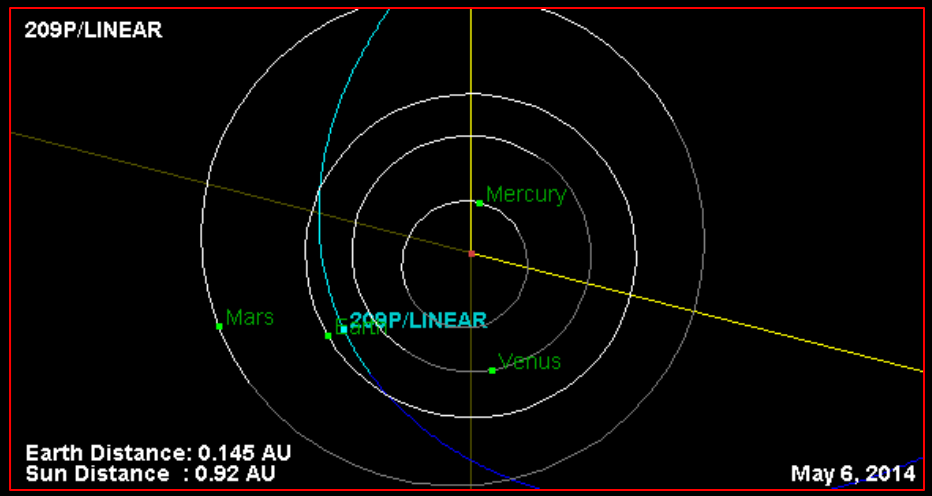
Coma : +/- 16", Tail : +/- 21", PA : +/- 120°

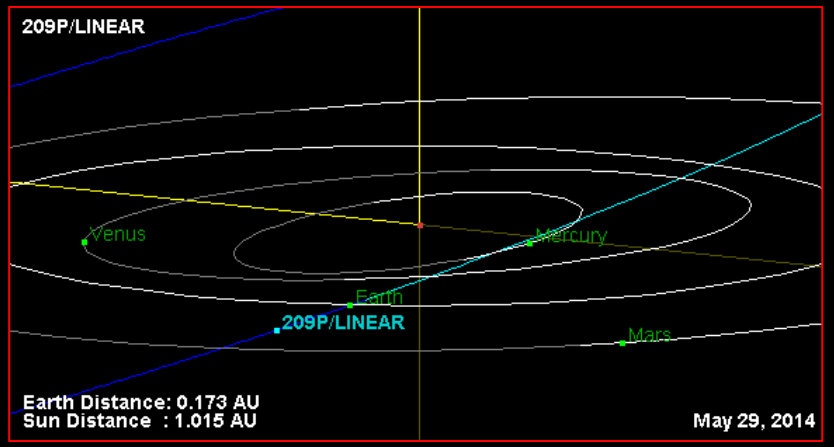
© Jean – Francois Soulier
19 March 2014

The Structure of 209P/LINEAR's orbit!









Courtesy of NASA/JPL/CalTech – NASA Solar System Dynamics/JPL Small Body Database Browser.

NEW Big Meteor Shower 2014

Recent data analyzed from the Comet has lead two scientists to predict a new meteor shower for this year & month! (May 2014)

Two scientists: Quanzhi Ye & Paul A. Wiegert

Dept of Physics & Astronomy, The Univ. of W Ontario (London, Ontario, Canada)

Published their results in the monthly notices of the Royal Astronomical Society (4 Nov 2013)

The night of this shower: 23/24 May 2014
Precise Local Time: 2:40 AM CDT (24 May)

While the elliptical orbit is intersect with the Earth's orbital plane!

The Radiant point is determined at Eqn. Coords.:
(122 ± 1)° or 8hr 8 min R.A.
(79 ± 1)° N Declination

That places in the NE region of Camelopardalis!



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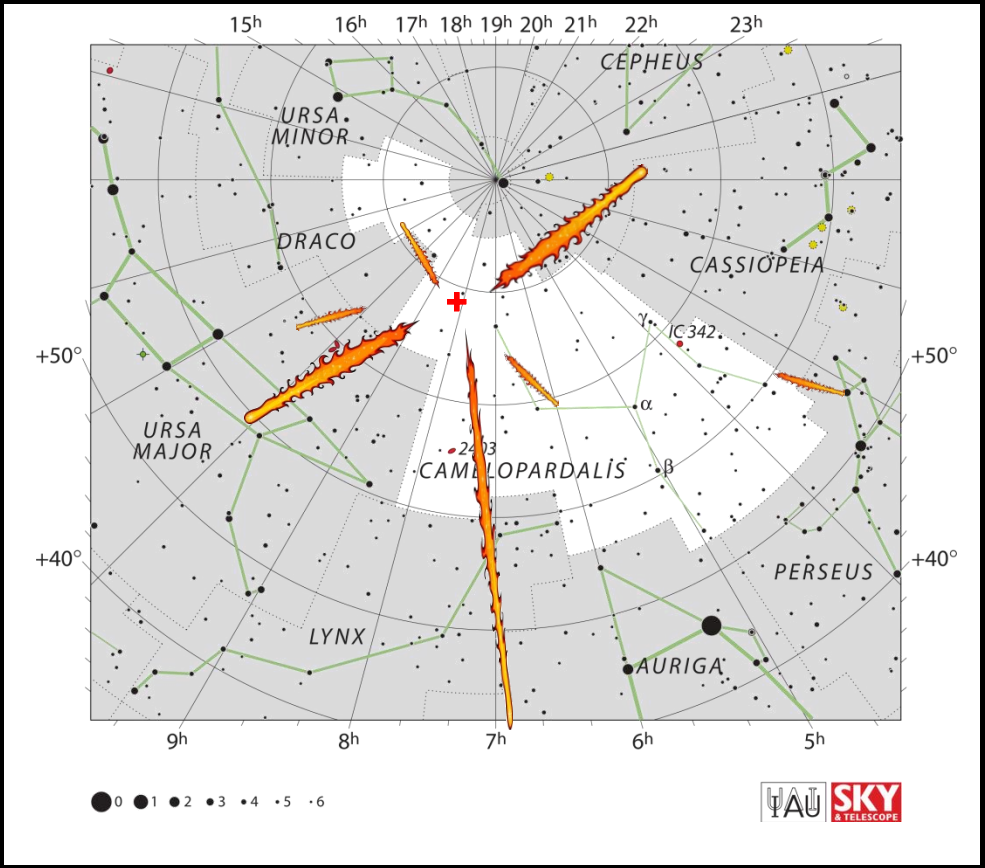
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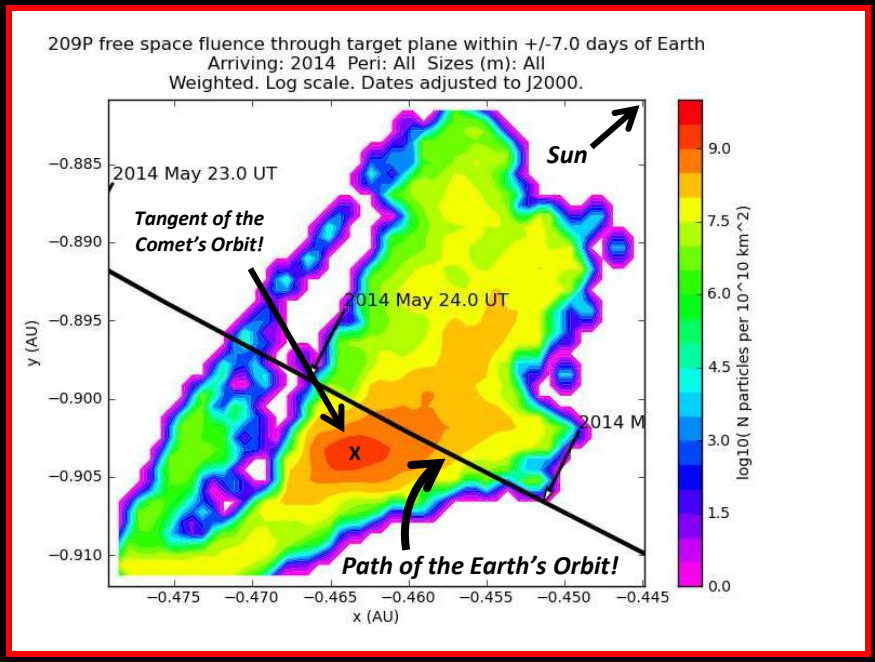
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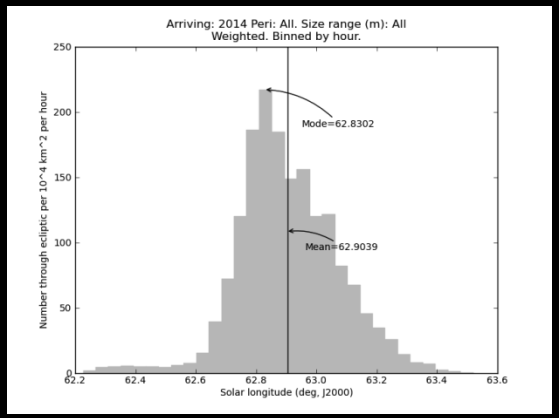
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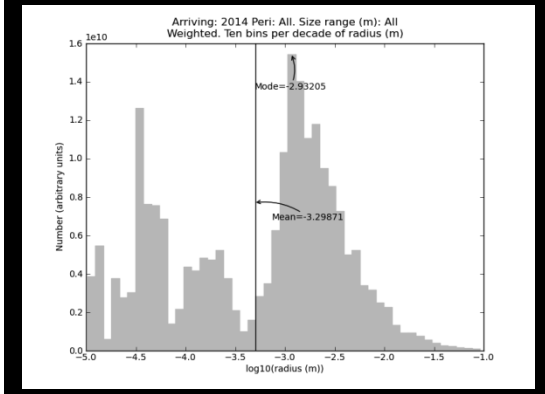
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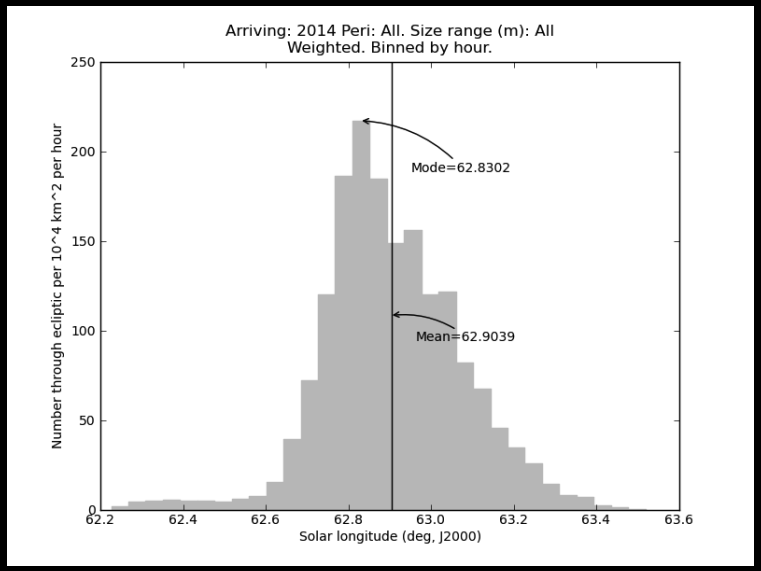
The tangent meaning the path of the comet's orbit as it heads away from the Sun back to the region of Jupiter's orbit! (Jovian comet)

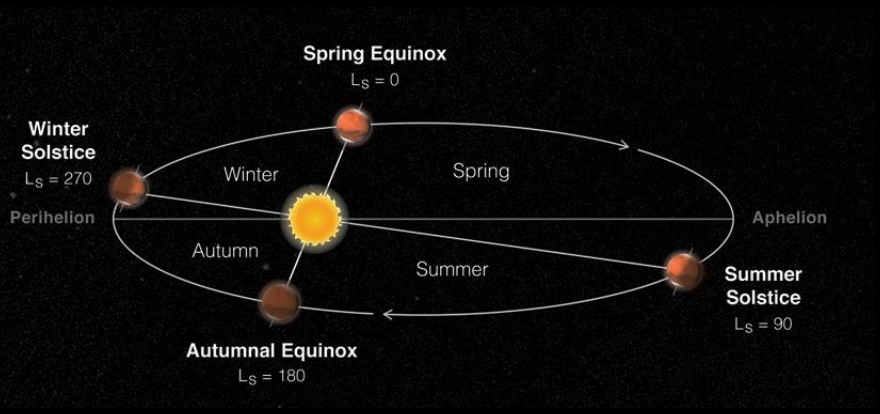






NEW Big Meteor Shower 2014



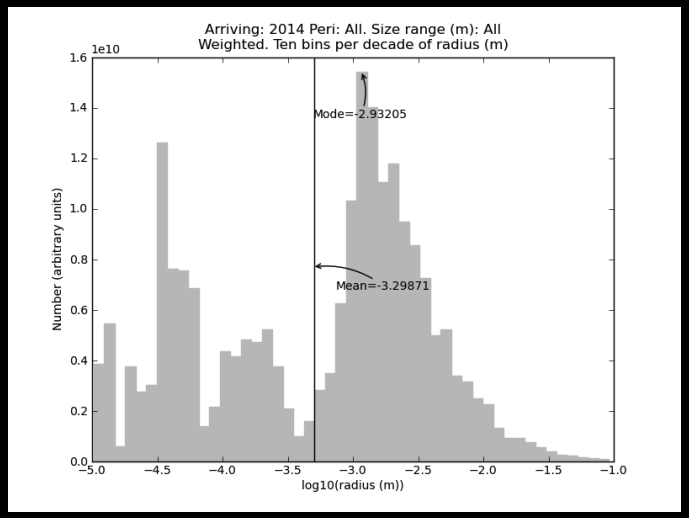


Solar longitude at 62.83° (Date: 24 May 2014 @ 06:29 UTC or 01:29 CDT)

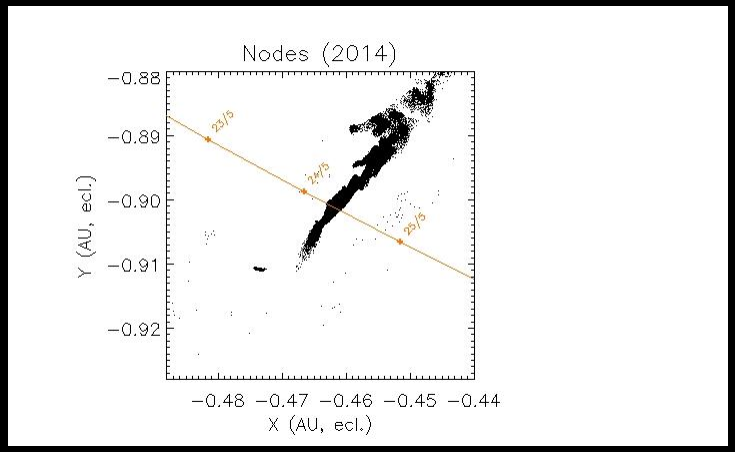
The bulk of meteoroids arriving to Earth from the comet's dust tail will average over 1 mm in size with an arrival rate of between 200 – 225 per hour.

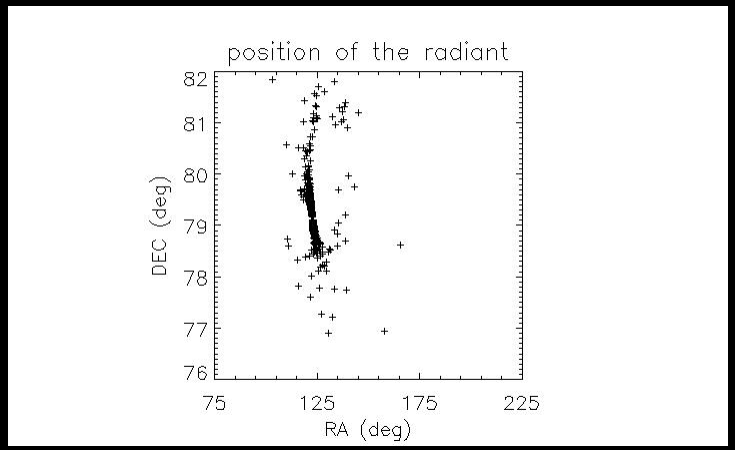
Correlating with a predicted rate for ZHR: 100 – 400

Very likely an intense meteor shower! Possibly an Outburst?

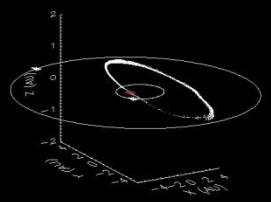


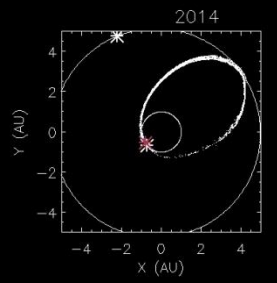
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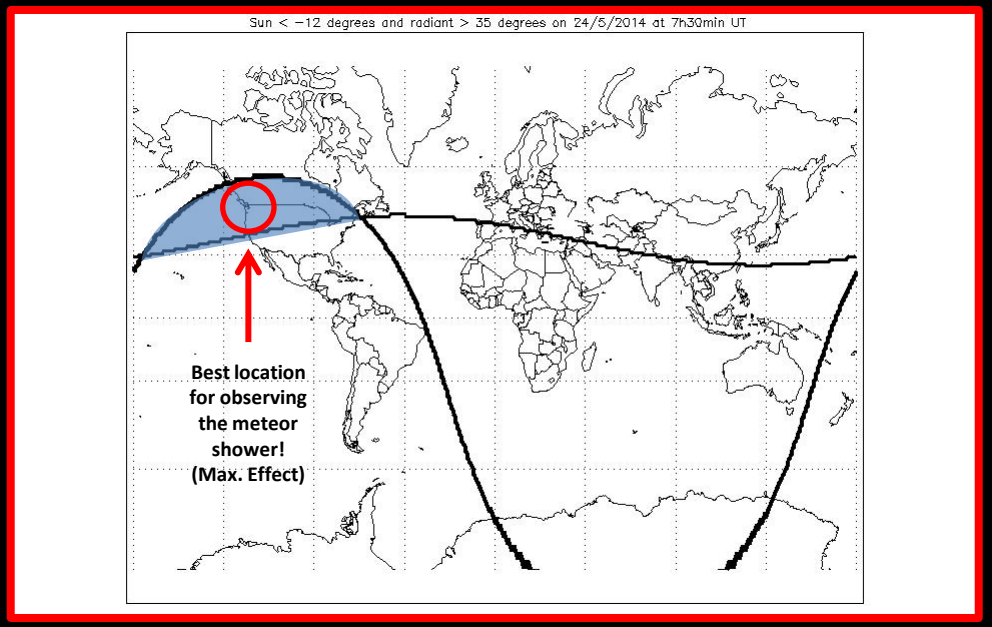


Top Image (the stream of meteors emanating from the tail) with the orange path being the Earth's orbit. The bottom image shows the relative positioning of the radiant around the NE region of Camelopardalis.





Left (side view) and right (overhead view) of the meteorite debris path left by the comet!



The slightly oscillating black line shows the Sun's altitude at -12° during astronomical twilight and the widely oscillating black line the position of the radiant at an altitude of 35° during the peak of the meteor shower!