

OBSERVER

Autumn Delights



The Horsehead and Flame Nebulae (Barnard 33/IC434 and NGC 2024)

The Horsehead Nebula (also known as Barnard 33 within the bright nebula IC 434) is a dark nebula in the Orion constellation. The nebula is located just below Alnitak, the easternmost star of Orion's Belt, and is part of the much larger Orion Molecular Cloud Complex. This image was taken with an SBIG ST2000XM through a Stellarvue 80mm f/4.8 telescope on a Takahashi mount.

Image copyright Philip Good

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Calendar

7..... First quarter moon

14..... Full moon

21..... Last quarter moon

28..... New moon

OCTOBER SKIES

No more flying saucer reports. They're all in for maintenance this month. So look at meteors instead: The Orionids and the last-quarter moon will share the sky on the morning of Oct.21.

Everyone who reads *Astronomy Magazine* probably knows Phil Harrington's excellent column entitled "Binocular Universe" is always chock full of goodies that can be seen with binocs and then again with your telescope, especially the smaller scopes with wide angle views. If you don't get *Astronomy* maybe your library has it and you can xerox his one-page articles.

In September he was looking at Cygnus (Northern Cross) and finding things there that I have overlooked or didn't know about. One of these is Cygnus X-1, "the Rosetta Stone of black holes," the classical case of a black hole as member of a double star pair. X-1 is quite close to Eta Cygni, the star halfway between Gamma, the star at the meeting of wings and body of the flying bird (or the crossing of the cross) and Albireo at the head of the swan (bottom of the cross.) Cygnus X-1 is a bit back towards Gamma and below the axis of the bird; look at Phil's map. I don't imagine X-1 looks like much in the way of visual splen-

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PRESIDENT'S CORNER

Colorado Astronomy Day and the annual DAS Auction are just around the corner! CAD is on 4 October this year with our focus at the Denver Museum of Nature & Science during the day, and at the Historic Chamberlin Observatory of the University of Denver in the evening. There will be speakers from Ball Aerospace and Lockheed/Martin, solar viewing, and plenty of interaction with the public. Thanks to Rodney Pinkney for handling this years coordination effort. Other events are planned around the state.

The DAS Auction opens at 11:00 A.M. on Saturday, 11 October to set up items that you may want to sell and preview what others have to offer. Bidding will commence at 1:00 P.M. Requirements: 10% of proceeds (minimum) go to the club. Many people donate the entire proceeds to the club. These monies support our outreach work and other efforts. This is always a fun event.

Estes Valley Astronomical Society has declined to host the 2010 convention. After a lot of soul searching and little support from the rest of the community, they decided they did not have the people to handle an event of that size.

This past month the DAS Outside Outreach committee hooked up with the Alliance Group to host a star party at the Denver Museum of Nature & Science. They donated \$500 to the club! Thanks goes to Bryan Wilburn for coordinating the activities and to Rodney Pinkney as a liaison.



We recognize there is a bit of an issue getting brand new members access to the Edmund G. Kline Dark Site. Mike Hotka has volunteered to be the next Dark Site Committee Chair.



DAS President Wayne Green

We are instituting a quarterly orientation date—rain or shine, where we will meet with new people to the site and perform the orientation. There are quite a few safety and etiquette issues covered with the orientation. The first orientation will be the October Dark Site Weekend, starting at 4:00 P.M. on 25 October.

Ron Mickle, our long standing Outreach Committee Chair and Board Member has added a new telescope operating team to the roster. This is Team 7 who will be responsible for Saturday Open House operations at Chamberlin Observatory. We also realize there are a lot of new members joining DAS. So we are starting a new orientation program for these folks! We will have a table and telescopes on the lawn at Chamberlin during Open House to meet with new members, answer questions, make introductions and have some serious outreach fun!

Chamberlin Observatory is recovering very nicely from its makeover! It looks great. Many thanks to all the people that were involved with supporting the effort, the University Hills

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Society Directory

President:

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Email: president@thedas.org

Vice President:

Keith Pool (303) 718-7273

Email: vicepresident@thedas.org

Secretary:

Ron Pearson (303) 670-1299

Email: secretary@thedas.org

Treasurer:

Brad Gilman (720) 488-1028

Email: treasurer@thedas.org

Executive Board Members

Jack Eastman

Ron Mickle

Joe Gafford

David Shouldice

Stuart Hutchins

Bryan Wilburn

Frank Mancini

Dan Wray

Steve Solon, Past President

President Emeritus, Larry Brooks

Committees

Van Nattan-Hansen Scholarship Fund:

Ron Pearson (Chair)

P.O. Box 150743

Lakewood, Colorado 80215-0743

EGK Dark Site Committee:

Wayne Kaaz (Treasurer) (303) 840-1549

Email: kaazmos@msn.com

IDA Representative:

Dr. Robert Stencel

Email: coloida@hotmail.com

Public Outreach Committee:

Ron Mickle (Chair)

Bryan Wilburn (External Outreach

Coordinator)

Email: bwilburn@4dv.net

Student Astronomy Chair:

Naomi Pequette (Chair)

Volunteers or Appointed Representatives

DAS Librarian:

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Solon

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Website:

Darrell Dodge

DAS Information Line: (303) 871-5172

DAS Correspondence:

Denver Astronomical Society
Chamberlin Observatory c/o Wayne Green
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.

COLORADO ASTRONOMY DAY 2008: CELEBRATING THE 400TH ANNIVERSARY OF THE TELESCOPE

Colorado Astronomy Day will be October 4 this year with festivities at the Denver Museum of Nature and Science, the Historic Chamberlin Observatory of the University of Denver, the Grange at Castle Rock, and other sites around the state. Rodney Pinkney is spearheading DAS's Colorado Astronomy Day festivities. Remember, the International Year of the Telescope and the International Year of Astronomy is just around the corner --- making Colorado Astronomy Day the perfect time to start our projects!

We always have great fun at the DMNS, where we bring our telescopes to show the Sun and other daytime planets, work with the public to raise their awareness of amateur astronomy in general and light pollution in particular. We will co-host speakers at the Museum and shift to Chamberlin for an Open House

event in the evening.

This is a fun day for club members, chime in and enjoy yourselves!—Wayne Green

Colorado Astronomy Day 2007

Astronomy Day is a day of fun for club members and visitors alike.

Image copyright
2007 Ron Pearson



Check out
www.coloradoastronomyday.org

OCTOBER SKIES (CONTINUED FROM PAGE 1)



The Trifid Nebula (M20)
Image copyright Bryan Wilburn

dor, but as you have found out in astronomical observing, half or more of what you see is really in your head, not your eyes. We all know you can see fantastic pictures of, say, Saturn taken by spacecraft, yet there is a peculiar excitement in seeing the real thing in real time with your own eyes. This is the “being there”

that the invention of the telescope brings us. If you look at X-1, continue back along the bird-line and farther below it to find star cluster NGC6871. And here's one I didn't know: surrounding the Gamma star at the Cygnus crossing is a heart-shaped cloud of faint stars that Phil calls Amber Heart. Just below that is the cluster M29. Cygnus is well placed near the zenith this month. Phil's October object is Cepheus; we'll talk about it next month. Can you find Cepheus? Look for a big, sloppy vaguely house-shaped constellation aft of Cygnus. Cepheus the King was Andromeda's father.

Jupiter is still looming in the south like an airplane in one of our landing patterns, always fun to observe and show to passers-by. In fact ol' Jupe is the theme of our Open House on Saturday Oct 4th, Astronomy Day. If you don't come to Chamberlin, do a bit of sidewalk astronomy and set up your scope where people congregate like near a movie theater or a popular park. Wear a long, ratty overcoat and say “Psst, hey buddy do ya

want some . . . I mean do ya wanna see Jupiter?” Or you could leave out the ratty overcoat (except on Halloween) for that clean-cut wholesome look. For instance, people are walking around Smith Lake in Washington Park at all hours. I've been meaning to set up there and some day I will. Jupiter is not much affected by light pollution and easy to find. Can't find my old overcoat, however.

The *Sky & Telescope* counterpart of Phil Harrington in the excellence of information is Sue French, who does what Walter Scott Houston used to do, write about deep-sky objects. In the September issue she featured the NGC 6520/Barnard 86 pair, a cluster next to a dark nebula right in the steam of the teapot of Sagittarius. Look at this constellation's Gamma star that makes the tip of the spout and note the length of the imaginary line connecting the teapot body to Gamma. Then at Gamma turn 90 degrees left and go up (a tilted 'up') that same distance to find the pair.—Dennis Cochran.

OPEN HOUSE LEAD: ROLES AND RESPONSIBILITIES

In response to a request I sent several weeks ago to the Public Night staff, John Moyles has accepted the position of Open House Lead for the new Chamberlin Observatory Team 7. The primary role of the lead is to take responsibility for operations of the Clark telescope. Until John has completed the final checkride with Dr Bob, I've asked him to identify a certified scope operator each OH to be responsible for its operation. This has never been a problem in the past, and I certainly see none at this point.

Other duties for the OH Lead include generally making the rounds downstairs:

1. To see if the money collector needs some relief (Brad will provide training for others who can assist—mainly procedural),
2. Advise the person at the bottom of the stairs of the number of visitors in the dome. Mr O is well versed and can advise John,
3. Check on the number of visitors in the queue and ensure we always have visitors in the dome—that is, keep the line moving,
4. Ensure that dome operators are briefing visitors on the dome floor regarding what they will see through the telescope, and briefing on the gantry at the tailpiece only when visitor numbers and time permit,
5. Contacting Dr. Bob and Aaron with any unforeseen issues, and exchanging ideas for the better movement of visitors through the observatory,

The Open House Lead is not normally involved with events on the lawn. For those who normally set up on the lawn, the only change you'll see is the assignment of the team lead.

We've always had incredible support from our Public Night staff and other DAS members during OH and the formation of



Team-7 is a welcome addition. John, thanks again for stepping forward and volunteering to take on this responsibility.

John's contact information is:

John Moyles
Aurora (Denver), CO
Phone: (720) 201-8702
Fax: (484) 631-4239
Text Page: textpage@cdre.com

I hope to see you all at the next Open House!

—Ron Mickle

Chair, Public Outreach & Science Programs
Denver Astronomical Society

2009 Astronomy Calendars

The 2009 *Astronomy Calendars* will be available for sale at \$10.00, (a \$2.95 savings over the cover price) at observatory during Public nights and Open houses starting August 26th.

Get them while they last!—Brad Gilman

TELESCOPE TRAINING FOR PUBLIC NIGHT STAFF

The annual recertification and training for Telescope Operators and Apprentices was conducted Saturday, July 12 at Chamberlin Observatory, with Dr Robert "Bob" Stencel, Director of Observatories for the University of Denver providing opening comments. Recertification training for existing telescope operators consisted of a preliminary exam, review and discussion of the Telescope Operator's Manual, and the final exam. In addition to the before mentioned training, apprentices participated in the hands-on review in the dome.

Telescope Operators certified were:

Ted Cox
Darrell Dodge
John Doran
Doug Dreher
Brad Gilman
Wayne Green
Rich Loper
Frank Mancini

Ron Mickle
Bill Ormsby
Aaron Reid, Observatory Manager
David Shouldice
Todd Thomas
David Tondreau
Bryan Wilburn

Apprentices who received training were:

Hugh Davidson
Marilyn Flanigan
Patrick Flanigan
Joe Smullen

Rob Tamblyn completed his training toward his final checkride on Aug 16 at Chamberlin.

Apprentices receive training by being assigned to one or more of the six public night teams. During their apprenticeship, they receive a minimum of six training sessions signed off by a certified telescope operator, and then receive a final check ride by the Director.

The Denver Astronomical Society's certified telescope operators are volunteers who staff the public nights at Chamberlin Observatory every Tuesday and Thursday, every week of the year, taking off only on Thanksgiving and Christmas. In addition, they staff the monthly Open House and special viewing events. Our public night volunteers reach over 6,000 guests annually, carrying on a 50 year old tradition which we are very proud. Thanks to all the volunteers for their service and for making 2007 accident free at Chamberlin Observatory.

—**Dr Robert "Bob" Stencel**

Director of Observatories
Professor, Physics and Astronomy
Department
University of Denver, and

—**Ron Mickle**

Chair, Public Outreach & Science
Programs
Denver Astronomical Society

PRESIDENT'S CORNER (CONTINUED)

Neighborhood Association, Historic Denver, and especially the University of Denver for their attention to the details of the interior spaces. I would like to recognize the extremely great effort put forth by Aaron Reid both a DAS member and the official Observatory Coordinator for his attention to details and for taking good care of the team of workers on this project. We extend our thanks to DAS members for their patience with the public and issues during this time. Well done all!

In all, October seems to be a promising month!—
Wayne Green

DU MARKS 400TH ANNIVERSARY OF THE TELESCOPE

The University of Denver's historic Chamberlin Observatory co-hosts a day of celebration and exploration marking the 400th anniversary of the telescope on Oct. 4 with the Denver Astronomical Society and S&S Optika.

In early October, 1608, Hans Lipperhey filed a patent in Holland for the invention of a tele-magnifying optical device, which has become known as the telescope. Within six months, word of the invention spread to Italy, where Galileo Galilei was first to turn it heavenward and discover the craters on the moon, spots on the sun, the moons of Jupiter and other wonders.

October 4th Events:

Jack Eastman Lecture at S&S Optika, Littleton, 2-4 p.m. (see Page 3)

Colorado Astronomy Day Open House at Chamberlin Observatory, 7-11 p.m.



The Elephant Trunk Nebula in IC 1396

Worth a two-page spread, the Elephant's Trunk nebula is a concentration of interstellar gas and dust in the IC 1396 star cluster and ionized gas region located in the Cepheus constellation about 2,400 light years away from Earth (thank you, Philip Good, for that description). Joe shot this image at Rocky Mountain Star Stare 2008 with an SBIG ST-2000XM ccd camera through his 18-inch f/4.5 JMI Newtonian telescope. It's a mosaic of two frames of 15-minute each LRGB exposures.

Image copyright 2008 Joe Gafford



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 pub-



lic 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).

More information about the DAS, its activities and the special tax-deductible funds is available on the DAS website at www.thedas.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

DAS SCHEDULE

OCTOBER

- 4 Astronomy Day (Open House at Chamberlin Observatory follows day at DMNS at 5:00 P.M.)
- 11 DAS Auction at Chamberlin Observatory (Setup at 11:00 A.M., Auction begins at 1:00 P.M.)
- 17 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)
- 24-26 EGK Dark Sky weekend

NOVEMBER

- 2 Daylight Savings Time ends
- 8 Open House at Chamberlin Observatory (Begins at 5:00 P.M.)
- 14 General Membership Meeting and "Show 'n Tell" at Olin Hall (Begins at 7:30 P.M.)
- 21 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)
- 28-30 EGK Dark Sky weekend

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.thedas.org) or call (303) 871-5172.



The Denver Astronomical Society
C/O Chamberlin Observatory
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Denver, Colorado 80210