



# METEOR

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OCTOBER-NOVEMBER-DECEMBER 2007

## "METEOR" - Brought to you by EAMN

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### METEOR is back! - Adam Marsh (Editor)

After a long period of absence METEOR, the EAMN meteor astronomy newsletter, is back.

This issue will cover the period from October 2007 until December 2007, with the first issue next year, and every issue thereafter being a quarterly production.

I will be looking for contributions from anyone wishing to see their article in METEOR, as well as ideas and suggestions.

October, November and December are exciting months for meteor observers with the three major streams: Orionids, Leonids and Geminids active. Thrown in for good measure are The Taurids and The Pup-

pid Velids which both produce some good activity.

With the weather improving and warming up, it's a good time of the year to get outside and have a look at some meteor activity.

Until next edition, clear skies and have fun observing.

#### www.eamn.info

The EAMN website now has a domain name [www.eamn.info](http://www.eamn.info). The website has been updated and reformatted but still includes all the great information it always had, including much more. The website is still being updated and will eventually change to a .org domain, in the future.

### Demise of the ASVMS - Adam Marsh

As many of you may know, the ASVMS has been disbanded by the ASV (Astronomical Society of Victoria). At the time of publication of this newsletter, it is unknown as to the exact reason or reasons the ASVMS has been disbanded. Members of the former ASV Meteor Section (Lance Kelly, Adam Marsh and Geoff Carstairs) are working together with the ASV to attempt to re-establish the ASVMS in the near future.

At this stage, it is likely the ASVMS will be reformed by the end of 2007.

### Active Streams for October to December 2007 - Adam Marsh

Name	Start Act.	End Act.	Maximum	R.A	Dec	ZHR
Orionids	Oct 2	Nov 7	Oct 21-22	6h 20m	+15	15 - 25
Epsilon Geminids	Oct 14	Oct 27	Oct 18	6h 52m	+28	2 - 4
South Taurids	Oct 1	Nov 25	Nov 5	3h 25m	+13	5
North Taurids	Oct 1	Nov 25	Nov 13	3h 52m	+22	5
Leonids	Nov 14	Nov 21	Nov 18	10h 12m	+22	Variable
Geminids	Dec 7	Dec 14	Dec 14-15	7h 28m	+33	70 - 100
Puppilid Velids	Start Nov	End Feb	Several	8h 12m	-45	5 - 15

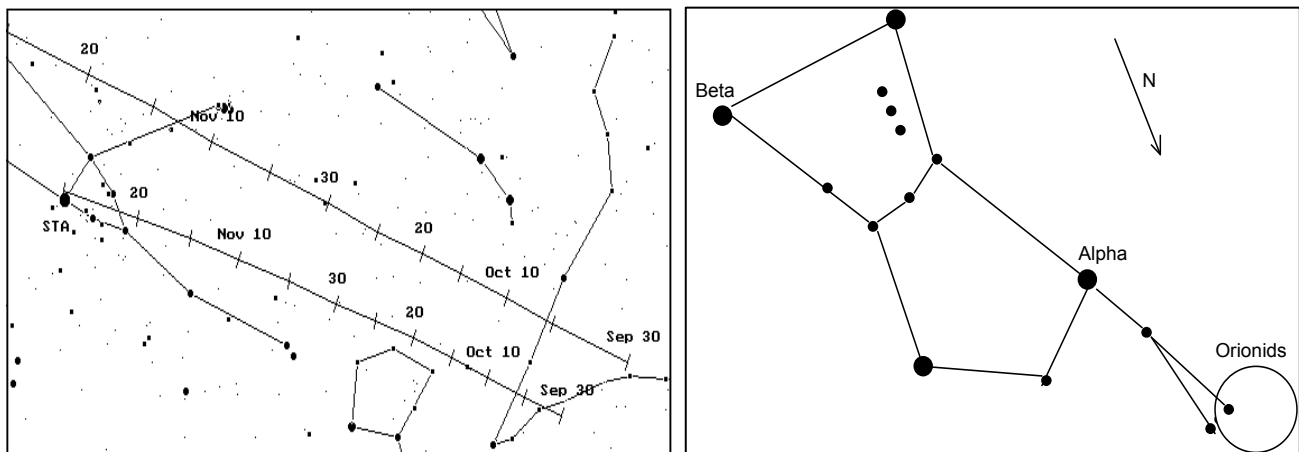
## *Active Streams for October to December 2007 (Continued)*

### *The Taurids*

The Taurids are comprised of two sub radiants, The North and South Taurids, both which become active around the same time. Activity from the Taurids starts from the start of October and finishes at the start of December. The South Taurids reach maximum first on Nov 05, the North Taurids follow on Nov 13. The South Taurids are the more active.

Taurid meteors are slow and the many brighter ones produced by this shower are spectacular. At maximum the Southern Taurids may produce as many as 10 to 15 per hour, the Northern Taurids 5 to 10 per hour.

Taurids meteors will be a feature for almost three months leading up to Summer. The stream traditionally produces many fireballs, so it will be an exciting time for meteor observing. I have provided a finder chart for the Taurids as the streams position starts in Pisces in September and moves into Taurus by the maximum date.



### *The Orionids*

The Orionids are the major meteor shower for the month of October. They are active in the second half of October and have a maximum date on morning of the 22<sup>nd</sup>. The Orionids are the sister stream to the Eta Aquarids, which are also produced by the passage of Comet Halley around the Sun. Orionid activity is good a few days before and a few days after maximum, so it is worth heading out around this time as well.

The Orionids usually produce around 20 meteors per hour at maximum, but are characterized by being unpredictable, some years producing only 5 to 10 meteors per hour at best, other years, in excess of 20.

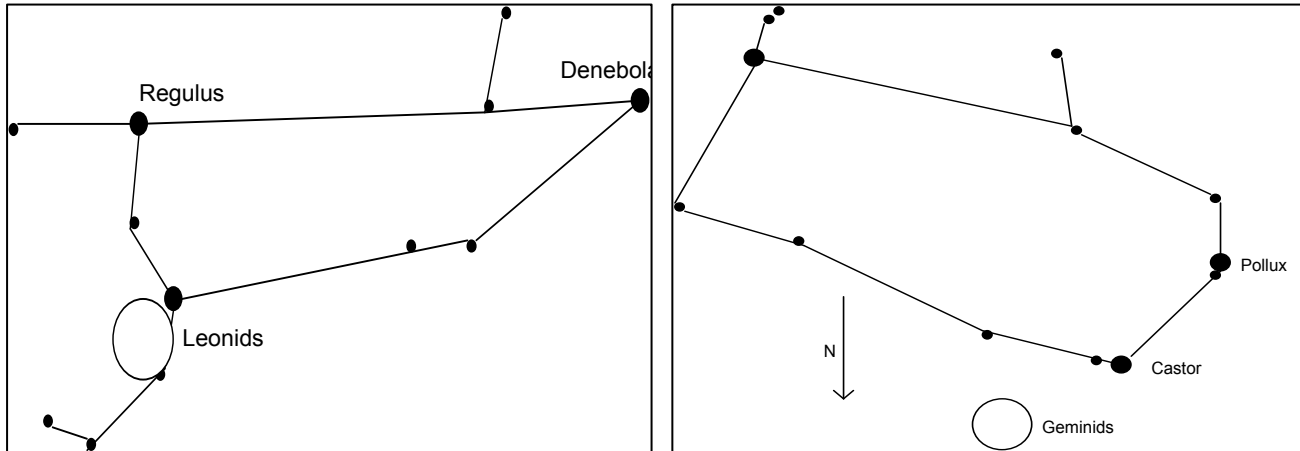
While usually described as being of a fast speed, Orionid meteors are slower than their sister shower, the Eta Aquarids. This shower can make for some great viewing, with the faster than average meteors producing a high percentage of persistent trains, generally about 30 to 40 percent.

### *The Leonids*

November and December are fantastic months for meteor observers in both hemispheres. It starts in November with the Leonids. Traditionally, the Leonids are a shower that produces only about 10 to 20 meteors per hour at maximum. However, as anyone will remember over the last 10 years, it is a stream prone to fantastic outbursts in activity.

The Leonids are active across most of November with a maximum on the night of the 18/19 of November. There are no predictions for a major outburst this year for the Leonids, however, with any meteor stream, especially one like the Leonids, it is always worth a look because anything can happen.

To watch the Leonids, start observing in the east from about 1.30 a.m. and the radiant will rise. Leonids meteors will appear fast and will radiate from a point in the head of Leo, about 10 degrees north of Regulus. Face anywhere from the north to the east, about 30 degrees from the radiant position to maximize your results.



## *The Geminids*

The other highlight, this one in December, are the Geminids. Reaching maximum on the night of the 14/15 of December, the Geminids are a consistent performer, with observers from Southern Australia usually seeing about 20 to 30 meteors per hour at best.

The Geminids radiant will be fairly far north, meaning that the further north in latitude you observe this shower from, the higher the radiant will be in the sky, and the higher the rates will be. If you are observing from Northern Australia, expect to see 40 to 50 meteors per hour.

Geminids meteors will appear slowish in speed, with a characteristic yellow hue to many of the numbers seen.

From past observing experience, the Geminids throw out quite a few brighter meteors and spectacular fireballs, and observing the stream as a whole, is a very enjoyable experience.

## *Other Streams for November and December.*

Below is a list of streams over the November and December period. The Puppis-Velids are active from the end of Sept through to the end of January and provide meteors to be seen every night. The Puppis-Velids are made up from a number minor radiants in a “Radiant Complex” all having periods of activity from the end of September through to the end of January, combining to form the activity of the Puppis-Velids. More observations of this stream complex are needed.

## **Handy Hints...!**

### *Handy Hint 1 (Tape Recorder)*

As always, use a tape recorder to record the observations then transcribe them to paper later on. Use this internet link [www.imo.net/visual](http://www.imo.net/visual) for more information on observing.

To convert the R.A value above, divide by 15 and divide the decimal remainder by 1.66. The whole number is hours, the remainder is now converted into minutes.

### *Handy Hint 2 (Sleeping Bags)*

Use a sleeping bag to lay in when observing. They are usually well insulated and act as a nice wing break when lying still.

You will be a lot warmer and more comfortable with this item in your possession, and when using it.

### *Handy Hint 3 (Maximize your observing)*

When observing, it is best to face at least 50 degrees up in the sky. This maximizes the amount of atmosphere you are looking through and increases your chance of seeing more meteors.

Observing after midnight also increases the number of meteors you will see. This is because the Earth rotates “into” the direction in which it moves around the Sun, running into more debris in the Solar System after midnight.

### ***Newsflash.... Extremely Bright Fireball Seen Over Victoria and NSW.***

On Tuesday the 2nd of October at 9.47 (AEST) 11.97 (UT) an extremely bright meteor graced the skies of Victoria and parts of NSW. The meteor was around magnitude -12, as bright as the gibbous Moon, and was in the sky for several seconds. The meteor appeared to travel at an altitude of around 30 to 40 degrees across the eastern sky roughly from north to south, but this varied from the north east to the south east depending on the location of the observer

Witnesses to the event described it as blue green in colour with a persistent train that was visible for 10 to 15 minutes in the sky, after the meteor had disappeared. Some reports included electrophonic sound (sound heard at the time of the meteor) and a later sonic boom, some minutes after the meteor had passed.

Witnesses, myself included, state that the sky around the object went from black to blue, the ground was lit up and shadows were cast.

I was witness to the event personally while driving between Tocumwal and Cobram, and it was a spectacular sight and indeed one of the brightest meteors I have ever seen. If you also witnessed this event, please email the EAMN via [www.eamn.info](http://www.eamn.info) or email to [adammarsh@netspace.net.au](mailto:adammarsh@netspace.net.au)

*Adam Marsh and Geoff Carstairs - Editors*

## **Reporting Observations and Newsletter Submissions.**

To report any meteor observations or make a submission for the newsletter please email to: [adammarsh@netspace.net.au](mailto:adammarsh@netspace.net.au)

I will try and publish articles of any size, photos are also most welcome.

Hope you enjoyed the comeback edition of "METEOR" Please visit [www.eamn.info](http://www.eamn.info) for more meteor related information.

Eastern Australia Meteor Network (EAMN)

Homepage - <http://eamn.info>

Newsgroup - <http://newsgroup.eamn.info>

Online Newsletter - <http://newsletter.eamn.info>

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