

# OBSERVER

Happy Holidays!



**HEART AND SOUL FOR THE HOLIDAYS**

In Cassiopeia, IC 1805, the Heart (right), and IC 1848, the Soul (left), were imaged at the Dark Site with a 110-mm Mamiya RZ lens at f/5.6 on an SBIG ST-2000XM ccd camera. Joe shot 20 minute LRGB plus 30 minutes Ha narrowband exposures, with five-minute sub-exposures.

*Image copyright 2009 Joe Gafford*

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8..... Last quarter moon

12..... Hanukkah

14..... Winter Solstice

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24..... First quarter moon

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## DECEMBER SKIES *by Dennis Cochran*

They say that Mars is coming and Jupiter's going, and Cygnus the Swan is diving into the northwest, standing the Northern Cross upright on the evening horizon. Our favorite double star, Albireo, will be buried in the twilight—or twilit—trees. As Jupiter becomes an evening dropout, (although still visible), Saturn rises at midnight. By mid-month, Neptune will be a moon's width above Jupiter. Uranus, butt of many a joke, is farther east than Neptune, in the middle of nowhere, but neatly on the ecliptic between the eastern chunk of Aquarius and the Circlet of Pisces. That doesn't make it easy to find, but it's big at 3.5 arc-seconds, one-fourth of what Mars will be at opposition. Speaking of Mars . . .

The Red Planet rises at 10 P.M. as the month begins and by 8 P.M. after Christmas. The opposition of Mars (when it's closest to Earth) happens January 27, 2010, so January and February will be the best months for viewing the world to which we have paid so much attention over the years. This time around it's not as near as before, and consequently, not as large in our scopes as at previous oppositions, only about 14 arc-seconds across. Mars will be in the faint zodiac constellation Cancer the Crab, between Leo to the east and Gemini to the west. In fact, it started drifting east last month through the Beehive Cluster, M44, and will start its retrograde motion to the west in mid-December. Look for faint trains of

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# PRESIDENT'S CORNER

We are pleased to welcome our newest members, listed on Page 7 of this edition of the *Observer*, and are happy to have you join us!

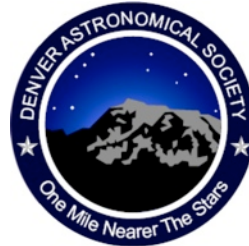
When you receive this *Observer*, the Holiday Potluck will be only days away—if we're able to get the document to the printer and mailed on time, plus the usual delay in getting the President's Corner to Patti (who does a great job of editing and making all the articles coalesce into an organized newsletter.)

The December 5th party will begin at 5 P.M. at the Columbine Unitarian Universalist Church. This is the third year CUUC has allowed the DAS to host its annual potluck at their church, located at 6724 South Webster Street, Littleton, off Coal Mine Avenue, 2 traffic lights east of Wadsworth. My special thanks to Darrell Dodge for coordinating the location again.

The International Year of Astronomy (IYA) 2009 is drawing to a close, with Colorado Astronomy Day (CAD) being the finale for the Society. The DAS worked with the University of Denver and Chamberlin Observatory, the Denver Museum of Nature & Science (DMNS) and KEZW Radio to bring astronomy to hundreds around Colorado. To

help spread the word, on the Thursday morning before CAD, Dave Tondreau and I were interviewed by Rick Crandall of KEZW radio, Studio 1430 am. The combined interview included topics about the Denver Astronomical Society, Colorado Astronomy Day, the IYA 2009, amateur astronomy and upcoming astronomical events. We appreciate Rick giving us the opportunity to share our science with the community.

On Saturday morning, October 24th, DAS volunteers met at the DMNS. David Cuomo and Eddie Goldstein of the DMNS were our coordinators and contacts. A dedicated DAS group set up optical telescopes for solar viewing on the west atrium, and there was also a spectroscope and radio telescope to demonstrate the radioactive nature of our nearest star. Inside, the DAS staffed a table providing information on CAD and our Society. DAS members presented lectures on



*Continued on Page 7*

## WAYNE KAAZ ON THE WEST ATRIUM AT CAD, USING THE SCOPE FEATURED IN THE AD ON PAGE 6.

*Photo by Steve Solon*



### Society Directory

- President:**  
Ron Mickle (303) 229-6868  
*president@denverastro.org*
- Vice President:**  
Keith Pool (303) 718-7273  
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- Secretary:**  
Ron Pearson (303) 670-1299
- Treasurer:**  
Brad Gilman (720) 488-1028

### Executive Board Members

- Jack Eastman  
Joe Gafford  
Frank Mancini  
Norm Rosling  
Wayne Green, Past President  
President Emeritus, Larry Brooks
- David Shouldice  
Tim Pimentel  
Steve Solon  
Dan Wray

### Committees

- Van Nattan-Hansen Scholarship Fund:**  
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P.O. Box 150743  
Lakewood, Colorado 80215-0743
- EGK Dark Site Committee:**  
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- IDA Representative:**  
Dr. Robert Stencil  
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- Public Outreach Committee:**  
Ron Mickle (Chair)  
**Student Astronomy Chair:**  
Naomi Pequette (Chair)  
**Finance Committee:**  
Frank Mancini (303) 663-5263

### Volunteers or Appointed Representatives

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The *Observer* is available in color PDF format from the DAS website.
- Website:**  
Darrell Dodge  
*Email: dmdodge@aol.com.*
- Librarian:**  
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DAS Information Line: (303) 871-5172
- DAS Correspondence:**  
Denver Astronomical Society  
Chamberlin Observatory c/o Ron Mickle  
2930 East Warren Avenue  
Denver, Colorado 80210

*The Executive Board conducts the business of the DAS at 7:30 p.m. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.*

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



# FAREWELL, FRIEND, AND CLEAR SKIES

Dear, DAS E-board and the General Membership:  
It is with mixed emotions that I resign from DAS and the E-board. My husband and I are preparing to move back home ( to the south). I have enjoyed our time out here in Colorado and will always cherish the friends, that we both have made here in Colorado.

DAS is a great astronomy society. I hope that everyone will keep up the great work that DAS does, especially with the public outreach. I would especially like to thank Dr. Bob for the support and friendship he has shown us over the past ten years. I have learned a great deal from him. My times observing at Mt. Evans and learning from him will always be cherished.

I would also like to thank Ron Mickle, not only is he a great president for DAS, he is also a great mentor and friend. I would also like to thank Jack Eastman, there's only one Jack Eastman and if you ever get a chance to hear one of his lectures, etc. or just to sit down and talk with him, you are in for treat, Brad Gilman, Joe Gafford and the rest of the members of the E-board. Even though my time with the E-board was short, it was very interesting. I enjoyed working with each one of you.

A special thank you, goes out to the general membership of DAS. You are what makes DAS so special and wonderful.

Like I said, it is with mixed emotions that I leave DAS. But the time has come to go back home and be with the grand-children and family. The last time we were there, this past May and June, I took one of my telescopes with us and showed Preston - 6 years old and Kieston - 4 years old, the moon, Jupiter and other wonders of the night sky. This was the first time that they had looked through a telescope. To hear them say, oh WHOW, was the best. I knew then that I needed to get back home and be able to teach them and their friends about astronomy. The younger generation are the future amateur and professional astronomers. To be able to be there and go to their schools for stargazes and lectures will be awesome. You can rest assured that I will differently mention DAS and show pictures from activities that we have had here.

I wish everyone the best and will be thinking of you. I will only be an email away.

Sincerely,  
Ginny Kramer  
E-mail: [stargirl816@yuboo.com](mailto:stargirl816@yuboo.com).

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## DECEMBER SKIES (CONTINUED FROM PAGE 1)

flying saucers coming off the planet near Christmas as they bring toys to Santa. Last called the Demon Star. Perseus' shape in the sky is a bit like a wishbone



### A WEIGHTY CONTENDER IN PLANETARIES

As planetary nebulae come in many shapes and sizes, the Little Dumbbell (M76) certainly strikes a unique form in the constellation Perseus. Much debate exists over its distance, but ~7500 light-years seems to be an accepted figure. Details: HaLRGB exposures totaling 4.2 hours; 12.5-inch reflector, SBIG ST-8e CCD camera.

*Image copyright 2009 Steve Solon*

year he outsourced a lot of his toy production to the Red Planet.

Perseus is nearly overhead these evenings. You know about the Double Cluster at the Cassiopeia end of Perseus, and the variations of its beta star, Algol, an eclipsing binary once

open cluster M34, a beautiful wide-field object full of blue-white double stars.

Northeast of Perseus and east of Cassiopeia is the faint constellation Camelopardalis the Giraffe. Jakob Bartsch added it to the sky map in the 1600s. Its shape is a crude upside-down

V, pointed towards Polaris. The northeast side of the V bulges outwards and contains a few noteworthy objects: In the jaws of the V is the open cluster NGC 1502, and below that the dim planetary nebula NGC 1501. Above 1502, almost to the point of the V just inside its western side, is the "large beautiful spiral galaxy IC 342" (*Peterson's Field Guide*). A Local Group spiral, NGC 2403, is located way northeast of the V in the area north of the end of Lynx. On Astronomy's map, one third of the way from the end of Lynx towards Polaris, you'll see a right angle defined by three stars; 2403 is just northeast of that.

So how about taking a gander at NGC 253? This popular large, nearly edge-on spiral galaxy is next to the South Galactic Pole, which is no help in locating it. Try drifting east from Fomalhaut, that bright star in the southwest, into the vast nowhere between the west end of Cetus and the constellation Sculptor; 253 is just below the bright beta star of Cetus, which is about 20% of the sky east of Fomalhaut. You could also try going south from the Great Square of Pegasus halfway to the horizon to spot Beta. A ways above Beta is the planetary nebula, NGC 246, which appears as a dim oval in small scopes, but a ring with a central star in larger ones, according to *Peterson's Field Guide*.

Don't forget DAS events: Saturday the 5th we have our Holiday Potluck instead of a General Meeting, and then the Open House at Chamberlin on Saturday the 26th. Bring your Christmas scope!

# THE RIGHT MOUNT FOR EVERYONE

by Ron Pearson

Images by Neil Pearson



**RON PEARSON LOOKS ON AS LARRY BROOKS TRIES OUT THE "EASY VIEW" MOUNT.**

The DAS recently purchased an "Easy View" mount from Universal Astronomics Inc. If you set up your scope for the public during Open House nights at Chamberlin or other star parties, you may be aware that it is often difficult for people in wheelchairs to get to the eyepiece of our typical amateur telescopes; either the eyepiece is too high or the tripod legs get in the way of rolling up to the telescope. The Easy View is designed to be used by wheelchair-bound observers with a variety of telescopes.

The main part of the mount body is a long horizontal arm with a telescope attachment mount on one end and counterweights on the other. The arm is mounted to a pivot on a standard aluminum telescope tripod and suspends the telescope out away from the tripod legs. This allows anyone in a wheelchair or even a regular chair to sit right up at the eyepiece of a telescope and move the mount in azimuth and altitude.

## LARRY BROOKS

DAS President Emeritus finds success with the new mount at this year's Colorado Astronomy Day.

The "Easy View" made its outreach debut at the Colorado Astronomy Day solar observing session at the Denver Museum of Nature and Science. Our own President Emeritus, Larry Brooks, did the honor of first light observing of the sun with the DAS Outreach Personal Solar Telescope, or



PST. Larry was very enthusiastic of being able to observe our nearest star!

In addition to the PST, the DAS has an Orion 127mm Maksutov telescope that was recently donated by Paul Crawford. These two scopes, along with the Easy View mount, will be employed for a unique outreach experience on Public Nights, Open Houses and special viewings at Chamberlin Observatory. In addition to the wheelchair capability, because the mount keeps the telescope low, it will be also be useful for small children to view the sky.

In setting up the mount with the PST on the sloping concrete patio at DMNS, I found an unexpected benefit in the sliding counterweight system of the Easy View arm, which made it simple to balance the scope on the angled surface. If it had been necessary to raise a tripod leg to level the mount, the eyepiece would have been too high for Larry to use. By sliding the counterweights further back and moving the center of gravity, the problem of tipping was solved and the eyepiece was kept at the right height. An enthusiastic Larry Brooks proclaimed, "YEAH!"



# COLORADO ASTRONOMY DAY

*Images by Neil Pearson*

Although well over 450 years old, the Italian philosopher Galileo Galilee, made an appearance at The Denver Museum of Nature & Science for

Colorado Astronomy Day to celebrate the 400th anniversary of his first use of the telescope for the science of astronomy. Galileo 'debated' with Aristotle, of Athens (a really ancient Greek guy), whether two objects dropped from the "Leaning Tower of Pizza" (yes Pizza!), would hit the ground at the same time. While Aristotle only "thought about it," Galileo proposed to do an experiment to test what would happen. Galileo enlisted the aid of the children and parents around him and two young assistants dressed in rain coats and goggles to watch closely as the test object, water balloons were dropped into a wading pool from the Tower. (2nd photo). About 50 kids and parents cheered and clapped as Galileo made a big splash with his demonstration of the experimental method of science! It was truly a renaissance moment. Below left photo: Chadd Warwick, Johnny Barela and Joanie Mickle staffing the DAS table at the DMNS. Below right photo, Norm Rosling on the Galaxy Stage, at the DMNS. The lower photos are courtesy of Ron Mickle.

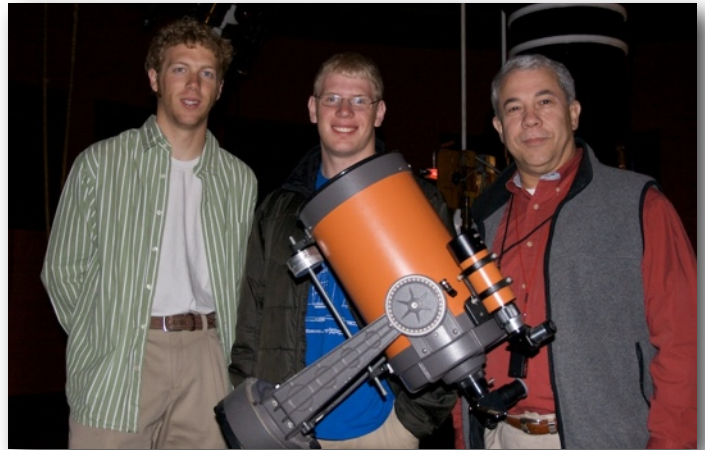




# SCHOOL OF MINES RECEIVES A SCOPE

By Ron Pearson

The Colorado School of Mines Astronomy Club (MAC) was looking to buy a telescope and trying to find the funds to purchase one. When the DAS E-Board learned of this need from Neil Pearson, they stepped up to oblige. The Board had wanted to reduce the DAS inventory of seldom-used telescopes stored at Chamberlin, and decided to donate this Celestron C8 Classic (aka "The Pumpkin") to the cause. The telescope was delivered to the Mines club during Colorado Astronomy Day activities at Chamberlin Observatory on October 24th. Accepting the telescope were (left to right): MAC President Chris Pederson, MAC Quartermaster and DAS Student Member Neil Pearson, and DAS President Ron Mickle, making the presentation official. Over the past two years, MAC members have attended DAS Open Houses and have used the EGK Dark Site several times for observing.



## CELESTRON C-8 DONATION

From left to right: Chris Pederson, Neil Pearson and Ron Mickle.

Photo by Ron Pearson



## IC405, THE FLAMING STAR NEBULA

On October 19th, Dave shot this image with an Orion StarShoot Pro2 at f/6.95 on a Stellarvue SV-102 ED Telescope. He used both an Ha filter and a Sky Glow filter. It's a combination of 14 subs with the Sky Glow filter X 300 seconds each and 18 subs with the Ha filter X 360 seconds each.

Image copyright 2009 Dave Wolf

## LOAN ME A SCOPE

The DAS is making one of its 8-inch Dobs available to loan to members. This is an ideal way to test or hone your skills if you're new to art of observing, or to check out a fine instrument if you're in the buying market. A \$100.00 renewable deposit is required for the one-month loan period and you must be a DAS member in good standing for at least 3 months.

Please contact the DAS Equipment Quartermaster, Bill Ormsby, at: [ormsbill@gmail.com](mailto:ormsbill@gmail.com).

## HOLIDAYS ARE COMING! NEED A TELESCOPE?

### Meade 2080-C.D.E.

For Sale: Meade 8" SCT, Model 2080 & Meade #9068 Digital Readout System and case; includes Orion Blue Bag with Tripod, Wedge, Assorted eyepieces and Meade Solar Filters, one Mylar & one glass. Asking \$1,500.00, or make a reasonable offer.- Contact Wayne Kaaz via E-mail: [kaazmos@msn.com](mailto:kaazmos@msn.com).

# COME ONE, COME ALL TO THE HOLIDAY POTLUCK!

By Keith Pool

The DAS Annual Holiday Potluck will be held again this year at the Columbine Unitarian Universalist Church, 6724 South Webster Street in Littleton. We've been holding our annual gatherings there for the past several years and it has been a great venue, providing both a convenient location and ample room to accommodate us. Directions on how to get here may be found on the DAS website at [denverastro.org](http://denverastro.org). The festivities begin at 6:00 P.M. on Saturday, December 5th. The DAS will provide liquid refreshments, ham, turkey and eating utensils; all you need to bring are a favorite side dish and a good story or two to tell your friends.

In past years, Joe Gafford has entertained us with a slide show highlighting DAS annual events. This year we'll also be privileged to have as our guest speakers Ron Pearson and Stephanie Pahl, two society members who were able to make the trip to China this past July to view the total solar eclipse. Although the eclipse itself was clouded out for Stephanie, I'm sure they'll have many other pictures and stories of "things astronomical" from that ancient land. Stephanie also assures me that she will be bringing plenty of other solar eclipse images as well.

So mark your calendars for December 5th and plan to come to the Holiday Potluck! There will be a little something for everyone!

## PRESIDENT'S CORNER (CONTINUED FROM PAGE 2)

the Night Sky Tonight, Solar Viewing, and How to Buy a Telescope. The solar viewing lasted for a couple of hours until the clouds rolled in, however, sunspots and prominences were visible while it was clear. DAS volunteers were also treated to lunch by the Museum. David and Eddie really did an outstanding job coordinating for the DMNS and were a pleasure to work with.

CAD concluded that evening at Denver University's Historic Chamberlin Observatory. The first event was the portrayal of Galileo Galilei by Jack Eastman. Those who know Jack (and there aren't many who do not) know that besides looking the part, he also has world recognition in optics. Due to the large number of visitors at Chamberlin, Jack conducted two presentations. Afterward, visitors moved upstairs, where they viewed the Clark 20-inch and learned of its history from John Moyles and Rich Loper.

The Denver Astronomical Society receives an annual invitation by the Tesoro Cultural

Center to join in their celebration of the "Great Meteor Storm of 1833" with their "Night the Stars Fell" event at The Fort restaurant. This is a great outreach event, which not only generates income for the Society, but also allows several of our members to enjoy a very pleasant night out, including dinner and a guest speaker. This year, Dan Wray, Jack "Galileo" Eastman and Ron Pearson represented DAS at the Tesoro event on November 15th.

In accordance with our Bylaws, during the November General Meeting I appointed Ivan Geisler as Chair of the Election Committee for the DAS elections in February 2010, with Wayne Kaaz and Dennis Cochran serving as members. With over 300 members, we have a large pool of talent to draw from, members who can provide fresh new ideas to keep our Society moving forward. If you are interested in serving the DAS in some capacity, please consider running for an Officer position or a place on the Executive Board.

If you're interested in volunteering in an observing position, consider one of the Public Outreach functions, such as Public Nights, on a Tuesday or Thursday night, or staffing the Open House team every month. If these interest you, please contact me.

In closing, I want to wish all of you a safe holiday season and hope to see you at the Potluck.—*Ronald E. Mickle, President.*

## WELCOME November New Members

Brandon Fox  
Fred Kuhns  
Alex Miller (Student)  
Barry Miller

## ABOUT THE DAS

Membership in the Denver Astronomical Society is open to anyone wishing to join. The DAS provides trained volunteers who host educational and public outreach events at the **University of Denver's**

**Historic Chamberlin Observatory**, which the DAS helped place on the National Register of Historic Places. First light at Chamberlin in 1894 was a public



night of viewing, a tradition the DAS has helped maintain since its founding in 1952.

The DAS is a long-time member in good standing of the **Astronomical League** and the **International Dark Sky Association**. The DAS' mission is to provide its members a forum for increasing and sharing their knowledge of astronomy, to promote astronomical education to the public, and to preserve Historic Chamberlin Observatory and its telescope in cooperation with the University of Denver.

The DAS is 501 (c)(3) tax-exempt corporation and has established three tax-deductible funds: the Van Nattan-Hansen Scholarship Fund, the Public Outreach Fund and the Edmund G. Kline Dark Site Fund. To contribute, please see the bottom of the membership form for details (found on the DAS website: [thedas.org](http://thedas.org)).

More information about the DAS, its activities and the special tax-deductible funds is available on the DAS website at [www.denverastro.org](http://www.denverastro.org).

## S&S OPTIKA HAS MOVED TO:

6579 SO. BROADWAY  
LITTLETON, CO. 80121  
(~1 1/2 blocks NORTH of  
Arapahoe Road on the  
WEST side of South  
Broadway)

**(303) 789-1089**  
[www.sandsoptika.com](http://www.sandsoptika.com)

## DAS SCHEDULE

### DECEMBER

- 4 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)
- 5 Annual DAS Holiday Potluck (Begins at 5:00 P.M. and takes the place of the General Meeting)
- 18-19 EGK Dark Sky weekend
- 26 Open House at Chamberlin Observatory (Begins at 6:00 P.M.)

### JANUARY

- 8 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)
- 15-17 EGK Dark Sky weekend
- 23 Open House at Chamberlin Observatory (Begins at 6:00 P.M.)
- 29 General Meeting at D.U.'s Olin Hall and nomination of officers (Begins at 7:30 P.M.)

*Public nights are held at Chamberlin Observatory every Tuesday and Thursday evenings*

*beginning at the following times:*

*March 9 - April 14 at 8:00 p.m.*

*April 15 - September 1 at 8:30 p.m.*

*September 2 - March 8 at 7:00 p.m.*

*Costs to non-members are: \$3.00 adults, \$2.00 children.*

*Please make reservations via our website ([www.denverastro.org](http://www.denverastro.org)) or call (303) 871-5172.*



The Denver Astronomical Society  
c/o Chamberlin Observatory  
2930 E. Warren Ave.  
Denver, Colorado 80210

### **DAS Holiday Potluck**

Saturday, December 5th  
6-9 P.M.

Columbine Unitarian Universalist  
Church  
6724 South Webster Street,  
Littleton, Colorado.