

# The Photon Gazette

A quarterly publication of the Christian Association of Stellar Explorers (CASE)



Volume 2, Issue 2  
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The Christian Association of Stellar Explorers  
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## Welcome from the President

Well, it's that time of year again. Winter is upon us. It's time to take our scopes out of the garages and houses we keep them in, remove them from our closets, and trudge out in the cold weather to look at the stars. I love this time of year!



Looking through our telescopes, all the while our eyepieces and corrector plates fogging up with the dew. The views of usually beautiful pin-point stars quickly becoming oscilloscope trails due to the ten and fifteen mile per hour winds that set upon us. Seeing our dobsonian mounted telescopes move, seemingly on their own, from the star fields and objects that we have set them to view. Spending time putting together and setting up tripods, just to have the wind make it virtually impossible to see anything. Feeling the cold on your noses, making them run and turn a bright red color. Knowing that the numbness in your fingers is only temporary, especially when you are attempting to focus your telescope on some extremely faint planetary nebula. I do love this time of year! Really, I'm not joking about enjoying this time of year as an astronomer. It may be cold, sometimes dewey and damp, and even extremely windy, but this is a great time of year for astronomy. Think of one thing. . . The Planets!! Here comes our old friends Saturn and Jupiter. Saturn, displaying her beautiful bright rings, and Jupiter, showing her belts and zones, and even sharing a peek at her four Galilean moons. What a great time of the year to be an amateur astronomer.

Even the stars seem to shine brighter in the Winter Milky Way during these crisp, cool and sometimes cold, nights. Take some time and just lay in your backyard (making sure to wear something very, very warm) observing using nothing but binoculars or your naked eyes. The Milky Way is very beautiful in the winter.

### Other News

We've made some great strides in our attempts to build an observatory out on the New Life Ranch property. They have agreed to build it, but we are still negotiating on a time-frame, and where in the field the observatory building will be placed. When this is finished, there will be plenty of room for dobsonians and permanent mount piers for other scopes. The 16" Meade reflector will be mounted on a very nice Schaeffer german equatorial mount donated to John Brown University by member Michael Cater. This facility will allow us to share the awe and wonder of God's creation with secular and Christian alike. What a blessing. The Creation Nation Camps at the ranch have been very successful, and I am thankful that we have been able to partner with the ranch to offer these evening astronomical events to the campers.

The Mid-States Regional Convention is still in the planning stages, but visit the website at [www.christian-astronomy.org/msralconvention.html](http://www.christian-astronomy.org/msralconvention.html) for information and registration forms. We are working hard to procure a top-notch keynote speaker for the dinner.

Dark (and Clear) Skies to All,

Patrick Carr  
President/Editor/ALCor & MSRAL Chairman

## Memberships Coming Due This Quarter

Membership in CASE is based on a calendar year. The following members listed will be responsible for renewing their memberships on or before the date listed beside their name.

Stephen Sbanotto Family (7/31/01)  
Steven D'Annolfo (11/30/01)

## The Planets are Coming

David Cater, MSRAL Vice Chairman

The onset of Autumn always brings the amateur astronomer one of the best opportunities for viewing. As Autumn becomes Winter in northwest Arkansas, we have some of the clearest weather we will see all year. Yes, it is true, that we are likely to have some major storms over the next six months, but these storms are often followed by great weather for viewing.

Fall and Winter are planet season! Mars is becoming very uninteresting as this is being written, but Saturn and Jupiter, the premier planetary sights for the amateur, will soon be evening objects. There will be some night time cold weather to be



Mars by David Cater

braved, but this dealing with the cold is worth it. Saturn will rise late in the evening in November, and with each week, it will rise higher in the sky. Saturn is a gorgeous gas giant of a planet and its ring system is

one of the most beautiful sights to be seen either on Earth or in the heavens! When you look at Saturn, a telescope is mandatory. You might just see Saturn as an oblong shape in binoculars, but to really see the ring system and the ball of the planet itself, you need at least a magnifying power of at least 100--preferably more if your telescope can

do it. About 200 power will reveal all of the detail most amateurs can expect to see on this planet. Start with low power and work your way up until you reach a magnification that shows details well but does not over magnify the effects of the Earth's atmosphere. You will see the ring system and on a good night you will see two or three of Saturn's



Saturn by David Cater

moons. Titan is easy to see in most amateur 'scopes and you might spy Tethys, Rhea, or Dione if you are very sharp-eyed. These moons are quite faint. The ball of Saturn itself is somewhat featureless. You can see faint, low-contrast cloud bands, but Saturn is a very cold place indeed! On such a uniformly cold world, the gases which make up Saturn's atmosphere are all at about the same temperature. This makes for very little turbulence in Saturn's atmosphere and very little Saturnian weather. Things look about the same from month to month, year to year on the tops of Saturn's cloud tops. But...sometimes there is a storm and the last big one was initially discovered by a dedicated amateur who had been studying Saturn for years...

At about mid-Winter, Jupiter will be an evening object just waiting for you, the amateur, to study!

Jupiter is very much brighter than Saturn, both because it is nearer to us on Earth and because it is considerably larger than Saturn. Jupiter turns on its axis in about 9.5 hours, so fast



Jupiter by David Cater

that this rapid rotation draws out its cloud formations into stable bands on its cloud tops. The colors of the cloud tops are caused by the intermixing of various chemical gases in Jupiter's topmost atmospheric layers. Jupiter, still losing heat from the time of its formation, actually radiates more heat than falls

on it from the Sun. This makes Jupiter a bit warmer than Saturn, and this makes for Jovian weather. Coriolis storms (tornadoes) on an immense, Earth-swallowing scale are common. There is always something of interest happening on Jupiter if you can see it in clear, calm skies. Use as much power as you can. Jupiter is a planet which, if conditions are just right, you can see change over cloud tops by following the planet on successive nights.

Another big Jovian thrill is Jupiter's system of moons. The four Galilean moons are easy in most telescopes and you can see the moons dance over the surface of Jupiter, disappear behind Jupiter, and even leave a tiny shadow on Jupiter's surface. With a large amateur telescope and good conditions, you can just resolve each of the Galilean moons as a tiny ball, rather than just a star-like dot.

Venus shows its cue-ball appearance in the morning sky well into winter. On the last five days of October, Jupiter will have a star-like object near it and this will be illusive Mercury. Perhaps you can see it as a tiny ball or crescent. You will need to get up about 6:00 a.m. to see these two planets so close together in the sky, but you can also take in Saturn and Jupiter when you get up this early, and they will be on a somewhat curved imaginary line in the sky extending up from Venus (the Plain of the Ecliptic). Saturn will be nearly overhead and Jupiter will be about half way up the sky. All planets will emerge from the Eastern horizon as the seasons move on.



Mercury by David Cater

Planetary observation can be some of the most challenging yet rewarding types of work the amateur astronomer can do. If you do take up planetary observation, do background reading on each of the planets and look at as many pictures of the planets as you can. An old rule comes in to play here: "The more you know, the more you will see..." You will train your mind to be on the look-out for more and more interesting detail. Good luck!

## Benefits of AL Membership

Patrick Carr, MSRAL Chairman

Many of you may be unaware of some of the benefits that your membership in CASE brings. Since we are members of the Astronomical League (AL), we are eligible for several discounts. Sky & Telescope and Astronomy Magazine will give subscription discounts for AL members. Also, Kalmbach Publishing Corporation will also give discounts through the AL for book purchases.

As an AL member, you are also entitled to participate in the observing awards that they offer. I have recently participated in the Sunspotters Club, Messier Club and Lunar Club, and have found these to be not only challenging but extremely enjoyable! They have enabled me to increase my knowledge of astronomy while focusing on different areas. There are clubs for amateurs of different skill levels, from novice to expert, and the AL is constantly adding new clubs. The new Caldwell Club was just announced at the last AL meeting in July! Interested? Then go to [www.astroleague.org](http://www.astroleague.org) and look at the area entitled Observing Clubs. There is a plethora of different clubs, including something for everyone. So far I am the only CASE member who has earned a certificate (and pin) from the AL for observations (the Sunspotter Award and a Messier Club Certificate). I would love to see our members taking their place in the region by participating in the AL's observing clubs.

## Important Club Activities Dates for 3rd Quarter

### October:

October 12 - 7:30 p.m. (Star Party)  
October 26 - 7:30 p.m. (Lunar Party)

### November:

November 16 - 7:30 p.m. (Star Party)  
November 2 - 7:30 p.m. (Lunar Party)

### December:

December 21 - 7:30 p.m. (Star Party)  
December 7 - 7:30 p.m. (Lunar Party)

## The Gallery . . .

This area is reserved for photographs, drawings and musings from our membership. If you have an interesting thought, please be sure to e-mail it to [thecarrs@tcac.net](mailto:thecarrs@tcac.net) or by mail to the CASE office. If you have photographs or slides of interesting objects in astronomy, please get them to the CASE office for inclusion in our quarterly publication.



Lunar Craters on the terminator by Patrick Carr



Lunar Mountain Range by Patrick Carr



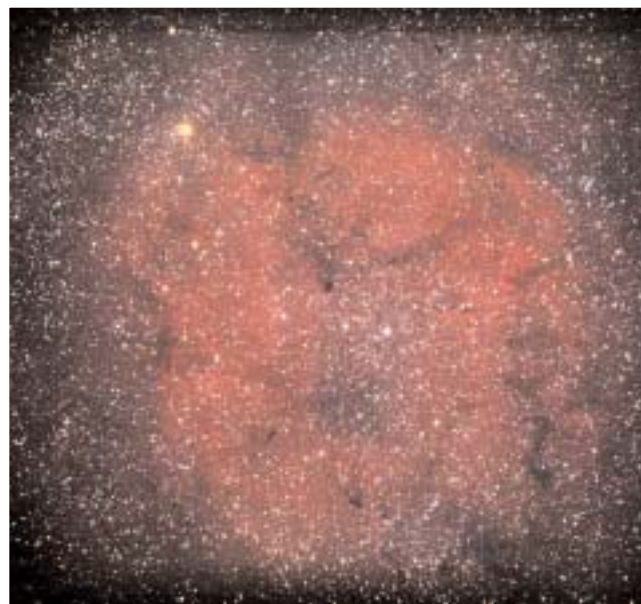
M20 by Mike Peterson

## Dues Paid in Full!

The following people have paid their membership dues for the current year.

Brian Greuel & Family  
Ken Knight  
William Leiser

*All dues paid will be good for 1 year from the date of payment.*



IC1396 by Michael Cater

## Treasurer's Report

Income (YTD September 30, 2001)

Balance Forward:	\$72.80
Membership Dues:	\$150.00
Money Returned from AL:	\$9.00
Miscellaneous Deposit:	\$12.80

Total:	\$244.60
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Expenses (YTD September 30, 2001)

Postage:	\$33.71
National Astronomy Day Materials	\$26.00
Astronomical League 2001-02 Dues	\$45.00
Checks Ordered for Account:	\$12.25

Total:	\$116.96
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Total Cash Reserves:	\$ 127.64
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## What's Up This Quarter?

Mike Peterson, Treasurer

### The Fall Sky

Fall has arrived! I no longer have to wait until 9 or 10 PM to go out and look at the starry sky. It is also not so hot as it was in July & August. It makes it so much more pleasant when I pull the 'scope out to look at the night sky.

In mid October, when moonlight isn't interfering with our viewing we can still see some of the summer objects in the sky. For example we can still see M13 the Great Cluster in Hercules, M57 the Ring Nebula, M27 the Dumbbell Nebula. Also in Hercules you can find another nice Globular Cluster, M92. In the southern sky the constellation Sagittarius can still be seen, along with many objects around it like the Lagoon Nebula, the Trifid, the cluster M22, the Eagle Nebula, M6 the Butterfly Cluster, M7, and the Omega Nebula.

In the northeast, M31 the Andromeda Galaxy, and the Double Cluster are moving higher and higher into the evening sky making it easier to see them. Along with the Pinwheel Galaxy and the Pleiades (M45).

In the southeast, in the constellation Capricorn, the planets Uranus and Neptune can be found. Just like last year. Mars is not too far away. All you have to do is look a little further to the south. The planets Jupiter and Saturn, are returning to the evening sky. Lately you'd have to get up early

in the morning in order to see these planets. Now, Saturn can be seen by about 11 pm, and Jupiter by about 1 am. In between is M1, the Crab Nebula. Mean while, Venus and Mercury can only be seen if you get up to watch the eastern sky just before dawn. In fact, Venus and Mercury will pass near each other on the morning of Oct. 29.

Once we reach the new moon in mid November, the Pleiades, Jupiter and Saturn, the Crab Nebula can easily be seen by 10 PM. Although the constellation Orion is closer to the horizon, It also is visible by 10 PM. With Orion coming up we will be able to see the Great Nebula in Orion: M42. In the west, Hercules (with the cluster M13) will be setting, The Ring Nebula, and the dumbbell will not be far behind. Also, in mid November, The Leonids meteor shower will be taking place. I've been told that the meteor shower may be the most intense we've seen since 1966.

When the full moon returns on Nov. 30 observers in the eastern and central sections of North America will have a chance to see the Full moon occult the planet Saturn during the early evening. We may have a second chance to see this event on Dec. 28.

By the dark of the Moon in mid December, we will be able to see the Christmas Tree Nebula, and the Rosette Nebula. If you are up late enough, you can also view the Beehive Cluster in the middle of the Cancer constellation.

## Current CASE Membership

(Current dues up to date)

Patrick\*, Adriane and Rachael Carr (F) - 3

David Cater\* (I) - 1

Michael Cater (I) - 1

Brian\*, Jane Greuel and Family (F) - 4

Ken Knight\* (I) - 1

Mike Peterson (I) - 1

Jon Peterson (S) - 1

Stephen\*, Elaine and Pete Sbanotto (F) - 3

William D. Leiser, Jr. (I) - 1

Steven D'Annolfo (I) - 1

Roger Youmans\* (F) - 5

Total Paid Membership - 22



\* = Mailing name on all newsletters.

F = Family Membership I = Individual Membership

S = Student Membership