



The Spectrum

Newsletter of the Western Colorado
Astronomy Club



Members of the Astronomical
League, MARS Region



Members of the International
Dark-Sky Association

President's Message

As we approach our Annual Star Party, things are starting to come together. Thanks to Jim Maddox, we are already receiving donations for our raffle. Blanche and Jim are also contacting past attendees with an invitation to this year's event.

Our refurbish efforts for the Loma Observatory have run into a few snags. The telescope has some "issues" that may need repair or replacement parts. The building is weather worn and is not much protection for the telescope. All issues seem resolvable but may take funds the school district may be reluctant to provide. A big thanks got to Jim Maddox, Jim McSheehy, and Ricky Smith for their efforts on the Loma Observatory.

Comet 73P/Schwassmann Wachmann 3 is breaking up! It is now a collection of 19 fragments. If the weather will clear, I plan on trying a look. It is passing through Corona Borealis and headed for Hercules.

Clear skies!

Dave Copley, President WCAC

Club News and Events

March General Meeting

Our March meeting included updates on the star party planning and a presentation by Dave Copley "Using a Telescope".

Saturn and Planets Public Viewing

Jim Maddox - WCAC

March 4th turned out to be a successful night for the local astronomy club doing a public viewing of the moon

and planets at Sherwood Park. More than 30 members of the community showed to take a peak and what eight WCAC members could muster on their personal equipment after 7 PM. President Dave Copley gave everyone a great peak at Saturn, it's rings and several of its moons. Charlie Liggett was right beside him working his gear as well. Jeff Dershem and James Maddox were also on hand, with several others, giving both the kids and the adults what they came for – a clear sky and some personal time on an eye piece.

The weather finally cooperated and gave us reasonable viewing conditions and not too cool an evening than was comfortable for all to handle. There was hot chocolate and cider and cocoa for those who needed a quick warm-up, complete with some very tasty local Girl Scout cookies. Best reaction: a young boy who finally got to see the moon up close and personal on a pair of stand mounted binoculars. Let's hope we lit a fire in that child's mind to want to see more, both at school and perhaps in a future astronomy club of his choosing later in life.

April General Meeting

The April WCAC meeting featured a tag-team presentation by Dave Copley and Jeff Dershem. Dave filled us in on the doings at Loma observatory with a slide show highlighting the efforts of the Loma Observatory SIG members who cleaned up the optics on the 16-inch Meade and began repairs intended to make the facility operational again. Dave had numerous photos of the scope and building and it all emphasized the potential this scope offers to the club and school district 51. Jeff Dershem followed with a historical overview of developments in telescope optics from the simple refractors

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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 atop of the Grand Mesa 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

WCAC OFFICERS 2005

President	Dave Copley	242-1721
Vice President	Ricky Smith	858-9936
Treasurer	Blanche Godel	242-1721
Secretary	position open	
Community Liaison	Jeff Dershem	243-1351
Newsletter Editor	James McSheehy	243-2887
ALCOR Representative	Aaron Reid	216-5744
WCAC Historian	Vicki Foster	434-8456

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

Did you know?

Venus is the only planet that rotates clockwise on its axis. Amateur astronomer Charles Boyer first estimated the length of Venus' day as 240 Earth days. Years later NASA confirmed it at 243 days.

ASTRO-ADS

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

* Vixen Super Polaris (SP) German equatorial mount with adjustable height, rigid wood tripod. Has good vibration dampening characteristics for imaging and can handle scopes up to ten pounds. Includes polar alignment scope, single axis (RA) drive w/controller, manual slo-mo controls, and counterweight. \$250 - contact Jim McSheehy 243-2887.

UPCOMING EVENTS

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

www.wcacastronomy.org
for the latest information

- May 15th Jim Skinner and the Grand Valley Audubon Society are sponsoring "The Dissapearing Night Sky", a program to address light pollution issues in the area. This event will be held at the Whitman Building next to the Museum of Western Colorado, at 7 PM.
- May 19th Observing Session, Open House, and Fund Raiser for the Loma Observatory Please attend and bring your friends to Loma Elementary School at 8:30 PM
- June 23rd - 25th Annual Star Party on the Uncompahgre Plateau - SIGN UP NOW!
- July 3rd BBQ and viewing session at Jim McSheehy's place (WCAC members and their families only please). Food & soft drinks provided, BYOB(eer).

NO JULY GENERAL MEETING (due to holiday)

- August 1st Monthly club meeting at 7 PM
Topic: TBA
- September 5th Monthly club meeting at 7 PM
Topic: TBA (Aaron Reid?)

built in the 15th century to the multi-mirror monsters on drawing boards today.



Dave Copley has been busy snapping great photos of Comet Schwassmann-Wachman as its many fragments pass through the constellations Corona Borealis and Hercules

Comet Schwassmann-Wachman

The photo above shows a fragment of Comet Schwassmann-Wachman (73-P). Dave used a digital camera on his 10 inch Newtonian and a 32mm eyepiece (afocal projection). The exposure time was 16 seconds.

Loma Observatory Open House & Fundraiser

The Loma Observatory SIG has organized an open house and fundraiser for May 19th (dusk) at Loma Elementary School. We plan to re-introduce faculty, students and parents to the recently cleaned Meade 16-inch scope and the observatory building. Both need some additional TLC to become fully functional again, and to raise the needed funds, we will solicit donations from those attending the event. WCAC club members can set up their own scopes next to the building so the kids and parents have a chance to view many different objects in the sky. Please plan to attend this important event for the club and school district 51, and if possible make a (tax deductible) donation so we can get the big scope up and running at 100% again. The site is easy to find, just take I-70 West to the Loma exit, and then drive North on Hwy 139. After you cross the RR tracks, look for the elementary school on your right. The observatory building is on the North side of the school next to the parking lot.

Colorado West Star Party Update

Everything is starting to come together for our an-

nual star party June 23rd-25th at the new site in the Uncompahgre National Forest. The Forest Service has approved our application, and through the efforts of Jim Maddox and Blanche Godel, the raffle prize pool now has over \$1,000 in donations from many generous merchants and sponsors. Now all we need is your smiling face to make this one of the best events ever. By all means plan to show up at this beautiful location next month, and if you can, volunteer to assist with the set up on Friday, and the tear down on Sunday.

CLEANING TELESCOPE OPTICS

Like anything else we look through, our telescopes, binoculars, and eyepieces will eventually get dirty enough that we will want to clean them. But before you reach for that bottle of Windex and a paper towel - STOP! That lens, corrector plate, or mirror is not just an ordinary piece of glass, and before going any farther down the path we should remember the first rule of medicine -- do no harm. A bad cleaning can actually make the situation worse than if you had simply left the dirt in place. Optical surfaces are polished to a high degree to remove all traces of scratches that can scatter light and reduce contrast. The last thing we want is to ruin this polish by dragging abrasive dirt across the surface. Mirrors have the added concern of a metal coating that is hundreds of times thinner than a human hair. This coating is easily scratched, and some chemicals can actually dissolve or oxidize it and reduce the reflectivity.



Improper Cleaning Can Ruin Optics

Lenses and eyepieces are usually coated to reduce reflections, and while this coating is much harder than the metals used on mirrors, it can also be damaged by improper cleaning.

Many people buy a brand new telescope and shine a flashlight into their optics to check things out. Almost all are horrified at what they see! How could their nice new toy look so awful, and where did all that dirt come from? The “flashlight test” is probably the most misleading way to look at optics because it emphasizes every mote of dust and exaggerates the amount present. No optic should ever be cleaned because it fails the flashlight test!

OK, so when should a lens or mirror be cleaned? The best answer is *as few times as possible*. But if you must clean, here are some guidelines for the process:

1) First remove dust and other large particles with a bulb blower or a clean camel hair brush. Avoid “canned air” because some of these have oil or other contaminants in the propellant and they will leave streaks on the surface. Never rub the optic with a dry cloth, even the so-called lens cloths.

2) The next step involves a solvent or soap to loosen and remove dirt that is bonded to the optic. Many parts of telescopes and eyepieces are now made of plastic, so be extremely cautious when using organic solvents like acetone. They are highly flammable, can attack plastics and paints, and even glue moving parts. Only use these solvents in a well ventilated area and away from flames of any kind.

There are three types of mirror coatings used in amateur scopes. The first is pure, bare aluminum. This surface develops a thin AlO₂ coating on its own, but it is extremely fragile and even damp cotton can scratch it. Fortunately it’s not used often in amateur scopes. The second type of aluminum coating is overcoated with a layer of SiO₂ (quartz) and this does a much better job of protecting the aluminum from damage. The third type of coating uses no aluminum at all. Instead it is made up of dozens of layers of metal oxides and this makes it extremely durable with reflectivity up to 99%. This type of coating is expensive and typically it’s used only for smaller mirrors found in diagonals.

Aluminized mirrors are best cleaned in distilled water with a few drops of dish detergent like Dawn added to each quart. Never use any alkaline cleaner like ammonia (Mr. Clean, 409, etc.) because it will dissolve aluminum and ruin your mirror! Submerge the mirror and then use a swab of surgical cotton (Bandaide aisle) to gently (barely touching) clean the surface. Be careful not to bang the edges of your mirror against anything because they chip easily. Rinse the mirror several times with distilled water and stand it on edge to dry. A few water spots might remain after drying -- leave them be -- do not try to remove them with a dry cloth.

Coated lenses are cleaned using the drop-and-drag method. This involves pure alcohol or acetone (not the kind with oil in it that women use for their nails!). Place the lens on a piece of surgical cotton. Next, wet a piece of lens tissue with the solvent and shake off the excess so it no longer drips. While it’s still wet, lay it flat on the lens and then using two corners, pull it slowly across the surface of the lens. The tissue will pick up dirt and oil, and if it’s done properly, no residue will remain.

For eyepieces with plastic parts that can’t stand acetone, the same drop-and-drag method can be used with a good commercial lens cleaner like Bausch and Lomb or similar. Use as little solution as possible to keep it from wicking into the assembly.

For a single fingerprint or smudge, a surgical cotton pad can be moistened with alcohol, acetone, or lens cleaner and then gently swabbed across the surface to remove the spot.

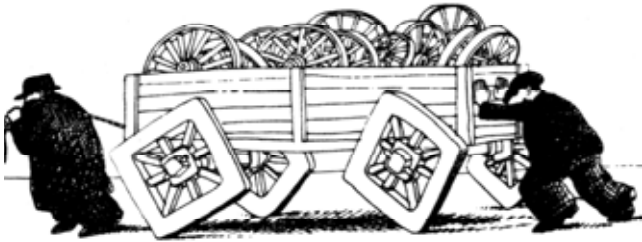
That covers the basics of cleaning optics. Here is a list of combinations to avoid. This is by no means all inclusive, and I’m sure there are other combinations just as bad. Remember the less you clean an optic, the better!

Cleaning Combinations to Avoid

Cleaner	Type of Optic
Alcohols	Aluminized Mirrors
Acids	Coated Optics
MEK, TCE	Coated Optics
Any Cleaner	Unprotected Aluminum

Goodbye Orion, Hello Spring

ODDS & ENDS



The Loma Observatory is Shaping Up!

We finally powered up the 16-inch Meade LX-200 scope installed at Loma and fortunately there are no major problems, even after two years of relatively poor storage conditions in the drafty, dusty building. While Ricky Smith was putting the scope through its paces, the hand control box for the goto mount developed a problem with the “South” button. This is a minor glitch, but it requires a factory repair that will cost at least \$75 (don’t forget the fundraiser on 5/19!). Jim Maddox added a tie down strap to prevent the roof from taking flight if a sudden gust of wind shows up while it’s open. We even have a couple of pieces of “furniture” in the building now so there are places to put stuff other than the floor. The Principle of Loma Elementary School, Ms. Lesley Whitacre has given her blessings to WCAC plans for improving the facility and making it an asset to the school district.

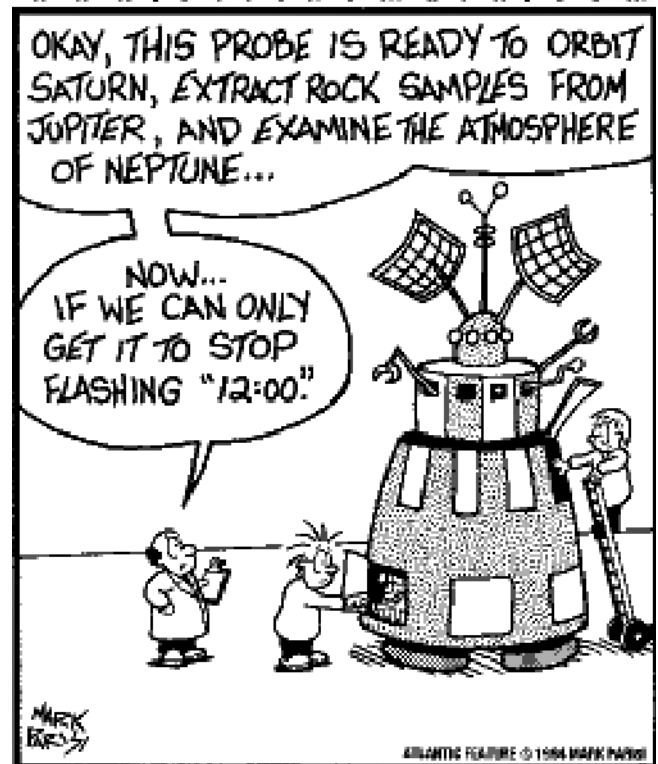


Loma Team Leader
Ricky Smith
Inspects the Mighty
Meade

Our old friend Orion is setting in the West now when it really gets dark. That and other unmistakable signs tell us it’s springtime in the Valley once again. One of my favorite sights is snow on the Bookcliffs. Add to that a nice bright Moon and some colorful clouds and it’s not hard to understand why folks like living here.



off the mark by Mark Parisi
www.offthemark.com



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 \$34 \$ _____

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