

# Meeting of the Eagle Valley Astronomical Society

**When:** Thursday, September 13, 2012, 7:30-9:00 PM. Free and open to the public.

**Where:** Walking Mountains Science Center, 318 Walking Mountains Lane, Avon, CO

**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).

**Meeting Topic:**

## *Where Dirt Comes From: From Early Big Bang Universe To Dust Bunnies*

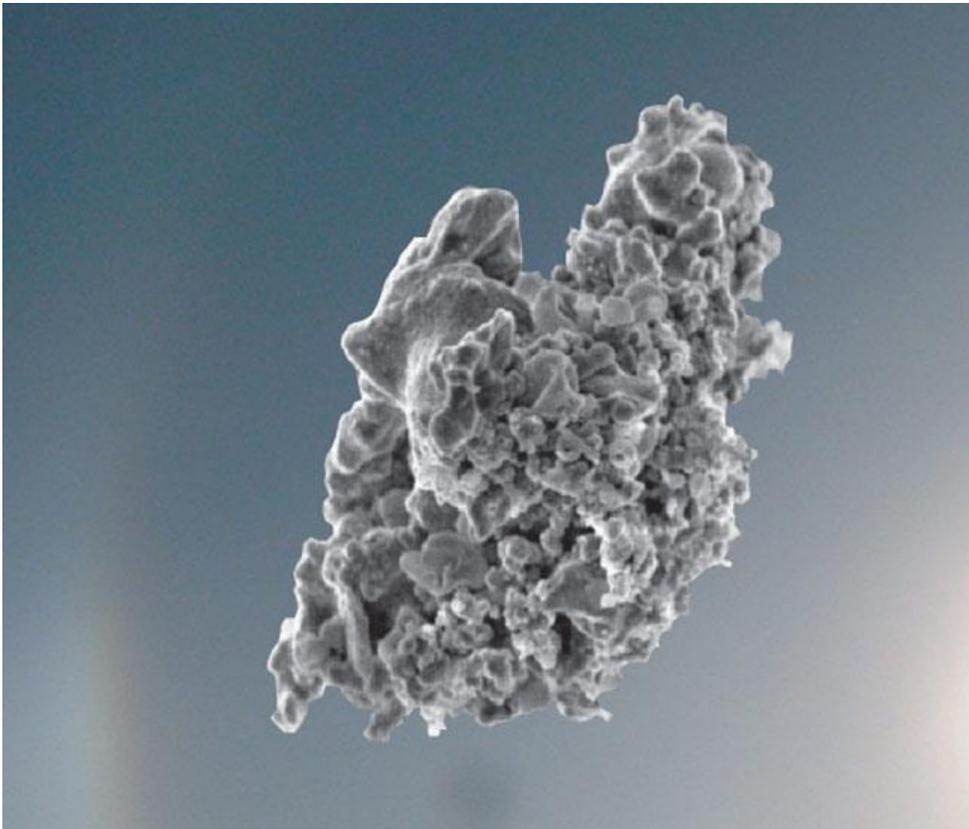


Dark streamers of cosmic dust block glowing hydrogen gas clouds in this image of the Rosette Nebula recorded at HUT Observatory.

## September Meeting Description

Eagle Valley Astronomical Society will gather Thursday evening, September 13, starting at 7:30 PM at the Walking Mountains Science Center near the base of Bush Creek Road in Avon. Our speaker will be Wayne Green, an avid amateur astronomer since grade school. Wayne will share a presentation for all ages regarding cosmic dust and its origin. As seen in the photo above of the famous Rosette Nebula in the winter constellation Monoceros, many of the most dramatic features in celestial images are caused by dark cosmic dust and interstellar grains. Wayne's show will include a look at the universe through different wavelengths beyond the light that we see. Mr. Green is the Vice President of the Boulder Astronomy and Space Society, Regional Chair of the Astronomical League, and is a past-president of the Denver Astronomical Society. He also serves as the Secretary of the Deep Space Exploration Society, a radio astronomy oriented group in Longmont, Colorado. Please come and enjoy his presentation! An interesting introduction to cosmic dust is available here:

[http://www.cosmotography.com/images/cosmic\\_nurseries.html](http://www.cosmotography.com/images/cosmic_nurseries.html)



A magnified image of a cosmic dust grain similar to those that are very common in many natural gas clouds, or *nebulae*, in space. Image by J. Freitag and S. Messenger.

## September Sky News

The following information regarding how to currently recognize the brighter planets is by Alan McRobert of *Sky & Telescope* magazine. “Magnitude” is the term astronomers use to describe brightness. A magnitude 1 star is bright, whereas a magnitude 6 star is nearly too dim to be seen by eye. The brightest star, Sirius, is magnitude -1.5, the full Moon magnitude -12.7, and the Sun magnitude -27! The faintest objects now detectable with the largest telescopes in existence are about magnitude 36. Polaris, the North Star, is magnitude 2.

**Mercury** is currently hidden in the glare of the Sun.

**Venus** (magnitude -4.3, in Cancer) rises in darkness around 3 a.m. daylight saving time (depending on where you live), emerging above the east-northeast horizon a good two hours before the first glimmer of dawn. By early dawn it's blazing high in the east. Binoculars show the Beehive star cluster  $6^\circ$  to Venus's lower left on the morning of the 8th, closing to less than  $3^\circ$  to Venus's left by the 12th and 13th.

**Mars** and **Saturn** (magnitudes +1.2 and +0.8) are low in the southwest and west-southwest, respectively, as evening twilight fades. This week they widen from  $13^\circ$  to  $17^\circ$  apart. Look for them well to the lower left of brighter Arcturus in the west. Can you still find Spica twinkling under Saturn? Mars ends the week just  $1^\circ$  below Alpha Librae, a wide binocular double star.

**Jupiter** (magnitude -2.4, in Taurus) rises in the east-northeast around 11 or midnight daylight saving time. Once it's well clear of the horizon, look for fainter orange Aldebaran twinkling  $7^\circ$  to its right, and Beta Tauri a bit farther to Jupiter's left. By dawn this line of three stands very high in the south.



Jupiter as imaged August 23 by [Christopher Go](#). South is up, as shown in many telescopes. Press “Ctrl” as you click on Mr. Go’s name, to see his excellent site.

## More Telescopes Promised to Eagle Valley Astronomical Society

Mr. Jim Hoffmeister, donor of the computerized Celestron 11 telescope now being used in our telescope loan program, has proposed that Eagle Valley Astronomical Society take charge of three more portable telescopes presently available in Wisconsin. John Briggs expects to pick up these instruments in a coming visit to Yerkes Observatory. “Big Red,” our 13-inch Dobsonian reflector, is currently available. Please contact John if you, your family, or your school is interested to take a turn with it. Big Red is particularly powerful showing objects like Messier 42, the Great Nebula in Orion.



This instrument is twin to our loaner telescope, “Big Red,” a 13-inch Newtonian reflector, mounted in the Dobsonian style and originally used at Eagle Valley Middle School

## Star Party Friday, September 14: “Hanging with the Stars,” 8:30 to 10:00 PM

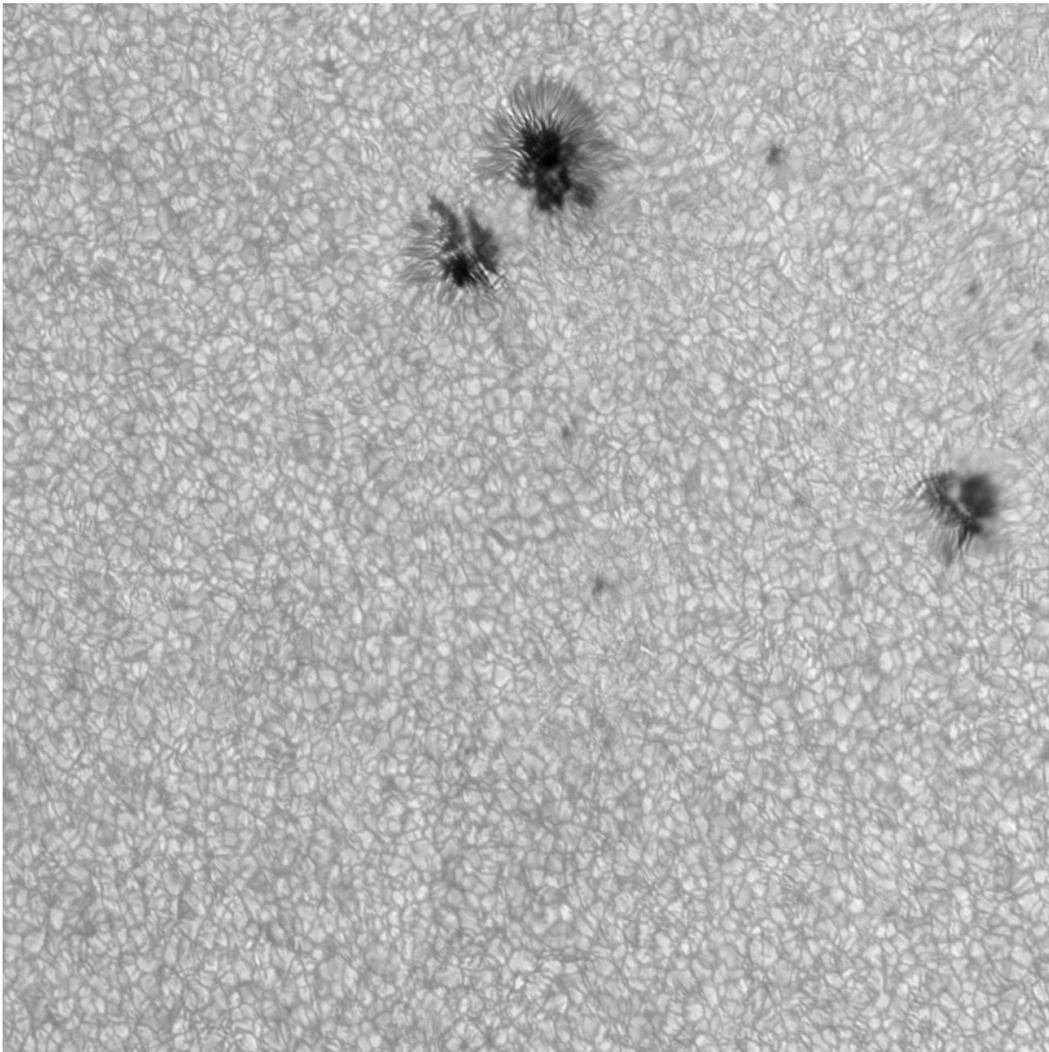
As reported in the current issue of the *Colorado Parks and Wildlife eNewsletter*:

[Castlewood Canyon State Park](#) (south of Denver) will be hosting a Star Party, complete with planets, star clusters, nebulae and galaxies! What better way to start your weekend off right, than to kick back, relax, and enjoy the beautiful Colorado sky. Park volunteers Monica and Don Ashby will be on hand to help you navigate through the night sky and several types of telescopes will be available for use. At the last Star Party, watchers were even able to see the rings of Saturn. So grab your blankets, chairs and telescopes and spend a Friday evening hanging with the stars. Participants should meet at 8:30 p.m. at the Canyon Point Event Facility. Please call the Park at 303-688-5242 for additional information.



## **Local Astronomy News: Briggs off to Lowell and Kitt Peak**

John Briggs will be returning with stories and photos from a conference at Lowell Observatory, “Origins of the Expanding Universe,” and from an observing run at Kitt Peak National Observatory. The observing run involves the McMath-Pierce solar telescope, one of the most unusual telescopes on Earth. Dr. Jack Harvey, an astronomer at National Solar Observatory, set up the project in which he and John will attempt to reenact the earliest photographic observation of solar granulation. This was first done by American astronomer Lewis M. Rutherford in 1871 using a 13-inch refracting telescope. The 13-inch, dating from 1868, is now in Eagle and will be transported by to Kitt Peak, near Tucson, Arizona, for the project. Dr. Harvey reports that the weather in Tucson has been poor for daytime astronomy in recent weeks, but the pattern may break in time for the observing run September 17-21. He sent a remarkable, recently exposed and processed image showing solar granulation as observed with the McMath-Pierce telescope. It will be interesting to compare this image to results from the Rutherford telescope at a future meeting of Eagle Valley Astronomical Society:



## **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.

## **Ongoing Thanks to Gifted Education Team and WMSC**

We are very grateful for the ongoing support and promotion given to Eagle Valley Astronomical Society by Gifted Education Team in here in Eagle County. The poster on page seven of this newsletter was prepared by GET for distribution in classrooms. <http://www.giftedteam.org/>

Our monthly meetings would not be possible without Walking Mountains Science Center: <http://www.walkingmountains.org/>

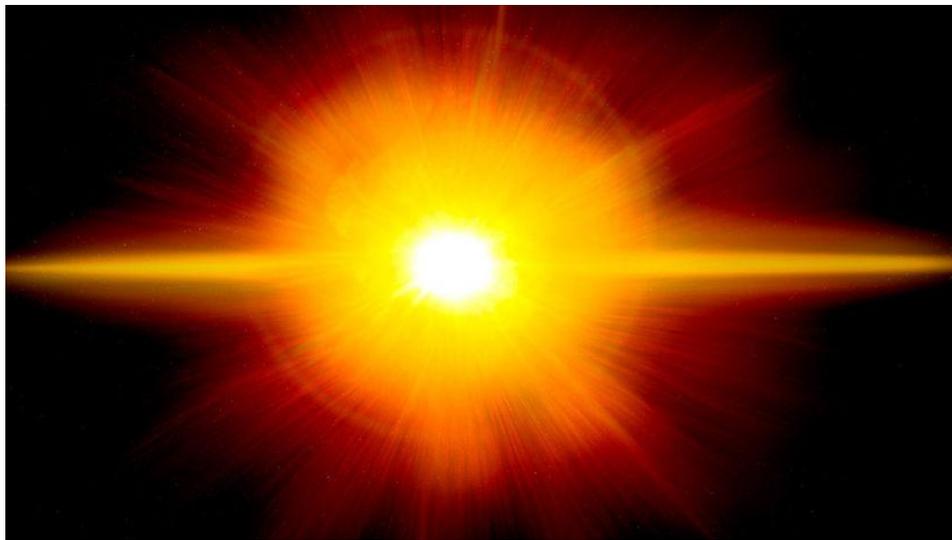
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# EAGLE VALLEY ASTRONOMICAL SOCIETY

*Presents:*

## **“Where Dirt Comes From: From Early Big Bang Universe to Dust Bunnies”**

**Thursday, September 13, 2012**



**7:30 – 9:00 PM**

**@ Walking Mountains Science Center, Avon, Colorado**

Driving Directions: <http://www.walkingmountains.org/page.aspx?pid=400>

**Wayne Green**, an avid amateur astronomer since grade school, will share a presentation for all ages regarding the origin of matter. The show will include a look at the universe through different wavelengths beyond the light that we see.

Mr. Green is the Vice President of the Boulder Astronomy and Space Society, Regional Chair of the Astronomical League, and is a past-president of the Denver Astronomical Society. He also serves as the Secretary of the Deep Space Exploration Society, a radio astronomy oriented group in Longmont, Colorado.

For more information contact Lara Carlson: [larac@walkingmountains.org](mailto:larac@walkingmountains.org)