



# The Spectrum

Newsletter of the Western Colorado  
Astronomy Club



Members of the Astronomical  
League, MARS Region



Members of the International  
Dark-Sky Association

## *Saddlehorn Observing Site is a Win-Win!*

The efforts of club members Jim & Vicki Maddox and Charlie Liggett paid off in 2006 as they negotiated with the Park Service to allow WCAC access and use of a new observing site on the Colorado National Monument. This site is located at the helipad parking lot and a nearby rock formation gives it the nickname "Saddlehorn". Only fifteen minutes from downtown, this site is more accessible and convenient than our other designated observing area in Rabbit Valley. While the skies at Saddlehorn aren't quite as dark as Rabbit Valley, the flat parking lot and paved access road make access and observing easier and safer.

Our informal agreement with the Park Service invites rangers to bring groups of visitors to the site while we are observing so they can talk with club members and view through our telescopes. This is in keeping with the club charter and goals of outreach and education to the community, and helps promote WCAC among area residents. Since September, we have used the observing site five times and entertained more than 75 visitors from the CNM campground.

## *Club News and Events*

### **October General Meeting**

Our October meeting discussed the upcoming transit of Mercury and finalized plans for work on the Loma telescope later in the month. Dave Copley showed some recent photos taken on the Monument with a "chocolate" water fall caused when rain washes mud and silt over a cliff. Aaron Reid presented IDA news and asked for volunteers to operate and maintain an all sky camera at Grand Junction High School. The camera was

run by Cheryl Borchardt for several years, but now that she is retiring, the school needs a new operator. Tom Burrows' presentation discussed astro-friendly outdoor lighting, and he showed before & after photos of fixtures he installed on his home.

### **Loma Observatory Repair Update**

On October 9th, the Loma SIG removed the optical tube and brought it to a clean, lighted area where it could be examined and repaired. The Meade scope at Loma is the largest SCT they make, and moving this tube is a big deal because it's about the size of a small water heater and just as heavy. Our first efforts to fix the focuser involved removing the rear mirror cell. It didn't come off easily so Ricky Smith called Meade to ask for hints or instructions. Their terse reply was "Send it back" and they refused to offer any more help than that. That wasn't a practical option so we then tried some gentle persuasion using a rubber hammer (!) to tap the edge of the rear cell but all our tapping and pulling failed to budge it even one millimeter. What next? There we were standing around a \$10,000 telescope contemplating hitting it with a bigger hammer! Charlie Liggett suggested we attack the problem from the other side by removing the big glass corrector plate on the front of the scope. After all, the focuser was down in there somewhere and all we had to do was take everything out of the tube to get to it.

This proved to be the right approach and after a few surprises (like one 12" long Wyle-Coyote spring hidden under the mirror!), the main mirror came out and we were able to finally get at the balky focuser. While the focuser was being cleaned and lubed, Dave Copley and Ricky Smith thoroughly cleaned the main mirror

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## **WESTERN COLORADO ASTRONOMY CLUB**

The Western Colorado Astronomy Club formed in 1989 as a non-profit organization for the purpose of astronomy education. Members have a wide range of skill levels from beginner to advanced. Club activities include observing, astrophotography, telescope making, and discussion and lectures related to astronomy. Meetings are held at 7:00 PM on the first Tuesday every month at Mesa State College in the Weldon room of the Horace Wubben science building. Monthly observing sessions are held throughout the Western Slope, including an annual star party lasting several days and nights including camping and observing. Club members visit schools in District #51 at various times to give telescope viewing time to the students, and to lecture on astronomy-related science and current events. Several times a year we visit the Colorado National Monument for observing with the general public in mind. The club also presents an annual program at Mesa Mall for the community astronomy day.

Membership is open to anyone interested in astronomy and the night sky -- no telescope is required! Several loaner telescopes are available for members who complete the requisite training in their use. We are members of the IDA (International Dark-Sky Association) and the AL (Astronomical League). Membership benefits include discounted astronomical publications, AL services, and newsletters. Also an annual national event takes place in various areas of the United States. For current events log onto the internet and visit the WCAC's exclusive web site, at:

[www.wcacastronomy.org](http://www.wcacastronomy.org)

### **WCAC OFFICERS 2007**

President	Dave Copley	434-4364
Vice President	Ricky Smith	858-5360
Treasurer	Blanche Godel	242-1721
Secretary Pro Tem	Jim Maddox	
Community Liaison	Jeff Dershem	243-1351
Newsletter Editor	James McSheehy	243-2887
ALCOR Representative	James McSheehy	243-2887

(the local area code is 970, and local zip codes are 81501-81506)

## **ASTRO-ADS**

Place your ad here -- free to club members,  
a \$3.00 charge to non-members.  
Only astronomy-related items please!

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\* JMI model NGF-S (older model, good condition) motorized focuser. This is a 2" focuser that fits the 2"x24 thread found on the back of many SCTs. It allows focusing without image shift for CCD work, and for public viewing sessions, less shaking and grabbing of the scope. Includes a 1.25" eyepiece adapter and push-button hand controller. Asking \$195 - contact Jim McSheehy 243-2887.

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## **UPCOMING EVENTS**

Please note that all event dates and times are subject to change. Check our web site at:

<http://www.wcacastronomy.org>

or our Yahoo group calendar at:

<http://groups.yahoo.com/group/WCAC-Group/cal>

for the latest information

- March 6<sup>th</sup> Monthly club meeting at 7 PM  
Topic: "The Discovery of Neptune"
- March 17<sup>th</sup> Messier Marathon at the Saddlehorn observing site (Colorado Nat'l Monument)
- April 3<sup>rd</sup> Monthly club meeting at 7 PM  
Topic: TBA
- May 1<sup>st</sup> Monthly club meeting at 7 PM  
Topic: TBA
- June 5<sup>th</sup> Monthly club meeting at 7 PM  
Topic: TBA
- June 15<sup>th</sup>-17<sup>th</sup> Colorado West Star Party 2007  
Annual club star party at the Uncompahgre Plateau observing site

### **Did you know?**

Earth is the only planet whose English name does not derive from Greek/Roman mythology. The name comes from Old English and Germanic. In France however, it is sometimes called "La Terre."

and corrector plate and Charlie put some super-sticky, no-drip grease on the sliding tube that allows the mirror to move. Everything went together easily (even Wyle's spring) and the scope was back at Loma in less than four hours. Ricky wasn't through with our friends at Meade though. He called their tech support line and told them we solved the problem - - all it took was a bigger hammer to finally get that rear cell off!

### **November General Meeting**

Our November Meeting was convened at Sherwood Park where club members set up scopes for public viewing.

### **December General Meeting**

Dave Copley showed photos of October's exciting Loma Telescope Repair Mission (NASA eat your heart out!), and announced a January 17th date for the scope's public unveiling after the recent repairs and refurbishment by WCAC members. A "Let's freeze our butts off" observing session was scheduled for the Saddlehorn site on December 23rd, at o-dark-thirty. Nominations were opened for club officers in anticipation of next month's elections.

Our much maligned, former planet Pluto was the topic of Dave Copley's presentation. He described the history of its discovery and showed us some of his photographs of the elusive orb. [Ed. Note: In 2006, the astronomy community collectively dissed this faraway rock and officially stripped it of its status as a planet. But WCAC would have nothing to do with this slight, and by voice vote reaffirmed Pluto's status as a planet in *our* skies.]

### **2006 IDA Report**

Aaron Reid - WCAC

At the beginning of the year 2006 the idea of visiting all astronomy clubs in the state was set into our goals for the Colorado Section of the IDA. It became a largely successful year. In March several of our section members attended the Annual General Meeting in Tucson, including Nancy Clanton, Leslie Lipstein, Aaron Reid, and Dr. Robert Stencil.

We attended the Silverthorne area on Earth Day 2006 despite the lacking power tools of the internet to advertise the event we had a good go of it. Nearly 300 people were at that event, bringing great exposure to the orga-

nization. We helped a local hardware store owner adapt Night Sky friendly outdoor lighting products. Several people knew of the IDA, yet were not familiar with the Colorado State section itself. They are now and want us to return next year.

Early April the website is lost, and appeared to be 'smut' hijacked. Ray Kaville noticed its improper content and put a complaint in with Emily Smit in Tucson. The problem was frustrating but swiftly corrected. We purchase a new domain name and will maintain it locally via the Western Colorado Astronomy Club for the next several years. After getting that fiasco rectified we had a chance to rebuild the section's website and reopen it. We made several announcements to that effect. We had a number of people Google it intentionally to gain our ratings back. The only way to access the old, no good site is to type in the previous and now incorrect URL. Bob Gent, David Crawford and the staff at the Tucson office also helped and corrected the links they had.

May 2006 came around and we made arrangements to have the portable "Saving the Night" display shipped to headquarters in the Denver area to use at forthcoming events. Teresa from the Tucson office made this a seamless process. It is the one that stands around 5ft tall and is similar to the big one used at AGM. As it turned out a gentlemen in Florida didn't need it until the second week of August. So we ended up using it for the intended May 15th Audubon Society meeting in Grand Junction as well as two Astronomy Club presentations and our big stop at the Vail Symposium. An estimated total of 1000 people viewed the portable display.

We tried to get some more of the "Nighttime Lights of Earth" posters printed up, but the file we did receive was under exclusive copyright agreement, and finding an affordable printing outfit was not an easy task. The main IDA office wasn't too keen on underwriting the costs in tandem with the Colorado section, so at this point the project is in hiatus. New satellite imagery is due out soon and hopefully more posters to follow. We've had a handful of requests from folks willing to purchase them to use for outreach.

In the middle of July we convened to the central part of the state to speak at the Vail Symposium about light pollution, with a star-party afterwards. Nearly 150 residents attended the event. TV interviews, radio

spots and local papers carried the story. Also in July we spoke with resident Jerry Bushong, on a light that needed some remedying, in southwestern Colorado. We told him the procedures to take to get the lights in to conformance. In September the Ken-Caryl Ranch Master Association, of Littleton, CO is the newest of IDA Contributing Organizations in our state.

In October we went to Aspen upon invitation for the Windstar Group which targets a variety of environmental issues. It was started by the late John Denver. We encouraged membership in the IDA. They want us to bring the displays back next year and to speak. We came upon this event with notice from one of the IDA-Alabama Coordinators, Brandi Smith.

We visited with a half-dozen astronomy clubs statewide in an effort to bring more awareness and to get those clubs more involved in the process. As Dave Crawford once said, "Without astronomers, then who?" With the traveling display and the Power Point presentations we informed folks of the potential to make a difference. We gave some assignments out as well. Nomination forms for good and bad lighting installations. We also did the "rate a fixture" quiz finding out that folks are pretty aware of what type of fixtures can be consequential to the light pollution problem. Those Clubs included: The Denver Astronomical Society, Colorado Springs Astronomical Society, and Northern Colorado Astronomical Society; in Fort Collins, and the Western Colorado Astronomy Club; in Grand Junction.

We did a two of astronomy talks for Boy Scout groups, and donated the Bob Crelin book *There Once was a Sky Full of Stars* to the libraries at those two schools. We also saw too it that the book got some statewide exposure, by requesting it at book sellers and bringing it with us to meetings and academic events.

Ski season in the Colorado Mountains debuted with the addition of a new resort just west of the metro Denver Area, and Echo Mountain Park is using controlled lighting for their nighttime skiing installed by Clanton & Associates. The effect is charming without excessive spill light.

The end of the year saw light-pollution mentioned in articles published in Grand Junction's newspaper *The*

*Daily Sentinel*, and the topic was brought up of the possible effects in the neighboring state of Utah, and in the Canyon Lands and Arches National Parks where new drill rigs may unwittingly brighten the pristine skies. Other parks in the shadow of possible unregulated lighting are Dinosaur National Park, Mesa Verde and the Colorado National Monument. The Monument has since corrected its lighting and is doing its part to preserve the nighttime environment. We have before and after photos and will show them at upcoming events.

For a copy of this IDA report and a more comprehensive review and successes not summarized here please view the exclusive site generously hosted by the Western Colorado Astronomy Club @ <http://www.wcacastromy.org/coloida.html>

### **Astronomy Classes at UTEC**

*Jeff Dershem - WCAC*

I'm offering a couple of basic astronomy classes through the Mesa State Community Ed. at UTEC again this spring. It's been a bit of a dry spell for me (don't know whether interest in the subject has just dried up, or what) but I really hope I can garner enough interest to teach at least one class this spring.

Anyway, here's what I'm offering:

Wonders of The Night Sky is my old stand-by of many years now. It's designed for those who are interested in getting a telescope or binoculars and actively pursuing the hobby of astronomy. I cover how to buy a telescope or binoculars, how to use them, telescope accessories, how to read star charts, learning the constellations, and more. Plus I take the class out for an observing session at Rabbit Valley overlook.

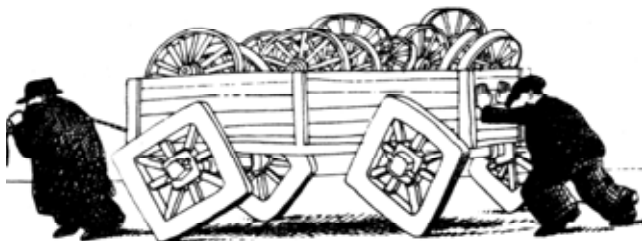
Astronomy Basics is a new offering that covers the history of discoveries in astronomy from the early cosmologies of Aristotle to modern ideas about dark matter and dark energy. No tests. No grades. Perhaps best of all NO MATH! Just relax and soak up the knowledge. Suggested text is *Astronomy For Dummies*. Young or old, if you've ever been curious about what astronomers know about the universe and how they know it, then this is the class for you.

I'm also giving the presentation to the Western Colo-

rado Astronomy Club on Tuesday, March 6 at 7 p.m. at Mesa State College in the Wubben science building. My topic will be The Discovery of Neptune. Neptune was the first planet whose existence was predicted before it was ever seen in a telescope. Two men (independently of one another) did the calculations that allowed those with the telescopes to point them at the proper place in the sky. So who should get the credit for Neptune's discovery? All ages and interests are welcome.

Hope to see you at one or all three. For more info on the classes (both start the first week of April), or to sign up call 255-2800, or visit the UTEC campus at 2508 Blichmann Ave., Building B. Pass this on to anyone you think might be interested.

### ODDS & ENDS

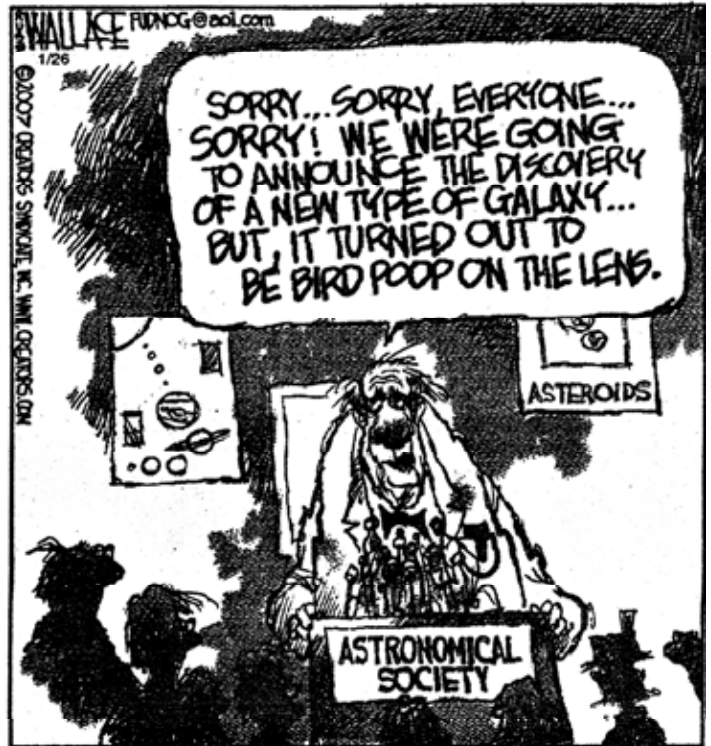


### Outer Space Is A Funny Place

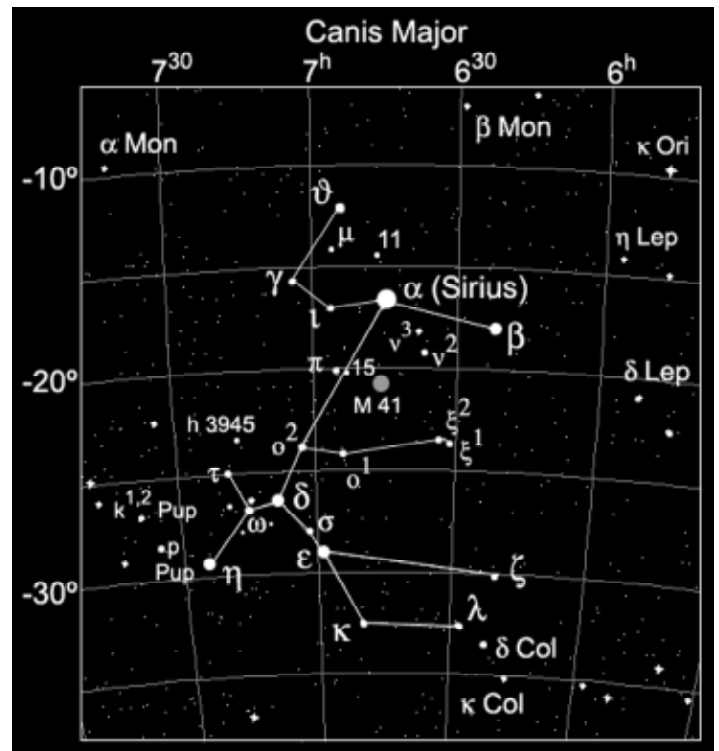
NASA's "Smaller, Faster, Cheaper" initiative attempted to reduce the complexity and cost of spacecraft by using commercial, off-the-shelf components and software instead of the highly specialized, super expensive stuff found in earlier probes. When a prototype Mars rover wouldn't accept any commands, engineers opened up a cover and looked at the rover's built-in display. On the screen it said: "PRESS ANY KEY TO CONTINUE".

You've probably heard about the Mars Pathfinder probe. After it landed on the red planet, pathfinder released the sojourner rover, a little laboratory on wheels. It turns out that sojourner and pathfinder used two standard, off-the-shelf 9600 baud radio modems to communicate. According to Jet Propulsion Laboratory program manager Donna Shirley, the modem manufacturer warned JPL that sending the modems to Mars would void the warranty.

### NATURAL SELECTION by Russ Wallace



from Jim Maddox



Canis Major, the largest of Orion's two hunting dogs, might be chasing Lepus, the Rabbit, who is just in front of him. The Athenian New Year began with the appearance of Sirius. He was seen as two-headed, like the Roman God Janus: looking back at the past year and forward to the new one.

Application for Membership in the Western  
Colorado Astronomy Club

New \_\_\_\_\_ Renewal \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

TEL: Home ( ) \_\_\_\_\_ Work ( ) \_\_\_\_\_

E-mail: \_\_\_\_\_

Occupation: \_\_\_\_\_

Other Interests: \_\_\_\_\_

\_\_\_\_\_

How did you hear about the club? \_\_\_\_\_

\_\_\_\_\_

**Please Circle all that apply:**

Regular Membership: \$35 \$ \_\_\_\_\_

Associate: \$15 (age 22 and younger) \$ \_\_\_\_\_

Astronomy Magazine \$34 \$ \_\_\_\_\_

Sky and telescope Magazine \$32.95 \$ \_\_\_\_\_

Donation to Colorado Astronomy \$ \_\_\_\_\_

Day events at Lincoln Park \$ \_\_\_\_\_

TOTAL \$ \_\_\_\_\_

Please make checks payable to Western Colorado Astronomy

Club and mail with form to: WCAC Treasurer, PO Box

55032 Grand Junction CO 81505

***Don't miss our monthly meetings!***

The Western Colorado Astronomy Club meets on the first Tuesday of every month at 7 PM, and all members, invited guests, and visitors are welcome. Meetings are held at Wubben lecture hall on the Mesa State College downtown campus (1175 Texas Ave.). For additional information and directions, please visit our web site at:

<http://www.wcacastronomy.org/>

Western Colorado Astronomy Club  
PO Box 55032  
Grand Junction CO 81505

Address Correction Requested