





# Northern Berkshire Astronomical Society

Founded 2023 | North Adams Public Library | North Adams, MA

## This Month

Meteor showers, planets, and several star clusters!

## The Moon

-  - Dec 5
-  - Dec 12
-  - Dec 19
-  - Dec 27 "Cold Moon"

## Planets

Mercury, sets just after Sunset

Venus: Rises about 3:30AM

Mars: behind the Sun

Jupiter, Uranus: in Aries

Saturn: in Aquarius

Neptune: in Pisces

## Deep Sky Objects

**Easy** (binoculars): M 42, NGC 1893 (Letter Y cluster), NGC 869/884, Pleiades, Algol

**Moderate** (small telescopes): M 1, M 35, C49/50 (Rosette Neb.)

**Challenges**: M 1, NGC 520, M 76, The Horse Head Nebula, NGC 1300



## The Longest Nights

With the Winter Solstice, we now have the longest nights of the year. Orion is now rising in the East after sunset, with all of the celestial treasures discoverable in these long cold nights.

The Geminid meteor shower peaks mid-month, and this year benefits from a moonless sky. The peak is on the 12th/13th, with an average of several dozen meteor per hour, especially in the early morning hours when Gemini is almost overhead, though meteors will be visible throughout the night. An interesting fact: the source of the Geminid meteors is the asteroid 3200 Phaethon and not the typical icy comet. Phaethon is interesting because its orbit carries it very close to the Sun - twice as close as Mercury! This sun-grazing might be responsible for its "comet-like" behavior, stripping matter into its orbit, which become our Geminid meteors when the Earth crosses this path.

Mercury might be visible the first week of Dec. just after sunset hanging low on the horizon in the twilight, setting at 5:45 PM.



### This Month's Image

The Triangulum Galaxy (M33) is sometimes overlooked, or just an afterthought - partly because of being overshadowed by its neighbor Andromeda, but also because though it's bright "overall", it's actually rather dim in surface brightness. But, it's nearly overhead and well-suited for imaging, though even this image required a 30-minute exposure.

Some of the brighter "puffs" in the spiral arms are very large star-forming regions, as much as 40x larger than the Orion Nebula and far more luminous.

### Interacting

Check out our Facebook Group <https://www.facebook.com/groups/nberkastro>

and join us at our next meeting, on Jan. 3rd at 6 PM at the North Adams Public Library.

## Playing "Connect the Dots"

Here are a few open star clusters - generally overlooked - that are a fun sight in binoculars or small telescopes, where the random position of its stars create familiar diagrams.

### NGC 2169: The "37" Cluster

This small cluster is located in the arm of Orion, and it's easy to see how it got its nickname!



### NGC 1893: The "Letter Y" Cluster

Another cluster in Auriga, has the shape of the letter "Y".



### NGC 1245: The "Starfish" Cluster

This rich cluster in Perseus takes on the image of a starfish!



### C13 = NGC 457: The "Owl" Cluster

Finally, in Cassiopeia, a flying owl with two bright stars for eyes.



Here's a finding chart for all four of these clusters.

Scanning the Milky Way from Cassiopeia down to Orion will show even more clusters!