

# Meeting of the Eagle Valley Astronomical Society

**When:** Thursday, August 9, 2012, 7:30-9:00 PM  
Free and open to the public; no reservation required.

**Where:** Walking Mountains Science Center,  
318 Walking Mountains Lane (off Buck Creek Road), Avon, Colorado  
Note the new signs directing visitors to the Science Center.

**Contact:** Lara Carlson, Community Programs Director  
Walking Mountains Science Center, [970-827-9725](tel:970-827-9725), ex. 129, or  
John W. Briggs, HUT Observatory, [john.w.briggs@gmail.com](mailto:john.w.briggs@gmail.com),  
[970-328-6228](tel:970-328-6228) or cell [970-343-0618](tel:970-343-0618).

**Meeting Topic:**

## *Fire in the Sky: Our Weekend Perseid Meteor Shower*



A composite image from two nights of 2007 Perseid meteors by Fred Bruenjes

## August Meeting Description

Eagle Valley Astronomical Society will gather Thursday evening, August 9, starting at 7:30 PM at the Walking Mountains Science Center near the base of Bush Creek Road in Avon. This weekend, August 10-12, is an unusually good opportunity to see the famous Perseid meteor shower in our Colorado skies. Local astronomer John Briggs will explain how to see the shower. The presentation will also feature recent video recordings of meteors over the Vail Valley – including a fireball recorded through clouds in the pre-dawn hours of Monday, August 6, that, at the end of its path, exploded over the town of Slit. An even brighter meteor was recorded among about thirty others in the early morning hours of August 9 – the morning of our meeting day. This video will also will be shown at the EVAS gathering.



Video recordings of meteors are possible thanks to two automatic cameras recently added to HUT Observatory near Eagle. They were built by Alan Sliski of Massachusetts, based on a design by Colorado astronomer Chris Peterson of Guffey. Mr. Peterson, a graduate of Caltech, maintains a network of 18 meteor cameras using surprisingly inexpensive parts and off-the-shelf computers. The network, a project of the Denver Museum of Nature and Science, has the ultimate goal of actually recovering meteorites associated with large meteors over Colorado. This is possible if individual meteors are observed with multiple well-calibrated cameras. Clever software developed by Mr. Peterson can then calculate the actual path of the meteor passing through the Earth's atmosphere. One can then predict where space debris has possibly fallen on the Earth's surface.

## How to See the Perseid Meteor Shower

Although the most meteors will occur during the early morning hours of Saturday, August 11, many are already visible as we approach the peak of the shower. The meteors are due to space debris from Periodic Comet Swift-Tuttle. Each year around August 11, the Earth passes close to the comet's orbital path. The situation is similar to driving through a snowstorm in a car. As viewed from the car, snowflakes appear to radiate from a direction immediately in front of the car. During the Perseid shower, the Earth's motion is like that of the car in a snowstorm. The meteors appear to radiate from the constellation of stars called Perseus, as shown in the above illustration from *Sky & Telescope* magazine. The best view is when Perseus rises above our local Colorado horizon. This occurs after about 11:00 PM and improves through the night. Another factor is moonlight. This year, a crescent Moon will rise about 1:30 AM, but it will not be bright enough to interfere greatly. Get away from bright lights and find a spot allowing a wide-open view of the sky, particularly toward the northeast, where Perseus rises. In good conditions near the peak of the shower, it's common to see about one meteor per minute. Also, as video recordings from HUT Observatory already confirm, many meteors are visible on nights both before and after the peak on Saturday. Additional details on viewing the shower are available from the *Sky & Telescope* website:

<http://www.skyandtelescope.com/observing/home/Perseids-at-Their-Prime-165433206.html>



Meteor jargon involves three terms, by the way: A *meteor* is the atmospheric phenomenon (flash) that we see in the sky. A *meteoroid* is an object in space, usually no

larger than a grain of sand and in orbit around the Sun. *Meteorites* are objects that were large enough in space to survive and fall all the way to the Earth's surface, after a violent deceleration in our atmosphere. Another interesting term is *bolide*, which refers to an unusually bright, exploding meteor. If a meteor is large enough to leave a trail of glowing gas in our sky above, the trail is called a meteor *train*. Meteor trains can sometimes remain visible through binoculars for many minutes. They quickly become distorted by high-altitude winds.

### **Additional Information**

Chris Peterson runs Cloudbait Observatory in Guffey, and his interesting website is here:

<http://www.cloudbait.com/>

The first meteor recorded with the new equipment at HUT Observatory (on the morning of August 6) was simultaneously recorded at Cloudbait Observatory. Mr. Peterson was able to estimate that the object ended its path over Silt, Colorado. Most of the cameras in his network are run by schools, and the calculations become more accurate as more participants are running and sharing data. The two new systems at HUT Observatory are numbers 17 and 18 in the network. The Smithsonian Institution ran a similar network of meteor cameras, called the Prairie Network, through the 1960s. This led to the recovery of the Lost City meteorite, named for Lost City, Oklahoma, where the first fragment was found. Such efforts were much more difficult before the advent of modern electronic cameras and microcomputers.



The "Meteorite Men," from the popular current TV show regarding meteorite discovery

## **News from HUT Observatory**

John Briggs organizes the annual Hartness House Workshop in Springfield, Vermont, coming up August 16. This year's Workshop is described here:

<http://stellafane.org/convention/2012/pdf/HHWSfinal.pdf>

The Workshop runs in association with the annual Stellafane Convention that has been going since 1926 and currently draws well over 1,000 participants for a long-weekend astronomical campout in Vermont. The keynote speakers at Stellafane this year are Geoff Notkin and Steve Arnold, shown above in their popular TV program, "The Meteorite Men." The Stellafane Observatory and Convention, run by the Springfield Telescope Makers, are detailed here:

<http://stellafane.org/>

### **A Note on the Future.**

Repeating from previous announcements, we hope that additional astronomers in the Eagle Valley area and beyond will hear about our meetings and join us, normally on the second Thursday of every month at Walking Mountains Science Center in Avon, Colorado. Note that astronomy clubs like ours always welcome folks, young and old, who are experienced or just starting an interest. The purpose of our organization is to share and encourage interest! If you're already involved with astronomy, you can especially help. We look forward to having more telescopes set up at meetings, additional speakers, more loaner telescopes, weekend star parties, and field trips. One of many active clubs setting an excellent example here in Colorado is the Denver Astronomical Society. It meets regularly at the historic and magnificent Chamberlin Observatory of the University of Denver: <http://www.denverastro.org/>. Another organization of interest is the Front Range Astronomy Club, an email-based group that connects members of individual astronomical societies in the Colorado region.

Walking Mountains Science Center: <http://www.walkingmountains.org/>

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