

The Christian Association of Stellar Explorers
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The Photon Gazette

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

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Volume 1, Issue 1
(July • August • September 2000)

Welcome from the President

Greetings in the name of our Lord and Savior Jesus Christ! I am pleased to welcome you as the first recipients of The Photon Gazette. This new newsletter will be published quarterly and sent via email using the Adobe PDF format, or sent via snail mail to your mail box. This newsletter will contain articles from the membership on issues such as astrophotography, telescope and binocular purchases, viewing tips and other topics and input from the membership. Remember, this is YOUR newsletter. I will be glad to print any and all submissions.



I am also proud to announce that we as a club have been accepted into the Astronomical League as a member society. This is an exciting time in the birth of our club, as their affiliation will allow our members to receive their quarterly newsletter, the Reflector and entitles us to discounts on Astronomy and Sky and Telescope magazines. We are also entitled to participate in their different viewing clubs. Some of these include beginner tours of the galaxy, planetary observers, Messier and Herschel Clubs and other opportunities to increase both your knowledge and enjoyment of the night sky.

Our new website was redesigned and announced in early May. This website now has places for astrophotography and a spot for KidPics, in

which children can send us their drawings to place on the website.

We need to decide what is better for our club: meetings on Friday night or Saturday night. Also, we will be attempting to have two viewing parties per month, one during the first quarter moon and one during the new moon.

New Life Ranch may become our permanent viewing site. I have been using their upper pasture for a few months and the difference in the night sky is tremendous. It's just so much darker there that the arm of the Milky Way can be seen much easier. I am currently in negotiations with their staff and board to be able to make some improvements to the entrance from New Life Ranch Road into the dirt road leading to the pasture.

We need to concentrate on getting our dues in for the year 2000. Remember, family membership is \$25.00 per year, individual memberships are \$15.00, and student memberships are \$5.00. These dues include membership in the Astronomical League and both the Reflector and the Photon Gazette newsletters. We are trying to get non-profit (501-C-3) status, but until then make the checks out to Mike Peterson, our Treasurer.

If I can be of service, please do not hesitate to call. God Bless, and keep looking up!!

Patrick Carr
President/Editor

Club T's Now Available!

We now have 100% cotton black t-shirts available. These shirts have our logo on the front left chest, and a great picture of M-42 (The Great Orion Nebula) on the back.

Shirts cost \$15.00, and are available by calling Patrick Carr at 501-524-0322 or by emailing to thecarrs@tcac.net.

mount also allows for large aperture scopes on a small aperture budget. The least desirable of these are the alt-az mounts, since they have neither the ability to track or the ability to hold a large aperture scope. Most alt-az mounts hold scopes that are in the 60-90mm range. So depending on what your budget and astronomy needs are, then you will be able to make an intelligent choice on the mount for your next scope.

Getting the Most From Your Telescope

Dr. David Cater, member

So, you've bought a telescope or you have had one for awhile and now you want to begin using it. How to go about it... The short answer is, take your telescope to a starparty sponsored by a local group of amateur astronomers. Tell them you are new to the hobby and want to use your 'scope well. There will be a number of people who will step forward to help. If you continue to attend club parties or join the club, over time, you will pick up all of the useful lore you need to use your 'scope effectively within its range. Don't be shy or afraid to ask questions--we all started out knowing next to nothing. More advanced amateurs than you may feel you are will be very happy to assist you in this terrific hobby.

Let us say, however, that you want to start on your own. First of all, does your 'scope do it with lenses or mirrors? Scopes which use lenses are called refractors. Most of the 'scopes beginning amateurs own are of the small, 60mm--3 inch variety. These can be good for viewing the Moon and some of the planets [Jupiter, Saturn, Mars and Venus, occasionally Mercury] and for viewing the Sun if you have the proper filter over the front end of the 'scope. NEVER VIEW THE SUN WITHOUT PROPER FILTERS--BLINDNESS CAN OCCUR! Read the instructions that come with the scope, if you have them. If there are any instructions which refer to polar alignment, follow these as carefully as you can.

Now, let us assume that you have achieved polar alignment, a process too complicated to describe in this short article [a future article will deal with

this important topic]. Start by viewing a large naked eye object--the Moon is perfect. Sight down the tube of your 'scope with your eye, much like you would aim a rifle. It may take awhile, but you will eventually center the Moon in your 'scope. Begin viewing with the eyepiece which magnifies the Moon the least. If you have more powerful eyepieces, use them in succession to see their effect. Notice two very important phenomena: the more magnification you use, the smaller the field of view, and, in general, the more power you add, the less distinct the image you see. These two phenomena are invariable for all telescopes, whatever kind you own. You have just made some early observations with your own telescope! The more you look, the more you learn how things look! After awhile, you will have a list of "old friends", objects you always come back to and cherish, no matter how advanced an observer you become.

Let us say that your telescope obtains its image by the use of mirrors. Most amateurs own reflector telescopes ranging in size from about 4 inches to 12 or 16 inches. [Of course, some amateurs own telescopes ranging larger than this, but the 4-to-16 inch range is more typical.] Again, if your telescope came with instructions, especially on how to obtain polar alignment, follow these instructions very carefully. However, you may have a popular form of the reflector called the Dobsonian type. These 'scopes are very convenient to use, requiring no polar alignment. They are "point and look" 'scopes. Sight down the tube, starting with the Moon, and use the eyepieces you may have, and just enjoy!

Typically, both refractors and reflectors come with finder 'scopes, of various degrees of adequacy. These are like telescopic sights on rifles and save you a lot of trouble in finding celestial objects. But...they must be properly aligned to help you find what you want. You must first find a large object, such as the Moon, and center it in your 'scope by sighting down the tube, as above. Then, using the instructions for the finder, and the small screws or knobs which come with the finder itself, bring the object to the center of the cross-hair or circles you will see in the finder. Both the image in the small finder and in the visual field of the

Welcome New Members

The following people have paid their membership dues for the 2000 year.

Brian and Jane Greuel and Family
Stephen, Elaine and Pete Sbanotto
Ken Knight

*All dues paid this year will be good through
December 31, 2000.*

main 'scope should correspond. Now, move the 'scope to a random position on the sky and, using the finder, bring the Moon back into view in the finder. Check to see that bringing the Moon to the center of the finder also brings the Moon to the center of the telescope field of view. If not, further adjustments in the finder are necessary, usually a trial-and-error process well worth the time.

This article is really about getting the most out of your telescope. This might suggest that I would give you some sort of list of mechanical adjustments you should perform to bring your 'scope to optimum readiness for observing. Other than the beginning advice given in the above paragraphs, I am not going to offer any more mechanical advice. This is because, the most important first thing you can do to help your telescope be a good instrument for you is to make adjustments to your mind! There is simply no substitute for reading about the things you want to observe. You must train your brain to see more. Let me explain. Your brain, especially your visual cortex, processes visual information from your eyes. The visual cortex, and its associated attachments to other brain centers, takes visual signals from your eyes and gives them meaning. As more meaning to visual signals is obtained, the more there is a developed context of meaning already existent when new visual signals arrive at the cortex each time you observe. Over time, the visual cortex learns to see things it did not previously see because it learns to process information better, [technically, it learns to discriminate "signal" from "noise" more efficiently] the more it is given the experience to do so. In addition, reading and study, and consultation with more advanced stu-

space.com to Feature CASE in June

It looks like CASE will be featured on the June redesign of the Space.com website. This newly created website is now the place for space and astronomy related issues and news. Patrick Carr met one of their freelance writers at the High Energy Astrophysics Workshop in Huntsville, Alabama, and was able to get him interested in the club. Please check the space.com website for more information.

GEM, Alt-Az or Dob? Pros and Cons

Patrick Carr, President

Well, well, well. I know that I want to buy a telescope, but what type to buy? This is the same question that concerns all amateur astronomers. What type of scope do I buy? This will depend on the types of astronomy that you will be pursuing. If you're interested in astrophotography, then the right scope for you will have to have a German Equatorial Mount (GEM). These types of mounts can be motorized for tracking when doing astrophotography. The Dobsonian mount, invented by Charles Dobson, is the mount of choice for your newtonian telescope if you are interested in quick setup and ultra-portability. The dob mount makes it easy to get set-up (less than two minutes!!!) and to get started looking at objects. These mounts tend to be made just like a lazy susan. The dob isn't really made for astrophotography, since it has no tracking motor attachments. This

dents, further greatly enriches this information-processing context. You will need to teach your brain how to observe and the only way to do it is to observe a lot and learn: from books, classes, or talking to others, what there is to see, how it should be seen, and the different presentations of the same object under various observing conditions. In effect, this will make your 'scope, no matter what its inherent, physical capabilities, the most it can be....FOR YOU! Getting the most out of your 'scope always implies getting the most out of your brain!

Good luck, good observing and good learning!

What's Up This Quarter?

Mike Peterson, Treasurer

Summer is one of my favorite times of the year for looking at the night sky. There seems to be so many interesting things to look at.

In the constellation Lyra is the Ring nebula. Not too far away is the Dumbbell nebula. This is near the constellation Cygnus, but is really in the constellation Vulpecula. Near by in the constellation Hercules are the globular clusters M13 and M92. In the southern sky, around the constellations Sagittarius and Scorpius, there are a great many open clusters, globular clusters, and nebulae to look at. I could spend the better part of an evening looking at the southern sky this time of the year. Some of what could be viewed is M8, the Lagoon, M20, the Trifid, and the M6, M7 and M20 star clusters.

Do you like galaxies? You can enjoy M81 and 82, M51 and its companion, and M101 in the neighborhood of Ursa Major (the Big Dipper). If you move across the sky a little bit you can look at all the galaxies you could want to see in the Realm of the Galaxies between Virgo and Leo. Move a little bit further, and you can view M104 the Sombrero Galaxy. M104, and the Realm should be viewed earlier in the summer because by August they are dropping below the horizon. By then the Andromeda Galaxy is on the rise in the northeast. Not too far away is another pretty sight: the Double Cluster that can be found between the Cassiopeia and Perseus constellations.

There is another reason I like the night sky in the summer. The Milky Way star clouds. The summer Milky Way is so much brighter, and more visible than the winter Milky Way. Sometimes it is fun to just cruise the Milky Way with a pair of binoculars, or a telescope. It is amazing how many stars can be seen in one small magnified area.

Visit our New Website!

The new and improved CASE website was posted on May 1, 2000 and, as of this printing, almost 200 people have visited our home page! Not too shabby for a small club with no national advertising budget.

Don't be left behind! Visit our website at:

www.christian-astronomy.org

Treasurer's Report

Income (YTD June 30, 2000)

Membership Dues:	\$150.00
Club Scope Donation:	210.00
Total:	\$360.00

Expenses (YTD June 30, 2000)

Astronomical League Dues:	\$ 28.00
Club Scope Purchase:	210.00
Website Registration:	70.00
Total:	\$308.00
Total Cash Reserves:	\$ 52.00

Upcoming Meeting Dates

July:

July 7 - 8:30 p.m. (Lunar Party)
July 28 - 8:30 p.m. (Star Party)

August:

August 4 - 8:30 p.m. (Lunar Party)
August 25 - 8:30 p.m. (Star Party)

September:

September 8 - 8:30 p.m. (Lunar Party)
September 29 - 8:30 p.m. (Star Party)

Regularly scheduled quarterly meeting will be held on Thursday, August 17 at 7:30 p.m. at John Brown University. There will be a door prize drawing for all paid members in attendance.

Club Has Loaner Scopes

Patrick Carr, President

CASE was given a donation of \$210.00 for the purchase of a loaner scope for members. Patrick Carr drove to Rex's Astrostuff in Russellville to purchase the 4.5 inch Celestron Dobsonian. This scope has a 25 mm eyepiece and has excellent optics for a scope of this size. We also currently have a 60mm refractor on a gem. If you are interested in using either scope, please make sure to call Patrick Carr at 524-0322 to reserve usage.

The Gallery . . .

This area is reserved for photographs, drawings and musings from our membership. If you have an interesting thought, please be sure to email it to 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.



M20 (top) and M8, the trifid and the lagoon nebulae. Taken by David Cater. Both of these objects can be found in the constellation Sagittarius.



Current CASE Membership

(Paid through Dec. 31, 2000)

Patrick*, Adriane and Rachael Carr (F) - 3
David Cater* (I) - 1
Brian*, Jane Greuel and Family (F) - 5
Ken Knight* (I) - 1
Mike*, John Peterson and Family (F) - 5
Stephen*, Elaine and Pete Sbanotto (F) - 3

Total Paid Membership - 18

* = Mailing name on all newsletters.
F = Family Membership I = Individual Membership

