

President's Corner



We in astronomy tend to think about time in terms of millions or billions of years, so the occasional reminder of lesser temporal increments brings our feet back to the ground. The year. The decade. The half-century -- ah, the half-century. Here we are, the DAS, at 50. Much has changed in our world in its fifty

spins about the Sun; technology, as always, has improved, simplified, lengthened and raised the rpm's of our lives, for better and for worse. We constantly search for the "happy medium," only to be coerced, prodded and subliminally led back into the race, like it or not. We like it, not.

Stop for a moment, if you will, and give thought to the wonder that is what we, as the DAS, do -- we search the sky for secrets, photograph its depths for beauty and enthuse the novice with its sheer existence. How simple, quiet and calming it is, this thing we do. And never before has what we do been so very important, to ourselves and to the people to whom we introduce the sky. We live in a time where the unthinkable is growing steadily toward becoming the norm and there must be examples of what things should be.

We are the examples.

Our 50th year is simply that, to be sure. A milestone? Yes, in this age of turnover and rearrangement, 50 is nothing to sneeze at. We must, though, in our quiet way, be very proud of the work we do to provide an alternative to what life has become filled with; tension, stress and suspicion.

It is my very great pleasure and honor to know the members of and serve the DAS. We do something that should give us all a wonderful peace; a very natural thing as old as humanity -- we look to the sky and wonder and encourage as many as possible to do the same. How could we do more or better than this?

We can't.

I thank you all for your unfailing efforts to teach, amaze and enthrall. There is so much good in what you do. Give that some thought as you watch the face at your eyepiece light up. Happy 50th.

Steve Solon

SCHEDULE

April

2 General Meeting at Olin Hall, rm 105, DU, beginning at 7:30. **Speaker: Dr. John Bally of CU at Boulder.** Topic is "Massive Star Formation."

17-18 Dark Sky Site Weekend: Alternative Messier Marathon

24 Open House, 7:30 pm, Chamberlin Observatory

30 8:00 PM E- Board meeting, Chamberlin Observatory

May

7 General Meeting at Olin Hall, rm 105, DU, beginning at 7:30. The speaker is Jeff Vancleve from Ball Aerospace. Topic is; "The Spitzer Space Telescope" (formerly SIRTf).

13-16 **Desert Sunset Star Party; see page 6**

15-16 Dark Sky Site Weekend

16-23 Texas Star Party

21 8:00 PM E- Board meeting, Chamberlin Observatory

28-30 RTMC

29 Open House, 7:30 pm, Chamberlin Observatory

The speaker for May 7th will be Jeff Vancleve from Ball Aerospace. His topic will be " The Spitzer Space Telescope" (formerly SIRTf).

The DAS 2nd quarter participation prize is the Astronomy Encyclopedia by Oxford Press.

Frank T. Mancini, V.P.

AstroQuiz

Q. What is the smallest of the eighty-eight constellations?

-Answer on page 7-

Mountain Astronomers Rendezvous and Starparty
 P.O. Box 55052 Grand Junction, CO 81505

Registration

Name _____

Address _____

City _____

State _____, Zip _____

Bringing a scope? what size? _____

Camping? tent _____ Trailer _____ Camper _____ Motorhome _____
 Size _____ ft.

Number in party over 16 _____, 10 to 16 _____, under 10 _____
 @30.00 @20.00 free

Total remittance _____ send to above address

Member? _____
 WCAC _____, MARS _____, AL _____, IDA _____, ASP, _____
 Other _____

When you arrive you will be given a package containing a commemorative T-shirt, a badge, a ticket for Saturday evening's dinner, and assorted papers and reading materials. Friday night we invite the public for general viewing from dark to midnight, we do or we don't get the site. All other times are ours. While we can't be absolutely sure of clear skies this time of year is usually very good. Due to the large number of lakes and ponds on the Grand Mesa we sometimes get a large number of insects be prepared..just in case.

Normal Star Party protocols will prevail, lights out at sundown, red lights after dark. Thank you for visiting this website and your interest in the MARS starparty, hope to see you there.
 Carlo Godel Pres. WCAC



V.P Frank Mancini (left) and Ron Mickle at the Annual Banquet

DAS Participation Prize Winner

Congratulations to Ron Mickle, 1st quarter DAS Participation Prize Winner.

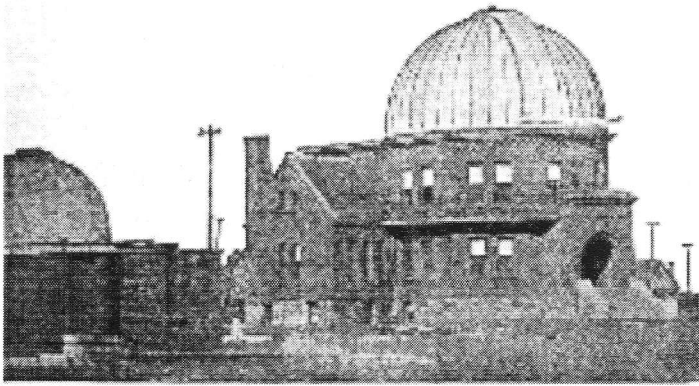
Ron Mickle has been a DAS member for 5 years. During that time he has managed to pile up quite an impressive record. Ron is a member of the Executive Board, a Public Night Operator of the historic Alvan Clark 20" at Chamberlin, the Lead Operator responsible for monitoring the training of new operators, scheduling teams for Public Night, continuing education and re-certification for the operators, as well as helping out with other DAS events. In his spare time, Ron is working on a Masters Degree in Astronomy thru the Center For Astrophysics at Swinburne University.

The prize awarded to Ron when his name was drawn at the DAS Spring Banquet, was a pair of 8 x 32 WP Canon Binoculars. You can become eligible for a participation prize by volunteering for Public Nights, Open Houses, school star parties, clean up days at Chamberlin, or work days at the Edmond G Kline Dark Site. Just ask an E-Board Member for a participation slip and their signature, and you could be the winner at the next quarterly drawing.

Frank T Mancini

Chamberlin History

By David Shouldice



As a telescope operator for the Public program, I have developed a deep interest in the history of the Chamberlin Observatory. The information available to me at first was a 5½ page handout and the talks of the public night lecturers. With a little research, I found that the diaries of the first director, Herbert Howe, were in the DU library. With time, help from the DU librarian and the loan of books from a number of club members like Todd Hitch, Dan Wray and Ivan Geisler, I have begun to accumulate significant information about the early years of Chamberlin Observatory. With the added information in Dr. Bob Stencel's new book, a better view of the background of the people, the astronomical research done at the observatory and its creation is now available to those who are interested.

I want to use this column to share some of the insights given by Howe as he created the observatory, and introduce you to the people, the components and stories of the people and the times.

Being armed with a daily diary gives one much insight into Howe and his life, but I admit that I can still only guess at how history happened. I will give you my perception of the data, or quote others when possible. I have tried to exclude incorrect accounts that have been quoted from newspaper stories, for example, when I had access to a better source of the data. I invite you to send me any anecdotes you have heard, or to give other points of view.

The Beginning:

On Feb 7, 1888, Chamberlin Observatory began as the result of a gift by Humphrey Chamberlin. Chamberlin, a philanthropist, land developer and speculator made an offer to build and equip an observatory for DU. The fledgling university and the vision of Her-

bert Howe, a 29 year old professor, began a four year path that would transform the empty university land into an operational observatory. The timing of the gift was unfortunate, as the creation would struggle through a deep countrywide depression that created severe financial problems both for the new university and the donor. Chamberlin, a multi-millionaire before the depression, was financially wiped out. The debt still due on the telescope and lens landed squarely on the young Howe's shoulders. But, in spite of the added challenges of the large debt, his teaching responsibilities, and a new family, Howe was victorious.

Excerpts and information used with permission from: "Denver's Pioneer Astronomer, Herbert Alonzo Howe" by Herbert Julian Howe and Robert E. Stencel – 2003

Next: The young Herbert Alonzo Howe

The following article is offered by Ron Mickle, Denver Astronomical Society for reprint by permission of the authors and the International Dark Sky Association.

PART 2 of 3

The Aging Eye

by Joan E. Roberts, Ph.D. [Professor at Fordham University, NY] and Naomi Miller [Naomi Miller Lighting Design, NY]

Continued from March issue

Behind the iris is the lens, which focuses light onto the retina. Focusing requires the actions of the ciliary muscles. As these muscles age, the lens becomes rigid and you may find it difficult to focus on close objects. Fortunately, reading glasses can correct this problem, known as presbyopia.

A more hazardous age-related change also occurs within the lens. The lens is clear when we are young and yellows with age. This yellowing is caused by changes in a protective pigment. It's supposed to prevent damage to the lens by absorbing ultraviolet A and B radiation and releasing that energy in a safe way. At 40, this pigment changes; it continues to absorb UV A and B light, but instead of releasing the energy safely it releases it in a way that causes damage to the lens. After one or two decades, the accumulation of this light damage leads to age-related cataracts. To prevent this damage, anyone over 40 should wear wraparound sunglasses that block both UV A and UV B radiation.

Even before the full cataract is formed, the clear lens becomes cloudy (a process called opacification). An individual might notice that his or her vision isn't as clear as it used to be and that more light is needed for reading. As opacification grows, colors become distorted, edges and details become less distinct, and sources of glare appear larger and obscure more of the field of view.

The vitreous humor, which is a clear gel, supports and attaches the retina to the back of the eye. With age, the gel becomes fluid which may lead to retinal detachment and blindness. Less dangerous, but still annoying, are “floaters” or clumps of sticky vitreous humor that can appear as particles floating across your line of vision. Unfortunately there are no quick solutions for these vitreous problems.

Most age-related changes to the retina occur to the photoreceptor cells (rods and cones). Those are the cells that receive light and transmits signals to the brain. Age-related changes in the rods make it more difficult for the elderly to see in the dark, primarily through the loss of dark adaptation. Changes in the cones result in loss of the ability to distinguish colors, especially blue, which appears to be gray. The retina is also slower to refresh the visual image, so afterimages persist and obscure important details longer.

Behind the photoreceptor cells are the retinal pigment epithelial (RPE) cells, which feed the photoreceptor cells. The nastiest age-related change is the accumulation of fluorescent pigments (lipofuscin) in the RPE cells. These pigments absorb visible blue light and make active oxygen, which causes the destruction of the retinal pigment epithelial cells. Thus, central vision is lost but not peripheral vision. This destruction, known as macular degeneration, is the leading cause of blindness in people over 55 years old. Although there is no cure, increasing the intake of the antioxidants mentioned above and blocking visible blue light with wraparound sunglasses can dramatically slow down the progress of this blinding disorder.

So in the end, while you can't stop Mother Nature, you can take personal precautions to save your aging eyes. Designers and engineers can be of great help if they keep these age-related ocular changes in mind when designing both indoor and outdoor facilities.

To Be continued

[Article provided to the International Dark Sky Association by courtesy of the authors, Joan E. Roberts, Ph.D. (Professor at Fordham University, NY) and Naomi Miller (Naomi Miller Lighting Design, NY)]

APRIL (Aprilis) SKIES 2004

By Ron Mickle

During April, Venus continues to be visible more than 3½ hours after sunset in the western sky. According to the *Astronomical Calendar 2004*, Venus will brighten to an apparent magnitude (m_{vis}) of -4.5, transitioning through its phases from ½ illuminated to ⅓. This view of Venus will repeat itself, but not for another eight years, so enjoy it while you can.

On April 25, Mars ($1.5 m_{vis}$) will have decreased its apparent distance from Venus to just 5½°, with Saturn

($0.2 m_{vis}$) and Jupiter ($-2.3 m_{vis}$) will still be high in the sky. In addition to this quartet of planets, the moon will start its eastern movement through the sky beginning low on the horizon April 20 in a thin crescent and progressing past Pleides, Hyades, Venus, Mars and, on April 24 near Saturn.

What to look for?

When viewing Jupiter, observe the four Galilean moons and remember that the four moons are so bright that if Jupiter were removed from view, the four moons would be visible to the naked eye. As for the Jovian giant, look for the belts and zones encircling the planet.

The highlight of Saturn is, of course, its rings. The two most visible rings, A & B, are separated by the darker Cassini division. The globe of Saturn has belts and zones running east-west, but they are less noticeable than those of Jupiter. When the observer's eyes are dark adapted, they should be able to make out the subtle hues of the zones.

To get a great view of the planets, stars, and other celestial objects, visit the Denver Astronomical Society's Open House at sunset on Saturday, April 24 at the University of Denver's Historic Chamberlin Observatory. Remember that members of the Denver Astronomical Society have free access to the Clark 20" at Chamberlin Observatory during Open House.

- 4.....Change clocks, “spring forward” to Daylight-Savings
- 5.....Full Moon (also called the Grass Moon or Egg Moon)
- 11.....Easter Day & Last quarter Moon
- 19.....New Moon
- 27.....First quarter Moon

*Astronomical Calendar 2004
Astronomy Magazine, April 2004*

DAS Member Needs Ride to Meetings

One of our members needs someone to ride with to DAS meetings. She lives near 1st and Sheridan and will gladly share carpool expenses. If you can help, please email me and I'll have her phone you to work out the details. Thanks, Sandy Shaw
m6m7@earthlink.net.



Desert Sunset Star Party - May 13-16, 2004

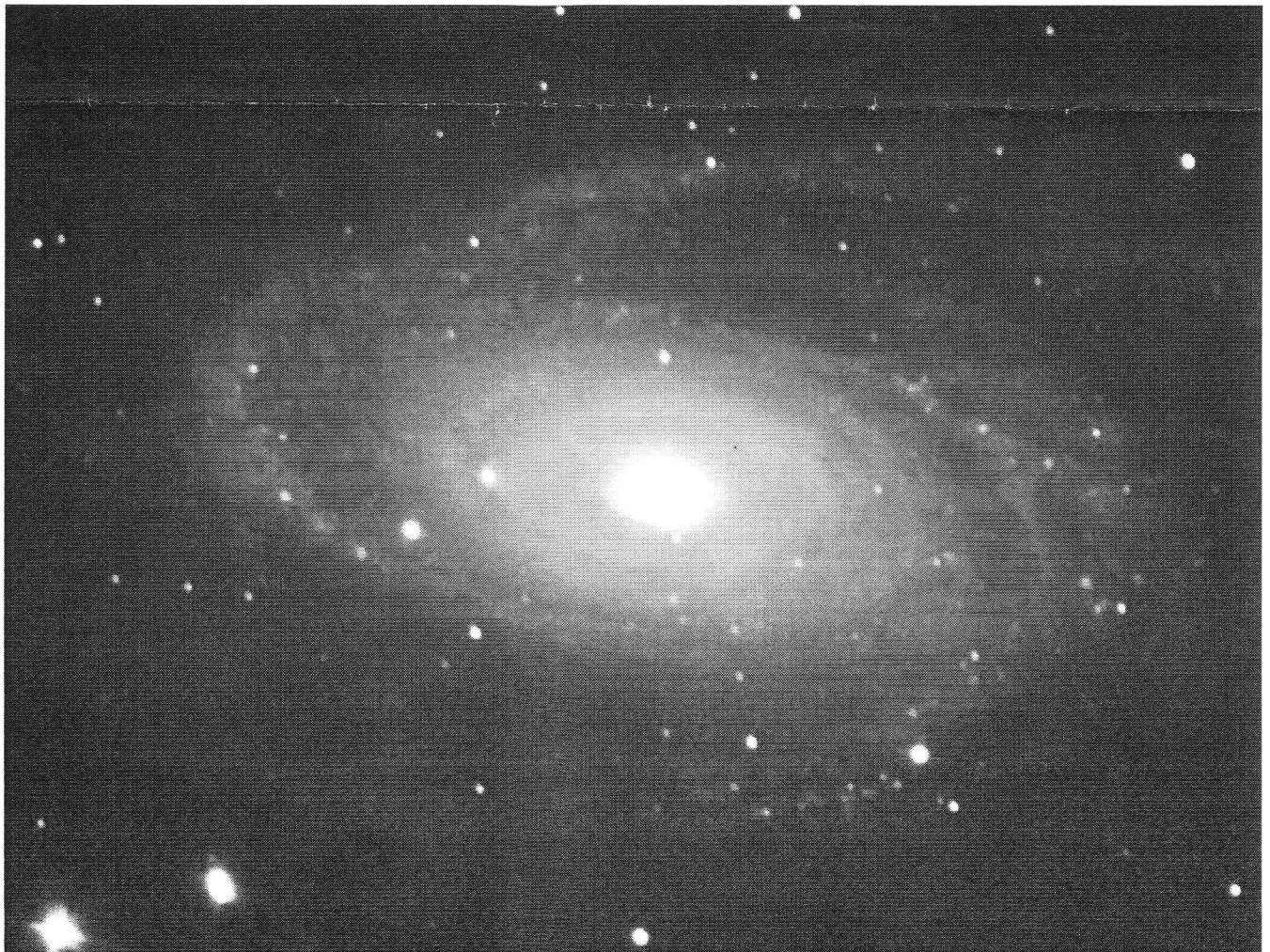
The 2004 Desert Sunset Star Party will be held at the Caballo Loco Ranch, about 11.5 miles south of Three Points, AZ, on Rt. 286, and then east for 8 miles. This RV ranch is in a secluded area of Arizona with dark skies. The telescopes of Kitt Peak are in clear view to the west.

The DSSP begins on Thursday night and runs through Saturday night. We will have a speaker on both Friday and Saturday evenings along with door prize giveaways. Registration information will be posted on the DSSP website:

<http://chartmarker.tripod.com/sunset.htm>

Pat and Arleen Heimann
<http://chartmarker.tripod.com>

M81 taken: 3-12-04 at the EGK site. This is a composite overlay of two sets of RGB exposures to decrease the size of the bright center. 18" f4.5 JMI scope with SBIG ST-2000XM CCD camera binned 2x2. Joe Gafford.



CONGRATULATIONS!

DAS member Craig F. Anderson has earned the Astronomical League's Master Observer award!

S&S
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Englewood, Colorado 80113

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AstroQuiz Answers

A. Crux, the Southern Cross, is the smallest constellation. Its stars were known to the ancient Greeks but were regarded as part of the hind legs of Centaurus, the centaur. The cross itself seems to have been first described in 1516 by the Italian navigator Andreas Corsali, who called it "so fair and beautiful that no other heavenly sign may be compared to it." The cross was used by navigators as a pointer to the southern celestial pole and was adopted by astronomers as a separate constellation by the end of the sixteenth century. Small telescopes can split Acrux, the brightest star in Crux, into two blue-white components. Other highlights in Crux include the Coalsack, a naked-eye dark nebula, and the spectacular open cluster NGC 4755, called the Jewel Box for Sir John Herschel's statement that this cluster gave him the impression of a superb piece of jewelry.

AstroQuiz is contributed by Sandy Shaw.

OFFICERS AND E-BOARD of THE DENVER ASTRONOMICAL SOCIETY

The Executive Board conducts the business of the DAS at 8 pm. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.

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About the Denver Astronomical Society

The DAS is a group of amateur and professional astronomers that share a mutual interest in the heavens. The DAS operates the University of Denver's Chamberlin Observatory, along with its prized 1894 Alvan Clark 20-inch refracting telescope. Our members have been involved with the first public planetarium at the Denver Museum of Nature and Science and the Smithsonian Astrophysics Observatory's "Moon Watch" program. The DAS successfully petitioned to have the Chamberlin Observatory listed on the National Register of Historic Places.

Our Credo is to provide members a forum for increasing and sharing their knowledge, to promote and educate the public about astronomy, and to preserve the historic telescope and observatory in cooperation with the University of Denver. To these ends we have established three tax deductible funds: the Van Nattan Scholarship Fund, the Chamberlin Restoration Fund, and the DAS Dark Sky Site Fund. This last fund was established in order to construct and maintain observing facilities near Deer Trail in eastern Colorado.

Please call our Info Line at (303) 871-5172 and drop by the General Membership meetings. Become a member and enjoy speakers, facilities, events, and our monthly newsletter, *The Denver Observer*.

Application for membership to the Denver Astronomical Society

New _____ Renewal _____

Name: _____

Address: _____

City, State, Zip: _____

Phone numbers: Home () _____ Work () _____

E-mail Address: _____

Occupation: _____

Other Interests: _____

(Associates Only) School: Grade: _____

Do you want to download the newsletter in PDF format from our website instead of by postal mail?
 Yes _____ No _____

Do you want the above information excluded from the yearly roster?
 Yes _____ No _____

Please Circle All That Apply:

Regular Membership: \$30 Associate: \$10 (Age 22 and younger)
 *****\$ _____

Astronomy Magazine/\$29
 Sky & Telescope Magazine/\$32.95
 *****\$ _____

Van Nattan Scholarship Fund *****\$ _____

Chamberlin Restoration Fund *****\$ _____

Total Amount Paid *****\$ _____

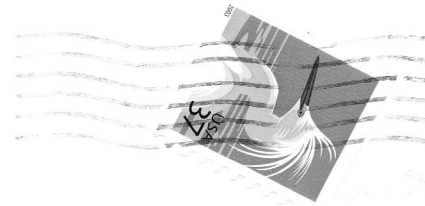
Please mail Dark Sky Site donations to: DAS Treasurer, Sandra Shaw, at the address below. (Make checks payable to the DAS Dark Sky Site Fund). Please make your check or money order payable to the Denver Astronomical Society and mail along with this completed form to:

DAS Treasurer, Sandra Shaw; 1095 Yank St.; Golden CO 80401



Denver Astronomical Society

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Membership Expires 1/1/2005

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