

The Denver

OBSERVER

Newsletter of the Denver Astronomical Society
One Mile Nearer the Stars

Are You Loaded for Bear?

This ancient ball of fire is made up of hundreds of thousands of stars and burns 25,100 light-years away. M13 (NGC 6205) in the constellation Hercules, is one of the most prominent globular clusters in the Northern celestial hemisphere. An easy target for "marathoners," it's worth a nice long look. See Page 7 for imaging details.

Image copyright 2008 Philip Good

MARATHON DAYS!

MARCH SKIES

Inside The Observer

Some two-fer views this month, plus Saturn at a decent hour! But first Mars, which starts out the month near Beetlejuice, otherwise known as Betelgeuse, the upper left corner star of

Orion, long a favorite of navigators. The Red Planet will at first be a bit brighter than this red giant star but by the end of the month will dwindle 0.6 magnitude to be more like Aldeberan in Taurus.

"A"s—the craters Archimedes, Autolycus and Aristillus, and especially north of these at the pyramidal peak Mons Piton. Observe it at an hourly interval to see the lengthening of its dramatic shadow. Mars is again in a two-fer on the earlier dates of Sunday and Monday, the 9th and 10th when it comes within two degrees of the star cluster M35 in Gemini. Compare Mars' orangish hue to the colors of reddish stars in the cluster, its surface of wind-blown mineral matter versus the stellar atmospheres of hot hydrogen, helium and traces of heavier elements. Most of these elements occur in the Martian dust as well,

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In the middle of this change, on Friday the 14th, Mars will be visited by the First Quarter Moon, giving us our first two-fer. Martin Radcliffe in the March *Astronomy* suggests on page 53 that we look north of the moon's equator to the region of the three

7	New moon
9	Daylight Savings Time begins
14	First quarter moon
21	Full moon
29	Last quarter moon

Continued on page 6

President's Corner

The elections are complete and we offer our special thanks to all the people that volunteered for leadership positions within the DAS. See Page 5 for the election results.

Our Annual Banquet is March 29th, at the Columbine Unitarian Universalist Church, one block west of Pierce and West Coal Mine Avenue in Littleton. The article and flyer in this issue have the details and the map. Please send your \$20 per person to me to hold your reservation by March 23. This will be a catered event, with Italian food by Romano's of Littleton. Chicken and Lasagna will be on order and Bryan White will present his Aurora and 3-D astronomy presentation. This is the same location we've held the past potlucks. Easy to get to and decent parking!

DAS was very active in the community with the recent lunar eclipse. We collaborated with Dr. Stencil in Observatory Park reaching around 170 people on the lawn with around 100 of those people viewing with the large telescope. We encouraged Stephanie Pahl (former Van-Nattan Hansen Scholarship recipient) and the new student as-



Wayne Green, DAS President

tronomy club at Metropolitan State College in Denver (MSCD). Their 75 new members reached over 200 people. Bryan Wilburn and I were invited to Front Range Christian Academy, where we encouraged 25 middle and high school students to start their own club. We had around 20 guests and no Moon! The turnout for starting these clubs was very encouraging since the

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	MARCH	APRIL
DAS Schdule	7-9 EGK Dark Site Weekend— Messier Marathon 1	4-6 EGK Dark Site Weekend— Messier Marathon 2
	9 Daylight Savings Time Starts (2:00 A.M.)	12 Open House at Chamberlin Observatory (Begins at 7:30 P.M.)
	15 Open House at Chamberlin Observatory (Begins at 5:00 P.M.)	18 General Membership Meeting at Olin Hall (Begins at 7:30 P.M.)
	28 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)	25 E-Board meeting at Chamberlin Observatory (Begins at 7:30 P.M.)
	29 DAS Annual Banquet (Begins at 6:00 P.M.)	

Public nights are held 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. at Chamberlin Observatory
 Costs to non-members are: \$3.00 adults, \$2.00 children.
 Please make reservations via our website (www.theddas.org) or call (303) 871-5172.

Society Directory

President:
Wayne Green (303) 530-1023
Email: president@theddas.org

Vice President:
Keith Pool (303) 718-7273
Email: vicepresident@theddas.org

Secretary:
Darrell Dodge (303) 932-1309
Email: secretary@theddas.org

Treasurer:
Brad Gilman (720) 488-1028
Email: treasurer@theddas.org

Executive Board Members

Jack Eastman Ron Pearson
Joe Gafford David Shouldice
Frank Mancini Bryan Wilburn
Ron Mickle 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 (Chair) (303) 840-1549
Email: kaazmos@msn.com

IDA Representative:

Dr. Robert Stencil

Public Outreach Committee:
Ron Mickle (Chair)
Bryan Wilburn (External Outreach Coordinator)
Email: bwilburn@4dv.net (303) 542-5137

Student Astronomy Committee:

Naomi Pequette (Chair)

Volunteers or Appointed Representatives

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Email: alcor@theddas.org

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Dr. Robert Stencil

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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.

theddas.org

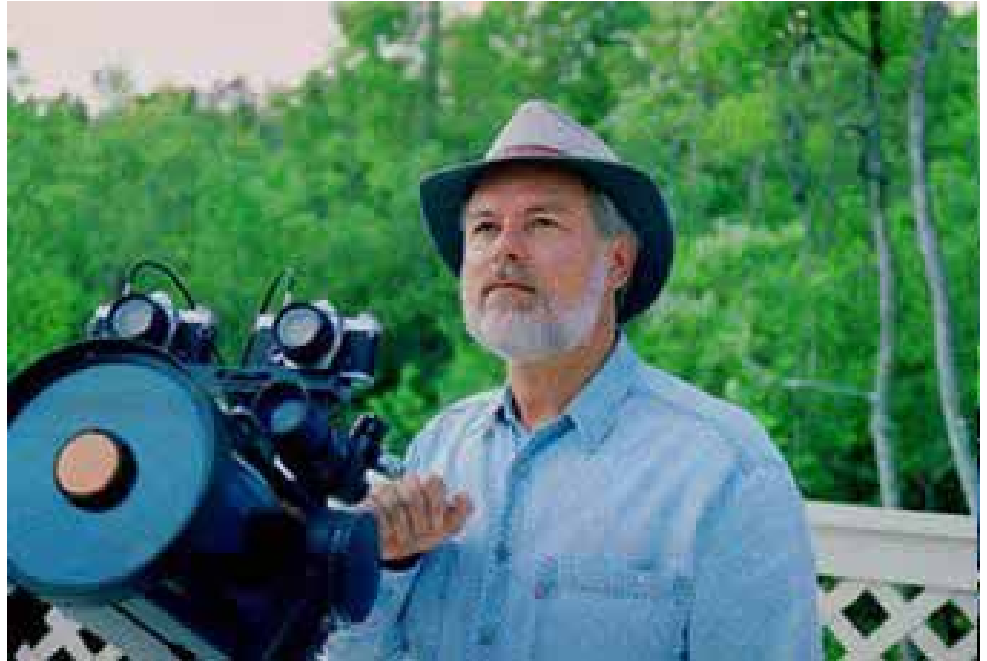
Annual Spring Banquet

by Keith Pool

When: Saturday, March 29,
6-9 P.M.
Where: Columbine Unitarian-
Universalist church
(CUUC), 6724 S. Webster
St., Littleton
Speaker: Bryan White,
Nitescapes 3-D

Make your Plans now to join us for the Annual Spring Banquet. After the installation of your 2008 DAS Officers and E-Board members, Bryan White will present to us his three-dimensional Astro Images, including his aurora pictures. For those of you who have never had the opportunity to see Bryan's work, it is truly breathtaking! Bryan has presented to the DAS several times in the past, and his *3-D Nitescapes* never fail to overwhelm the audience.

Bryan first became interested in astronomy when he was seven years old, living on his family's 80 acre farm in Michigan. There, far from any light pollution, his father and he had the opportunity to observe Comet Mrkos for a full night before astronomers announced its discovery to the general public.



Bryan White

Bryan will showcase his spectacular *3-D Nitescapes* at the DAS Annual Banquet.

After that first observing experience Bryan was hooked, reading every issue of *Sky & Telescope* and any other astronomical publication he could find. As his skills developed, he began taking pictures of comets, stars and the Aurora Borealis. In

this pursuit, Bryan has journeyed from the far northern reaches of Canada to southern Florida and many places in-between to capture in three-dimensional glory the wonders of the night sky.

Bryan has had a number of his images displayed publicly in museums around the country and also for the planetarium film *Deep Impact Mission*, which was developed for NASA by the University of Colorado. Bryan was also awarded best picture in the general category at the 1992, 93, 94, 95 and 1996 Winter Star Parties. His pictures have appeared in *Sky & Telescope*, *Astronomy*, *The Reflector*, and publications of the Denver Museum of Nature & Science. Good food, good fellowship and truly awe-inspiring three-dimensional astronomical images will make this a night that will be long remembered.

3-D Nitescapes

Bryan's renowned images are guaranteed to dazzle all at the Annual Spring Banquet.



Messier Marathon 2008

Part Two
by Darrell Dodge

March is Marathon month, and this year's DAS March Messier Marathon will take place over the weekend of March 7-8, with most people participating on the night of Saturday, March 8th, into the morning of Sunday, March 9th.

Because of this year's early-month New Moons, we'll also have an April Messier Marathon on the weekend of April 4-6, focusing on Saturday night April 5th into Sunday morning the 6th. The early evening objects will be extremely tough, but you may have better luck with the early morning ones, especially M30, the globular cluster in Capricorn.

For both marathon weekends, we'll have marathon checklists available, signup sheets, and certificates for members who observe 70 or more of the 110 Messier objects in star-hopping and go-to categories.

As usual, the DAS Messier Marathons will take place at the Edmund G. Kline Dark Site about seven miles east of Deer Trail. Check out the Web site at www.thedas.org/dss.html for driving instructions and other information on the site. There are 14 powered observing pads, so be sure to arrive well before dark if you need one. There are flat areas on the site that may be more appropriate and convenient for very large Dobs. If you must arrive after dark, please park your vehicle at the entrance and walk down to the pads for assistance.



David Shouldice sets up his "Dob" for the March 2007 Messier Marathon.

Photo courtesy Joe Gafford



Image copyright 2008 Bryan Wilburn

From the Front Page: The Great Globular Cluster in Hercules, M13:

Philip Good used an ST2000XM ccd camera with Astrodon RGB filters on his Stellarvue SV90T Fluorite Triplet APO at f/5.6 with a Televue 0.8x reducer/corrector. He processed one hour each of red, green and blue in 10-minute subframes with CCDStack and Photoshop®. He captured M13 in Denver, CO on April 25, 2007.

The Great Orion Nebula (M42)

There is so much to see in this region of Orion, that if you stay too long you'll never finish your marathon list! A composite of two sessions with a Canon Rebel XT camera, the image at left was captured with Hugo, Colorado with a Celestron 80ED with a Televue .8 reducer.

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President's Corner
(continued)

eclipse was all but obscured by clouds! Think what DAS can do with great planets in warm summer skies!

The Astronomical League continues to investigate ideas to help revitalize amateur astronomy. DAS has over 50 years as a great astronomical society. By mentoring community based clubs we greatly amplify amateur astronomy. We are attracting the community club's leadership to join with us in building up our strength for another 50 years of accomplishments.

I am running for the AL regional (MARS) Chair and our own Ginny Kramer is running for the Vice Chair position. Longmont's Vern Raben is seeking the new Regional Representative position. Gene Schermerhorn, Colorado Springs, will remain as the Treasurer. I am currently on the AL committee, Envisioning the Leagues Future. Feel free to share your ideas with me — we need them! My heartfelt thanks to Jerry Sherlin for his hard work with the MARS elections.

Darrell Dodge is our new ALCOR and will continue his excellent work with the website. Darrell will be maintaining the membership roster as well.

DAS is a great astronomical society and we operate at a level far above your average hobby club. Together we can revitalize a deep interest in astronomy and space science right here in our own city backyards!

The sky is not broken, let's have some fun with telescopes!—*Wayne Green*



Photo courtesy Bill Ormsby

The new E-board of the Denver Astronomical Society

From left to right: Wayne Green, Ron Pearson, Dan Wray, Stuart Hutchins, Ron Mickle, Brad Gilman, David Shouldice, Jack Eastman, Keith Pool, Frank Mancini and Bryan Wilburn.

Officer and E-Board Elections for 2008-2009

The DAS E-Board Elections were held at the February 22, 2008 general meeting. As a result, the following officers and trustees were elected:

President:
Wayne Green

Vice President:
Keith Pool

Secretary:
Ron Pearson

Treasurer:
Brad Gilman

Executive Board:
Jack Eastman
Joe Gafford
Stuart Hutchins
Frank Mancini
Ron Mickle
David Shouldice
Bryan Wilburn
Dan Wray

Check out the revamped Astronomical League website for observing ideas, information on observing awards and access to the new online store!

www.astroleague.org

Welcome New DAS Members:

Anne Andrews
Joseph Barrentine
Burt Harless
Charles (Ted) Lemen
Robert and Max Linz
John H. Nelson
Tom Payetta

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reminding us that planet material ultimately comes from an older generation of stars who make it and then blow it into space.

This kind of cosmic chemistry happens inside of star clusters as their stars are born from the debris of earlier stars, and their planets as well. The stars end up with most of the light elements while the planets collect the heavy elements. There are several of these star cities inside of Canis Major. This month it is at its best viewing position in the south at sundown. Right below Sirius, in the same binocular field, is M41. If conditions allow, scan downwards to the hindquarters of the Big Dog where NGC 2362 lies off to the left. Farther left still is M93. If you can see farther south, try dropping down to NGC 2477. Or go north instead—1/3 of the way to Procyon in Canis Minor—to find M47. These star cities are cousins of the cluster birthplace of our sun, but the sun's cluster has dispersed over the last 4.5 billion years to become the local neighborhood.

Saturn is now rising at dusk and in a good position east of Mars for viewing in Leo. If you want to know what one magnitude of brightness looks like to the naked eye, compare Saturn to nearby Regulus, the alpha star of Leo. Through a telescope, a smaller "star" near Saturn will be its large moon Titan, circling the ringed planet every 16 days. It will pass just north of Saturn on the 9th and 25th.

More star clusters: from the Saturn-Regulus pair you can search west to dim Cancer the Crab to find the Beehive Cluster M44. Way west is the 5-sided constellation Auriga captained by bright Capella. The three clusters M37, M36 and M38 are there. M37 is just outside the box of Auriga on the side close to Mars. M36 and M38 are inside the box in a line with M37. Comet Wirtanen passes just below M36 on Friday the 28th, giving us our last two-fer.



Eclipsed!

Last month's total lunar eclipse was a bust for most of us as clouds blocked our view. However, in Evergreen, CO., Ron Pearson managed this fabulous shot with a Canon Rebel XTi (400D) on his Orion ED80mm at prime focus. Not until 2010 will we be able to see another like event.

Image copyright Ron Pearson

Top Hat

A major stopover on the Messier Marathon journey, M104, the Sombrero Galaxy, is one of the most photogenic deep-sky objects we can see. Located on the Virgo-Corvus boundary, it's just a hop, skip and a jump from pointer stars Corvus Gamma (γ), Delta (δ) and Eta (η).

Image copyright Steve Solon



This month a Messier Marathon will take place at the EGK Dark Site on the weekend of 7-9. The Open House at Chamberlin will be Saturday the 15th, and

our Banquet will occur on the 29th. Check thedas.org and click on the Banquet link for details and a link to directions.—
Dennis Cochran



2008 DAS Annual Spring Banquet, March 29

*You are cordially invited to the Denver Astronomical Society's Annual Banquet.
This year's banquet will be at the Columbine Unitarian-Universalist Church located at
6724 S. Webster St, Littleton, CO.*

Reception starts at 6:00 P.M., dinner to follow. The telephone number is: (303) 972-1716 if you need directions. Details at <http://www.thedas.org/banquet2008.html>.

Bryan White will present his 3-dimensional astronomical images, including his aurora pictures. For those of you who have never had the opportunity to see Bryan's work, it is truly breathtaking! Bryan has presented to the DAS several times in the past, and his 3-D *Nightscaapes* never fails to overwhelm the audience.

This will be catered affair, at a cost of \$20.00 per person. On offer will be Chicken and Lasagna with bread, salad and dessert. We will also offer soft drinks, iced tea, coffee, red and white wine. Any left over funds will go to the DAS General Fund.

We have room for up to 150 people with this arrangement. Access to the church is easy and there is plenty of parking. We can stay as long as we want.

This past year has been very successful for the DAS, and we all have good reasons to celebrate those successes. Come and meet the Executive Board for 2008.

Driving Directions:



From Wadsworth Blvd: Turn East on Coal Mine, proceed down the hill to Webster St. (traffic light), turn right, then first left into CUUC.

From Santa Fe South: Turn West (left) on Mineral (becomes West Ken Caryl), North (right) on Pierce Street; West (left) on Coal Mine. Proceed down the hill to the first traffic light. Turn left onto Webster St. then first left into CUUC.

From Santa Fe North: Turn West (right) on Bowles, South (left) on Platte Canyon, West (right) on Coal Mine. Proceed to first traffic light past Pierce Street. Turn left onto Webster St., then first left into CUUC.

From C470 South or East: Exit at Wadsworth Blvd. Head North (right) (then see above).

From C470 North or West: Exit at Bowles Ave. Head East, then turn South (right) on Wadsworth Blvd (then see above).

Please indicate the number of people in your party, and their choice of meals on the form below. Please mail the form and your check, payable to the Denver Astronomical Society to Wayne Green at the address below. Feel free to email Wayne at dxwayne@gmail.com or call him at (303) 818-1290:

Send to: Wayne Green 7131 Oriole Lane Longmont, CO 80503	Name: _____ Phone: _____ Email: _____
Number of Chicken Dinners: _____ Total Number of People: _____	Number of Lasagna Dinners: _____ Check Total (\$20 x number of people): _____



About the Denver Astronomical Society

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 a 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.

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



**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: _____

(Students 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: \$35	Students: \$12 (<i>Students under age 23</i>)	\$ _____
Astronomy Magazine/\$34 and/or Sky & Telescope Magazine/\$32.95		\$ _____
Van Nattan Scholarship Fund		\$ _____
Public Outreach Fund		\$ _____
DAS Dark Site Fund		\$ _____
Total Amount Paid		\$ _____

Please send all checks to Brad Gilman, DAS treasurer, 7003 S. Cherry St., Centennial, CO 80122-1179. Please make donations to the DAS Dark Site with a separate check, payable to the "DAS Dark Site Fund." For DAS Membership and other funds, including new-member magazine subscriptions, please make amounts payable to the "Denver Astronomical Society." DAS RENEWALS ONLY: you may now send your Sky & Telescope subscription funds directly to the magazine's subscription service, using the renewal form sent to you.



Denver Astronomical Society

c/o Chamberlin Observatory
2930 East Warren Avenue
Denver, Colorado 80210

