

# DENVER OBSERVER

Newsletter of the Denver Astronomical Society

*One Mile Nearer the Stars*



Part of the Virgo Cluster  
Image: ©Joe Gafford, 2001

### Virgo Gives Up Her Charms

'Tis the season—for one of the grandest astronomical hunts of the year. During the spring we hone our observing skills on galaxies, and some of the hardier folks even stay out all night. From dusk 'til dawn these dedicated few systematically (or not) move their telescopes from one Messier object to the next; carefully logging each “faint fuzzy” until all 110 have been captured.

Charles Messier cataloged nine of his famous objects within the lovely Virgo, which also holds the closest rich cluster of galaxies to us—the Virgo Cluster. More than 100 galaxies can be seen in her depths with a medium-sized telescope. How many will you find?

## Messier Marathon Month

**Inside The Observer**

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### MARCH SKIES 2001

**D**azzling Venus, planetary Queen of the Night, is going through some dramatic changes, and she leaves the evening sky toward month's end—as it begins, she's shining her brightest only to fade to half that by March 21. During that time, her 20-percent lit crescent will slim down to a sliver. Jupiter is pulling away from Saturn and on the 1st and 29th will be part of a beautiful conjunction with the moon. Warrior Mars rises early in the morning, and is on the run, passing north of Antares and gliding about 4° southwest of M9 by month's end—all the while getting brighter and brighter. On April 1, don't forget to spring your clocks forward one hour!

- 2 ..... First quarter moon
- 9 ..... Full moon
- 13 ..... MIR Space Station falls back to Earth (plus or minus four days)
- 16 ..... Last quarter moon
- 20 ..... Vernal Equinox (6:28 A.M.)
- 25 ..... New moon



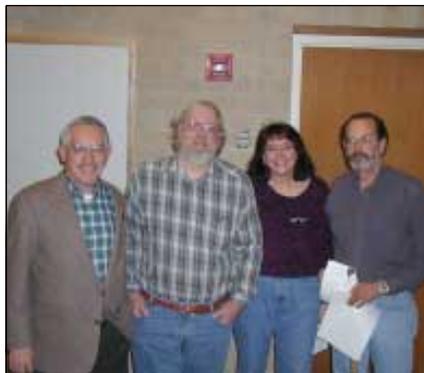
March is a magnificent marathon month for the Messiers.  
**Left: M79.**  
 Image: ©Tom Shaul, 2001

# PRESIDENT'S CORNER

I wish to take this opportunity to thank the E-board of the past year, and welcome the new one. It is also appropriate to express appreciation to the Dark Sky Site committee, the many members who contributed time and money to the efforts at the site, the Public Night crews, and those that come and make the Open House so successful. I'm sure I speak for the membership when I thank all of these folks for their effort.

The next year will bring new challenges and continued growth for the Society. If members have any ideas please contact myself, an officer, or an eboard member to make your wishes known. Your thoughts are very important to us. Remember—this is your organization.

**DSS REPORT**—The Warming Hut is now working with electric heat and red lights. Yea! Rules will be posted at the warming hut soon. Plans for spring include more pads and



**New D.A.S. officers from left to right: Chuck Carlson, treasurer; Ron Pearson, secretary; Patti Kurtz, vice-president; Larry Brooks, president.** Photo: David Shouldice

possibility a vault toilet depending on what it costs, and how much money we have. If you are the last one to leave the site, please make sure the lights and heater are **turned off and the door is locked**. We do not have timers hooked up yet. We hope to have some chairs and a vacuum cleaner out there soon.

**ATTENTION COMPUTER USERS!** In order to save mailing costs, we are asking those who can comfortably receive their *Denver Observer* by e-mail to let us know. Please tell Patti Kurtz, [pkurtz@starfirecreations.com](mailto:pkurtz@starfirecreations.com) if this works for you. We are now sending about 25 newsletters by email. By the way, the e-mail version comes in living color! —Larry Brooks

## D.A.S. Schedule

### MARCH

- 2 E-Board meeting, 8 P.M.
- 3 Open House
- 10 Annual Banquet at Dardanos Restaurant—Installation of new officers. Speaker: John Bally (See page 6)
- 23 - 25 Dark Sky Site Weekend —Messier Marathon

Public Nights are held every Tuesday and Thursday from 7:00-9:00 P.M.

at Chamberlin Observatory

Costs to non-members are: \$2.00 adults, \$1.00 children  
Please call (303) 871-3222 for reservations.

### APRIL

- 6 E-Board meeting, 8 P.M.
- 20 - 21 Sterling Star Party (See page 3)
- 20 - 22 Dark Sky Site Weekend
- 27 General Meeting at Olin Hall, D.U. 7:30 P.M.—Speaker: Dr. Ted Snow (Univ. of Colorado); Talk: Cosmology
- 28 Open House

## D.A. S. Officers

### President:

Larry Brooks (303) 986-5255  
Email: [LBrooks100@aol.com](mailto:LBrooks100@aol.com)

### Vice President:

Patti Kurtz (303) 948-5825  
Email: [pkurtz@starfirecreations.com](mailto:pkurtz@starfirecreations.com)

### Secretary:

Ron Pearson (303) 670-1299  
Email: [rpearson@ecentral.com](mailto:rpearson@ecentral.com)

### Treasurer:

Chuck Carlson (303) 744-7331  
Email: [chcarlo@du.edu](mailto:chcarlo@du.edu)

### ALCor:

Jerry Sherlin (303) 680-6894  
Email: [SHERLINJ@aol.com](mailto:SHERLINJ@aol.com)

### Chief Observer:

Jack Eastman

## Executive Board Members

Ted Cox	Jerry Sherlin
Jack Eastman	David Shouldice
Joe Gafford	Steve Solon
Greg Marino	Dan Wray
George Jones, Past President	

### D.A.S. Information Line:

(303) 986-5255

### D.A.S. Correspondence:

Denver Astronomical Society  
c/o Larry Brooks  
3686 South Depew, #8  
Denver, Colorado 80235

### Van Nattan Scholarship Fund

P.O. Box 150743  
Lakewood, Colorado 80215-0743

### Webmaster:

Terry Chatterton  
Email: [Kiowapages@aol.com](mailto:Kiowapages@aol.com)

### Newsletter:

Observer Editor, Patti Kurtz  
(303) 948-5825

The Observer is available in color or b&w PDF format from the D.A.S. website.

The Executive Board conducts the business of the D.A.S. at 8 P.M. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.

# www.denverastro.org



Russia's Mir Space Station is shown separating from the Space Shuttle during mission STS-71. Somewhere between March 13-18 (give or take four days), 50 tons of leftover Mir are expected to survive Earth's atmosphere as it's deorbited, and then splash down in the Pacific Ocean within a zone 3,726 miles long and 124 miles wide. (Russian Space Agency, Courtesy of NASA)

*Sky & Telescope sends only one notice before subscriptions end. The D.A.S. sends only one issue of The Denver Observer after dues expire. The cost of magazines (Astronomy and Sky & Telescope) is in addition to the annual dues. For questions concerning memberships, please contact D.A.S. Treasurer, Chuck Carlson (chcarlso@du.edu). See the back page of this newsletter for more information.*

**M22 (NGC 6656) in Triangulum.**  
Image: © Kiowa Observatory, 2001



## L.A.S. Springs into Star Party Season

D.A.S. members are invited to the third annual Sterling Star Party at North Sterling State Reservoir in eastern Colorado. Sponsored by the Longmont Astronomical Society (L.A.S.), the star party will be held next month, on April 20 and 21.

The reservoir is a three-thousand acre lake with three campgrounds about 15 miles north of Sterling. Bob Loomis, state park ranger there, has given this event the top campground on top of the hill above the middle of the lake where there are no visible lights. New restrooms are available at the site with hot water and showers. Gary Garzone, Vice-President of the L.A.S., said there is room inside the restrooms to warm up when needed.

Jim Sapp, L.A.S. member, said that Loomis approached the club two or three years ago and requested they visit the site, throw a star party, and guide the park system in constructing a possible public observatory there. He said

it will probably consist of a 16-inch SCT under a dome or roll-off roof. Additionally, there will be video and a large screen in an amphitheater, and individual observing pads for visiting astronomers.

"This site is almost as dark as Fox Park, and darker than Pawnee—great for the diehard dark-sky lovers," said Garzone. "We do see some sky glow from Sterling to the southeast, but that means the town is not too far away for people who want a restaurant or hotel. The first year we had an aurora from 9 P.M. until 3 A.M. It was so bright that we watched it most of the night!" This year they're looking forward to watching the Lyrids meteor shower.

He added that daytime activities at the reservoir include fishing and boating, and plenty of hiking trails. Last year's star party drew more than 200 people from Sterling and Brush due to publicity from local television stations and newspapers.

Camping fees are waived for astronomers—but you will still need to purchase a \$4.00 daily park pass or use your annual Colorado State Park Pass (\$40.00) which is good for the entire year. Maps and directions are available on the Sterling State Reservoir web site ([http://coloradoparks.org/north\\_sterling/index.asp](http://coloradoparks.org/north_sterling/index.asp)).

### Note from the editor:

Newsletter contributions (ccd and film astrophotos, members with telescopes, star party candid, short observing anecdotes, observing and imaging tips, etc.) are welcome and encouraged. This is your chance to strut your stuff! **Please submit by the 15th of each month as follows:**

**Film:** Glossy prints by mail\*\* or scanned and uploaded (high res.) to the listserve upload area.

**CCD:** Uploaded to the listserve upload area (resolution as high as possible, please).

**Text:** Articles should be no more than 250 words, please. Paste into an email and send to me at: [pkurtz@starfirecreations.com](mailto:pkurtz@starfirecreations.com).

If you don't receive a confirmation email from me, I didn't get your email. Also, be sure to let me know if you've uploaded a file. Thank you!

**\*\*Patti Kurtz (call for mailing address)**  
(303) 948-5825

**All images used are © the photographer and may not be reproduced.**

# observers deck



## Messier Marathon

### Bag All the Messier Objects in One Night

by Tim Geoghegan

How do you feel about your knowledge of the sky? Would you like to test it? Some of the most spectacular, yet easy to see deep-space objects are the Messier objects. These are a collection of galaxies, open and globular clusters, nebulae, and even a supernova remnant that were cataloged by Charles Messier between 1758 and 1782. Seems at the time, finding new comets was all the rage, and Chuck wanted to be known as the greatest comet-hunter of all time. With diligence he set about his quest. As he found each “faint fuzzy” that turned out *not* to be a comet, he and associate Pierre Mechain, cataloged them (M1, M2, etc.). As fate would have it, he turned out not to be the greatest comet-hunter, but is famous for his catalog of 110 *non*-comets.

Every year at the end of March, it's possible to see all 110 Messier objects in one night. Attempting to do so is called a Messier Marathon—as close to a sporting event as our hobby has. I've been in the hobby for two years, and I tried my first marathon last year. The moon was full at the peak time so I had to try a couple of weeks earlier. I was able to locate and observe 106 of the 110 objects. You can read my results on the Internet at <http://www.seds.org/messier/xtra/marathon/teg00.txt>. This year we're lucky—on March 25, we'll have a new moon. Mark your calendars now and get out to the Dark Sky Site for a Messier Marathon on the star party night of March 24.

Here are some tips. Although we now have a “warming hut,” dress warmly as you will not have much time to hang around in the hut. Bring the best (laminated!) star charts you can find—make tabs for the pages as they will be hard to turn if you're wearing gloves. The best instruments for the hunt, in my opinion, are 6- to 10-inch Dobsonian-mounted reflectors with Telrad finders—you can bag your prey much faster using these finders (using computers would be cheating, of course). The most critical parts of the search are at

#### M33 (NGC 598) in Triangulum.

Image: © Joe Gafford, 2001



## Warming Hut Rules

- Nothing can be stored in the building. If you leave crumbs or spill food, clean up after yourself immediately in order to keep mice out of the building.
- Be sure to close the door tightly so that it can't be blown open.
- When you are the last person to leave the building, turn off the lights, even if there are others still at the site.
- Please do not bring any contributions to the building until you clear it with the E-board — this will help prevent duplication. For your information, we cannot have upholstered furniture in the building because mice like to nest in it. At this point, we do not want items like coffeepots because there is no water to wash them. Contributions not approved will be thrown out.
- The Warming Hut is not an overnight camping site. You may take short naps, but it's not designed for overnight use.

## Classes

### UNIVERSITY OF DENVER

#### ASTRONOMY CLASSES:

All levels of instruction are available at Chamberlin and Mt. Evans Observatories. Contact Dr. Bob Stencel (303) 871-2135, [rstencel@du.edu](mailto:rstencel@du.edu), [www.du.edu-rstencel](http://www.du.edu-rstencel), and/or the D.U. Registrar's Office at (303) 871-2284.



#### M27 (The Dumbbell Nebula) in Vulpecula.

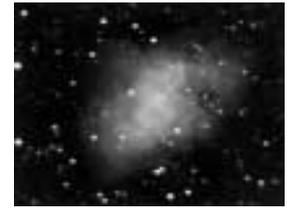
Image: © John Polhamus, 2001

o b s e r v e r s   d e c k

the beginning (dusk) and the end (dawn) as the objects are easily overcome by twilight. The exact order of objects is debatable but you may try mine from the web site report. If you keep a reasonable pace you will have a chance to get some sleep. Work your way from west to east until about midnight; then sleep; and get up at 2 A.M. to continue your search.

Watch the weather. If predictions for Saturday look cloudy, be ready to go Friday night. Last year there were only a couple of folks that stuck it out for the duration. Let's make it a true club event this

year. We will meet together for breakfast back in town the next morning. Perhaps we can even combine our reports for an article in a larger publication. When we're finished, we'll have a sense of accomplishment that will last. And, to really remember your hard work, check out the A.L. Messier certificate (see page 7). *Good Luck to all.*



**M1 (The Crab Nebula) in Taurus.** Image: © Tom Shaul

### MESSIER MARATHON LIST OF OBJECTS

Adapted from Sky & Telescope, March 2000, and the The Year Round Messier Marathon (Pennington). Listed in suggested order of viewing. Note: Object listed as M102 (alt) is not an official Messier object; viewing is optional. (O Cluster=Open Cluster; PLN=Planetary Nebula; Dif Neb=Diffuse Nebula; SN Remn=Supernova Remnant; O Cluster=Open Cluster; Glb Cluster=Globular Cluster; El Galaxy=Elliptical Galaxy)

#### EARLY EVENING:

74	Pisces	Galaxy	Difficult
77	Cetus	Galaxy	Difficult
31	Andromeda	Galaxy	Easy
110	Andromeda	Galaxy	Difficult
32	Andromeda	Galaxy	Difficult
33	Triangulum	Galaxy	Difficult
34	Perseus	O Cluster	Easy
76	Perseus	PLN	Moderate
79	Lepus	Glb Cluster	Moderate
42	Orion	Dif Neb	Easy
43	Orion	Dif Neb	Easy
78	Orion	Dif Neb	Moderate
50	Monoceros	O Cluster	Moderate
47	Puppis	O Cluster	Moderate
46	Puppis	O Cluster	Moderate
41	Canis Major	O Cluster	Easy
93	Puppis	O Cluster	Moderate
52	Cassiopeia	O Cluster	Moderate
103	Cassiopeia	O Cluster	Moderate
1	Taurus	SN Remn	Difficult
45	Taurus	O Cluster	Easy
36	Auriga	O Cluster	Moderate
37	Auriga	O Cluster	Moderate
38	Auriga	O Cluster	Moderate
35	Gemini	O Cluster	Easy
48	Hydra	O Cluster	Moderate
44	Cancer	O Cluster	Easy
67	Cancer	O Cluster	Moderate

#### LEO AND URSA MAJOR REGION:

65	Leo	Galaxy	Difficult
66	Leo	Galaxy	Difficult
95	Leo	Galaxy	Difficult
96	Leo	Galaxy	Difficult
105	Leo	Galaxy	Difficult
3	Canes Venatici	Glb Cluster	Moderate
53	Coma Berenices	Glb Cluster	Easy
64	Coma Berenices	Galaxy	Moderate
85	Coma Berenices	Galaxy	Moderate

51	Canes Venatici	Galaxy	Moderate
101/102:			
	Ursa Major	Galaxy	Moderate
106	Canes Venatici	Galaxy	Moderate
40	Ursa Major	Double Star	Difficult
81	Ursa Major	Galaxy	Moderate
82	Ursa Major	Galaxy	Moderate
97	Ursa Major	PLN	Difficult
108	Ursa Major	Galaxy	Difficult
109	Ursa Major	Galaxy	Difficult
102 (alt)	Draco	El Gal	Difficult
63	Canes Venatici	Galaxy	Moderate
94	Canes Venatici	Galaxy	Moderate
68	Hydra	Glb Cluster	Difficult
83	Hydra	Galaxy	Difficult

#### VIRGO CLUSTER REGION:

104	Virgo	Galaxy	Moderate
61	Virgo	Galaxy	Moderate
49	Virgo	Galaxy	Moderate
58	Virgo	Galaxy	Moderate
59	Virgo	Galaxy	Moderate
60	Virgo	Galaxy	Moderate
84	Virgo	Galaxy	Moderate
86	Virgo	Galaxy	Moderate
87	Virgo	Galaxy	Moderate
88	Coma Berenices	Galaxy	Difficult
89	Virgo	Galaxy	Difficult
90	Virgo	Galaxy	Difficult
91	Coma Berenices	Galaxy	Difficult
98	Coma Berenices	Galaxy	Moderate
99	Coma Berenices	Galaxy	Moderate
100	Coma Berenices	Galaxy	Moderate

#### AFTER MIDNIGHT:

13	Hercules	Glb Cluster	Easy
92	Hercules	Glb Cluster	Moderate
56	Lyra	Glb Cluster	Difficult
57	Lyra	PLN	Moderate
71	Sagitta	Glb Cluster	Moderate
27	Vulpecula	PLN	Easy

29	Cygnus	O Cluster	Moderate
39	Cygnus	O Cluster	Moderate
5	Serpens Caput	Glb Cluster	Moderate
10	Ophiuchus	Glb Cluster	Moderate
12	Ophiuchus	Glb Cluster	Moderate
107	Ophiuchus	Glb Cluster	Moderate
9	Ophiuchus	Glb Cluster	Moderate
14	Ophiuchus	Glb Cluster	Moderate

#### SCORPIUS AND SAGITTARIUS REGION:

11	Scutum	O Cluster	Easy
26	Scutum	O Cluster	Difficult
16	Serpens Cauda	O Cluster	Easy
17	Sagittarius	Dif Neb	Easy
18	Sagittarius	O Cluster	Easy
6	Scorpius	O Cluster	Moderate
7	Scorpius	O Cluster	Easy
19	Ophiuchus	Glb Cluster	Moderate
62	Ophiuchus	Glb Cluster	Moderate
4	Scorpius	Glb Cluster	Easy
80	Scorpius	Glb Cluster	Moderate
8	Sagittarius	Dif Neb	Easy
20	Sagittarius	Dif Neb	Easy
21	Sagittarius	O Cluster	Easy
23	Sagittarius	O Cluster	Easy
24	Sagittarius	Star Cloud	Easy
25	Sagittarius	O Cluster	Easy
69	Sagittarius	Glb Cluster	Difficult
22	Sagittarius	Glb Cluster	Easy
28	Sagittarius	Glb Cluster	Easy
54	Sagittarius	Glb Cluster	Difficult
70	Sagittarius	Glb Cluster	Difficult
55	Sagittarius	Glb Cluster	Difficult
75	Sagittarius	Glb Cluster	Difficult

#### EARLY DAWN:

15	Pegasus	Glb Cluster	Difficult
2	Aquarius	Glb Cluster	Difficult
72	Aquarius	Glb Cluster	Difficult
73	Aquarius	O Cluster	Difficult
30	Capricornus	Glb Cluster	Difficult

# observers deck



Greg Marino is loaded for bear with his 20-inch Obsession and 9.25-inch Celestron SCT telescopes. He uses the SCT primarily for solar observing at star parties. This photo was taken at Rocky Mountain Star Stare in July, 2000. The *Observer* wants photos of you with your scope(s) or at star parties—please send them in!  
Image: unknown photographer

## Directions to the D.S.S.

*The D.A.S. Deer Trail Dark Sky Site is about 60 miles east of the “mouse-trap” in downtown Denver.*

Take I-70 east to the Deer Trail exit (exit 328), turn left at the end of the exit ramp, and turn left again on CR 217 (after the Texaco station). Take CR 217 just over 1/2 mile, and turn right (east) onto CR 34. Stay on CR 34 about 6 miles until you get to CR 241. Turn left (north) onto CR 241 and continue about 1.5 miles – you’ll see a culvert with a wide gate on the right (east) side of the road.

*Directions to D.S.S. from Denver, arrival from the North (for after-dark arrivals):*

Take I-25 eastbound to exit 316 (Byers). Turn left at end of ramp which puts you on eastbound US-36. Take US-36 east 17.2 miles to CR 241. Turn right (south) onto CR 241 and continue for 6.2 miles. The D.S.S. entrance is on the left between two tall posts.

Note: Travel distance from Denver using the North route is actually 3.9 miles shorter than the traditional route. The first 5 miles of CR 241 going south from US-36 is narrow and somewhat rough. Be careful.

## D.A.S. Spring Banquet

We’ve had such good luck with Dardano’s Italian Restaurant ([www.dardanosrestaurant.com](http://www.dardanosrestaurant.com)), we’re going to have the Annual Spring Banquet there again this year! Dardano’s is located at 11968 W. Jewell Avenue in Lakewood, just three blocks west of Kipling (on the south side of Jewell, next to a Texaco station).

We’re fortunate to have as our featured speaker Dr. John Bally, University of Colorado. Dr. Bally conducts his research

in the areas of Star Formation, Molecular Clouds, and Freestyle Skiing (<http://casa.colorado.edu/~bally/>).

**When:** Saturday, March 10

**Time:** 6:00-7:00P.M. Cash Bar  
7:00-8:00P.M. Buffet Dinner  
8:00P.M. Speaker

**Cost:** \$17.00/person—pay at the door.

**Call or e-mail your reservations to Chuck Carlson (303-744-7331 or [chcarlo@du.edu](mailto:chcarlo@du.edu)) by Monday, March 5.**

## Dark Sky Site Guidelines

*The Dark Sky Site is for the use of D.A.S. members and their guests. If you are neither, please contact an officer of the D.A.S. for a “guest pass.” Please remember that white light disrupts your eye’s dark adaptation and can ruin astrophotography. Most members (astrophotographers may be the exception) are happy to share views from their telescopes, however, please introduce yourself and ask permission upon approaching a telescope owner. Please follow these simple guidelines to maintain a positive experience for everyone:*

- ★ Try to arrive before dark. If you must arrive after dark, please turn off headlights when turning into the site, and try to arrive from the north.
- ★ Don’t park on the graded graveled roads.
- ★ Turn off or disable all dome and trunk lights in your car (or cover with layered red tape or duct tape)
- ★ Use only dull RED FLASHLIGHTS.
- ★ NO OPEN FIRES. NEVER.

- ★ If you’re the last person to leave, close the gate.
- ★ If you leave before everyone else, ask for assistance in getting out of the site without headlights.

### Other suggestions:

- ★ Wear warm clothing.
- ★ Bring your own toilet paper in case that in the porta-pottie has run out.

# how to get there

## The Urban Observatory

**DARK SKY NEWS:** On Jan. 31st HB 1160 "Outdoor Lighting Standards" passed UNANIMOUSLY (10-0) in the Colorado legislature Transportation and Energy committee (Wm. Swenson, R-Longmont, chair), and moved to the full House for further consideration. Many thanks to Denver Rep. Andrew Romanoff for sponsoring the bill, and to public-minded advocates who showed up to speak in favor: Nancy Clanton, Cathy Havens, Larry Brooks, Leroy Guatney, Jan Kok (NCAS), Greg Marino, Ron Mickle, Jerry Sherlin, and others. This was only the first vote of seven (three house votes, three senate votes and Governor Owens). You can check on the bill's status on the web: [www.state.co.us](http://www.state.co.us) and find out how to contact your elected state representative and senator. Also have a look at new website: [smartlights.tripod.com](http://smartlights.tripod.com).

**LOCAL HEROES:** Special thanks to IDA enthusiasts Jerry Sherlin, Chuck Carlson, Leroy Guatney, Greg Marino, Ron Mickle and Bill Ormsby for helping prep the Outdoor Lighting Standards bill defense downtown.

**MORE LOCAL HEROES:** what really "rules" is the outstanding astrophotography by Joe Gafford that appeared in this newsletter (even more glorious in color). Great work, Mr. Gafford!

**HEADS UP:** a new, possibly bright comet, LINEAR WM1 coming this fall to the inner solar system. It will be hanging out near Perseus until it races southward in December and perihelion about mid-January 2002.

**DIGITAL SETTING CIRCLES:** Just as he determined one of the new encoder units was faulty, Tom Melsheimer had to leave for a Hawaii installation project in late Jan, which delayed continuation of the effort until Feb. 9th. However, the new laptop running TheSky software (Software Bisque) is already available for use at the refractor. Get out there and OBSERVE those Messier objects. *Regional newsletters are welcome to reprint any useful portion of this article.*

—Dr. Bob Stencel, [rstencel@du.edu](mailto:rstencel@du.edu)

## S & S OPTIKA

Colorado's Premier Astronomical Supply Store

5174 So. Broadway, Englewood, CO 80110

(303) 789-1089

Hours: Tuesdays, Wednesdays, and Fridays: 10 A.M. - 6 P.M.

Thursdays: 10 A.M. - 8 P.M., Saturday: 10 A.M. - 4 P.M.

Closed Sundays and Mondays

## The Astronomical League and You The Messier Award

The Astronomical League has 15 observing programs which are open to all League members. The oldest of these, and probably the best known, is the Messier Club Certificate. For over 25 years amateur astronomers have been developing or sharpening their knowledge of the sky by observing 70 or more of the deep-sky objects from Charles Messier's famous catalog. As a DAS member, and thus a League member as well, you can also earn the Messier Certificate and pin.

The basic Messier Award comes after you have observed and kept a record of at least 70 of the "M" objects. If you go on to observe all 110 Messier objects, you then are given the Honorary Certificate and pin. Complete details may be found on the League's website at [www.astronleague.org](http://www.astronleague.org): click on "Observing Clubs." If you do not have Internet access, contact the program leader: Scott Krantz, 106 N. Darrowby Dr., Raymore, MO. 64083-9181.

Before you start, remember that this

is a learning exercise; no fair using the computer keypads on the new automated scopes.

If you don't have a telescope but do have binoculars, there is now a program for you as well. Again, go to the League web sites mentioned above and look for the "Binocular Messier Certificate." If you don't have Internet access, contact Mike Benson, 2116 Crystal Dr., Nashville, TN 37210.

This is a great way to learn deep sky observing and win a nice certificate and pin to boot. Clear Skies—*Jerry M. Sherlin, Honorary Messier Certificate 154*



## The D.A. S. Listserve (For Members Only)

The D.A.S. Listserve is available to club members with an Internet connection. It's operated by the E-board and can be accessed from a link provided at the D.A.S. website. Members are encouraged to join up and share anecdotes, observing and imaging tips, or whatever moves you astronomically. Be sure to check the website for profiles of upcoming speakers.

Upcoming Chats (8 P.M.):

March 14

Karen Repine, M.D.

*(Are you tired of wearing glasses or contacts but aren't sure you're ready to "go under" the laser? Get some straightforward answers to astronomers' questions about LASIK)*

# o d d s ' n e n d s

## About the Denver Astronomical Society

The D. A. S. is a group of amateur and professional astronomers that share a mutual interest in the heavens. The D.A.S. 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 Science and Nature and the Smithsonian Astrophysics Observatory's "Moon Watch" program. The D.A.S. 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 D.A.S. 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*.



## Denver Astronomical Society

c/o Chamberlin Observatory  
2930 East Warren Avenue  
Denver, Colorado 80208

APPLICATION FOR MEMBERSHIP TO THE DENVER ASTRONOMICAL SOCIETY	
New	<input type="checkbox"/>
Renewal	<input type="checkbox"/>
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	<input type="checkbox"/>
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Do you want the above information excluded from the yearly roster?	
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<i>Please Circle All That Apply:</i>	
Regular Membership: \$30	Associate: \$10 (Age 22 and younger)
..... \$ _____	
Astronomy Magazine/\$29	
Sky & Telescope Magazine/\$29.95	
..... \$ _____	
Dark Sky Site Fund Donation	..... \$ _____
Van Nattan Scholarship Fund	..... \$ _____
Chamberlin Restoration Fund	..... \$ _____
Total Amount Paid	..... \$ _____
Complete this form, or a copy, and mail it with your check or money order payable to The Denver Astronomical Society; D.A.S. Treasurer, Chuck Carlson; 1521 So. Vine St.; Denver, CO 80210	

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