ASTRONOMY CLUB OF AKRON
www.acaoh.org

The Night Sky

The Newsletter of
The Astronomy Club of Akron
www.acaoh.org

Volume 27 Number 2 **February 2005**

From the President

Ramblings of the President
- by Dave Jessie

First Successful February Open House in Memory!

What a month we've had. First, our long-awaited gala holiday dinner had to be postponed due to a winter storm that turned out to not be as bad as predicted. Ray Paul, our Observatory Director was injured the prior morning in what could have been an extremely serious auto accident. Don't misunderstand…it WAS a serious accident, but Ray was lucky to have escaped without too much physical damage despite having to be cut from his beautiful new car – which was totaled. Don't despair. Ray is doing extremely well with relatively minor injuries compared to what might have been. As a matter of fact, Ray was at the scheduled observatory open-house this last weekend! Which brings me to the point…we had a tremendous turnout of both members and public. And we had SKIES, too! I had spoken to Ray a few days before the event to let him know his duties as Observatory Director would be covered. I assumed he would stay at home resting and recuperating, but no, he was there in case we needed any information about the facilities – and we did. Thanks, Ray. He and I discussed the fact that in our memories, we had never had a successful February open-house. By 'successful', I mean actually being able to observe. What a surprise we had when our Clear Sky Clock started looking good almost two full days before Saturday's event. And as usual, the prediction was right on the money. Beautiful skies, lots of members, lots of telescopes, lots of public coming from as far as Geneva, OH to check us out. I've received several emails from folks who came for the first time to see what we do. All have expressed thanks to our club and to our members who showed them the wonders of the universe. The skies were glorious! Saturn in the club's 14" SCT was fantastic! Honestly looking like some of the better digicam photos. Cassini's Division you could drive a truck through, several bands on the planet proper and four and sometimes five moons to boot! Don't get me wrong, it was cold out there! I don't think too many public stayed for the entire event, but I'll guess that we had 40 to 45 members and guests throughout the event. Everybody left happy – and somewhat chilled.

Gala ACA Holiday Party has been RESCHEDULED!

The event was scheduled for Saturday January 22nd but had to be postponed until Saturday February 19th. It's at the Kiwanis Civic Center at 6:00PM – and as before, it's a catered event with a charge of $12 per person. We have 67 people attending. ***IF YOU ARE ON THE RSVP LIST, MARK YOUR CALENDARS!***

Final note

Judging by participation in last Saturday's open house, it looks like we're in for well attended events this year…nothing could make me happier!

The ACA would like to extend a warm welcome to the following new members!

Tim Derring
Carol Hosfeld
Donald Johnson & Family
Andrew Marek
Steve Rohweder
Dan Rowland

We are thrilled to have you as members and look forward to seeing you at ALL club meetings and events!

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Activities Calendar

Club

February 19, Holiday Dinner 6 PM
February 25, Monthly Meeting 8 PM
March 12, Observatory Open House and Star Party 7:30 PM
March 25, Monthly Meeting 8 PM
April 9, Observatory Open House and Star Party 8 PM
April 16, Astronomy Day 2005
April 22, Monthly Meeting 8 PM

Celestial

February 16, First Quarter Moon
February 24, Full Moon
March 3, Last Quarter Moon
March 10, New Moon
March 17, First Quarter Moon
March 25, Full Moon

In case you did not notice, I am back as Night Sky editor for the time being. Lynn has experienced major computer problems and I have agreed to enjoy producing this newsletter once again. Ray Hyer

The deadline for article submission is **two weeks before the next meeting**. All word processing files should be saved in straight ASCII text files or any version of Word to minimize import problems. We will not turn away **any** submission, as long as the article's subject is astronomy or a related topic. If you don't have access to a computer, don't hesitate to write something out long hand. As long as it is legible, I will slave over the key-board and get it published.

PLEASE SEND IN YOUR ARTICLES!!!!

Send your articles, items for sale, and comments to:

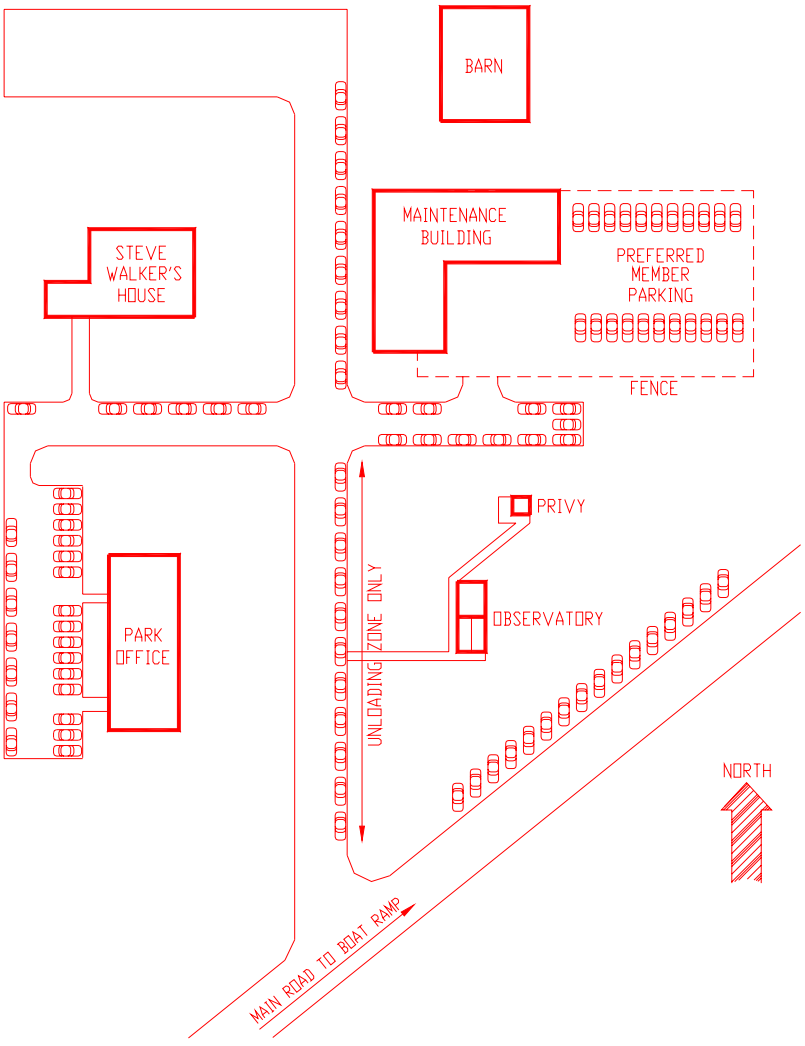
Ray Hyer 725 Brewer St. Akron, OH. 44305 email rhyer@neo.rr.com

Observing Etiquette and Telescope Techniques for General Stargazing - by Ray Paul

The Spring observing season is rapidly approaching. I'm sure we all want to make it as desirable as possible for everyone. I felt it was time to set down our "unwritten rules" one more time Please do your best to abide by these simple courtesies. As in any situation, the basis of a good observing experience is to consider the needs of everyone around you.

1. **Telescope?** Bring it along if you have one. Experienced observers, even the ones with the monster telescopes love to gander through other telescopes. In addition, binoculars are an excellent observing aid so bring them along.
2. **Headlights.** Many of you old timers are in the habit of turning out your headlights as you enter the observing area. This practice is greatly appreciated, but does, however, have a downside. The previous park manager frowned upon this practice and reminded us that State law prohibits driving at night without the use of headlights. This issue has not been brought up by the new park manager and to my knowledge, no one has been stopped for doing so. I'll have to leave this up to your own discretion since the club can hardly recommend your breaking the law. Please be conscious, however, of how long and where your headlights are pointed.
3. **Flashlights.** Always use flashlights with a red lens or some type of red filtration. If you need to find one ask one of the more experienced observers or purchase one online or from a local hobby shop. Keep it dim and pointed down at the ground.
4. **LED lights/Lasers.** With the advent of red and green lasers and efficient but bright LEDs (even if they are red), it is important to remember to shield the output appropriately. There has been some bad press of late regarding the use of green lasers. The green lasers have become a very useful tool for astronomers, but should only be used by responsible adults, not as a toy in the hands of children. A green laser beam in the business end of a scope could have serious consequences.
5. **No Aerosol Sprays on the Observing Fields.** One drop of spray can permanently damage telescope optics. Please do not apply insect repellent spray or use any other aerosol spray on the observing field. Lotions are fine.
6. **Watch your children and pets.** Children are the future of amateur astronomy and we encourage parents to bring them along to the party. However, very small children, pets, and many adults are bored by starlight. If they will not enjoy the hours of looking through expensive telescopes at faint, fuzzy objects, they might prefer to stay elsewhere. A star party can be a very exciting time for most everyone, kids included. **Please, keep an eye on your children and pets.** There are literally thousands upon thousands of dollars in equipment out on the observing field. Most scope owners have saved for years to buy their dream scope, or have countless hours in building their own equipment. Children should be instructed not to run or play around the equipment on the observing field. They should also get the owners permission before touching any equipment. Additionally, not everyone likes dogs or other pets. Please leave them at home or in the car as they can interfere with others' pleasure.
7. **Trash.** If you make a mess, please clean it up. Bring trash bags to place your trash in.
8. **No-no's.** Please, no loud radios, no consumption of alcoholic beverages and no discharging of firearms.
9. **Big Scopes.** Most telescopes are small enough that you can simply walk up and look in the eyepiece, or better yet, you can sit down and look through it. Then there are the "Big Dobs". These telescopes so large that you literally have to climb a ladder to look through them. Some only require a step or two and you are at the eyepiece. Others may require more. It is not uncommon to climb four, five, even six feet up a ladder just to look through the eyepiece. No big deal you say? They can be! Just remember, you are doing this in the dark. When you do go up a tall ladder, be sure to count your steps. If you forget that you are on a ladder and turn around to walk away, that first step could be a doozy! (Lulu) If in doubt, ask the owner to count you down. It's better to be safe than sorry. And whatever you do DON'T TRY TO BREAK YOUR FALL ON THE TELESCOPE! Scope owners will not be held responsible if you are injured climbing their ladders. **But you will be held responsible for any damage you cause to a scope**. By climbing the ladder, you assume the responsibility of getting up and down safely. If you don't think you can get up there and back down safely, don't go.
10. **Keep your hands to yourself!** Don't hesitate to ask to look through anyone's scope, but please don't use or move a telescope without the owner's permission. Please don't touch any glass optical surface. The oils on your skin can ruin the coatings.
11. **Walk-abouts.** When moving about the site, be careful. Use your red flashlight to check the area you are traveling. The ground is uneven and some telescopes have power cords connecting them to a car, battery, or computer. Tripping over these may spoil your evening as well as damage someone's equipment.

12. **Clothing.** Give some thought to this one! Check a weather report prior to an observing session. Astronomy is not much fun if you are not comfortable. Standing around in the night air can be quite cold, even in the summertime. Bring a sweater.
13. **Asking questions.** There is a saying that even holds true on the observing field. "There is no such thing as a stupid question. Only stupid people do not ask questions". Now we aren't implying that you are an idiot ;-). We are just trying to explain that no matter how dumb you may think the question is, go ahead and ask it. Most of us have probably asked the question ourselves when we were getting started in astronomy. A star party is the best classroom for learning about the hobby. You will learn more in one night by asking questions and listening to discussions than you will in a year out on your own. However, if you're a visitor or a "newbie", try not to monopolize another person's time. Some observers have a plan that they are following for the night's observing.
14. **Parking.** Please take a moment to familiarize yourself with the attached drawing of parking around the observatory. This is our agreement with the park. If you see someone parking otherwise, please help out and politely redirect them to a better spot. It's real hard for me to be in all places at once, and harder yet to find a driver once he's left the vehicle.
15. **Hospitality.** As members, we should all feel an obligation to make each star party enjoyable for all visitors. Please make an effort to greet anyone who looks new. Just a few friendly words will help to make everyone feel at home and will make their experience all the more memorable. Remember, this is where most of our new members come from.
16. **Have fun!** The enjoyment of a star party is indescribable. Many new friends will be made, you will look through many different telescopes, both large and small, and a sense of satisfaction and fulfillment will be with you as you leave. Most are already looking forward to the next star party even before they leave the observing field.



PARKING DIAGRAM FOR PUBLIC PROGRAMS

From the Veep:

What would I need to do in order to set up a …

Tube Dobsonian?

- by John Crilly

This series of articles is intended to familiarize folks who are in the process of choosing a telescope with the setup procedures required by some of the popular types from which he might choose. It is hoped that these descriptions will help a budding astronomer to choose gear that is suited to his needs and observing style, and to avoid surprises when learning of the type and degree of effort required by his new acquisition. Because of this, the article is general in nature and shouldn't be relied upon to enumerate each and every step required for best operation of any given instrument.

It's not unusual to hear the following question when visiting our Club's observing site:

"Hey, Mister - can you help me set up my new telescope?"

The correct initial response is, of course, "Sure!", followed by sufficient questions to determine the type of gear involved and the degree of familiarity with it that is possessed by the proud owner.

Tonight it's a tube Dobsonian owned by a complete newbie. These are very common telescopes, and are frequently recommended as a person's first telescope for a number of reason. They are uncomplicated to set up, initially requiring no understanding of the celestial coordinate system. They offer the most optical quality and aperture of any common instrument for a given price.

Common examples include the Celestron Starhopper, the Hardin Deep Space Hunter, the Orion Sky Quest, and many others. The most common apertures found are in the 6" to 12" range, though some exist which are larger or smaller.

I'll explain to the new observer that what they all have in common is:

1) A Newtonian optical tube consisting of a solid tube of either steel or Sonotube (fiberglass-coated cardboard) with a parabolic primary mirror at one end, a smaller, flat but tilted secondary mirror near the other, and a focuser extending out the side of tube near the secondary mirror.
2) Disk-shaped elevation bearings fixed to this tube on opposite sides near the balance point
3) A flat ground board attached by a central pivot to a rocker box, which is free to spin as it rests on the ground board. This freedom of motion is provided by bearings or by slippery pads on the top of the ground board.
4) The rocker box is a framework for two half-round elevation bearing surfaces in which the bearing discs on the optical tube rest. The optical tube is free to rotate in elevation, with the bearings riding on slippery pads installed in the round cutouts in the rocker box.
5) Because the optical tube can swing freely in elevation and the rocker box can spin freely in azimuth, the telescope can easily be pointed to any area of the sky.

Before we begin I'll make certain that the Sun is not permitted to shine into the open top of the tube while assembling the telescope! I'll keep it covered - and then be sure not to aim it at the Sun anyway, just in case.

Then we'll proceed as follows:

Setting the telescope up begins with placing the ground board/rocker box combination on a dry, fairly level spot. Many observers prefer to place a pad of indoor-outdoor carpet under the ground board to protect it from moisture, and to give them a non-muddy surface on which to stand. The rocker boxes are usually made of pressed wood, which is substantially heavier than conventional lumber. The weight of the ground board and rocker box assembly will usually range from under 20 pounds for a 6"

to around 40 pounds for a 12" instrument.

Before placing the optical tube in position, one should observe the rocker box; these are usually not symmetrical - the tube will be permitted to tilt in only one direction by a vertical wall on the box. This wall is installed to provide mechanical rigidity. The optical tube will swing toward and above this wall, but the bottom end of the tube would strike the wall if tilted the other way. Thus, when the optical tube is installed the "top" side of it needs to be placed away from this wall. The top of the tube is usually determined by the location of the focuser and finderscope. The focuser is often in line with the bearing; if this is the case it could be used in either orientation - but if the finder winds up on the bottom it'll be very inconvenient later!

Once the orientation of the optical tube is determined it can be lifted and the bearing disks placed into their receptacles on the rocker box. The weight of the optical tube depends on the tube construction and the aperture. A 6" steel optical tube might weigh 10 pounds, while a 12" steel tube might be 40 pounds. The Sonotube units are heavier; a 16" Sonotube optical tube weighs nearly 100 pounds!

Now it's a telescope, but we have some things to check before it's ready for use. First, we take a quick look at collimation. We aren't going to spend much time on that this first night; I'll make sure its close enough to provide great views and will direct the owner to some resources on the subject so he can learn to do it himself another night. For info on Newtonian collimation, see the following:

http://homepage.mac.com/vicmenard/telescopes/

Next, we must align the finderscope. Until we do that it'll be very difficult to find objects in the main telescope. The easy way, if it's not yet dark, is to find a terrestrial target at least 100 yards away and, with the longest focal length eyepiece available inserted into the focuser, to point the telescope toward the object while looking into the eyepiece. It should be easy enough to find the object that way. The we can adjust the focuser for the sharpest image and carefully move the telescope until the image is in the center of the field. Without moving the main telescope, we now look through the finderscope. If it's close to alignment the object will be visible but not centered. Adjusting the screws on the finderscope mount, we adjust it until the same object is centered (though much smaller) in that field of view. If it's dark, we'll use Polaris instead. Polaris is chosen because it is nearly stationary and thus won't move while we are trying to adjust everything.

At this point, the telescope is ready for observing. I'll suggest a number of easy objects we can see from that location at that time. I won't choose the sort of faint fuzzies so dear to experienced amateurs - remember the newbie doesn't have those observing skills. It's likely that (1) he won't see them at all and (2) even if he does see them he'll be disappointed in his new telescope. Show him the crowd-pleasers. After all, he's probably never seen them - and certainly not in his new scope!

John Crilly
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Treasurer's Report: 12/1/04 - 01/31/05

Total Beginning Assets	$7,902.84
Income	
Holiday Dinner RSVP's	756.50
Interest on balances for Dec/04 & Jan/05	13.57
Magazine Subscriptions	29.00
Expenses	
Magazine Subscriptions	(29.00)
State Sales Tax	(11.34)
Total Ending Assets	$8,661.57

Constellation Challenge

It's not too difficult to identify constellations when you are looking at a map with lines connecting the stars to show the pattern that the group is named after. But when you go outside there are no lines. So how good are you at recognizing the constellations in the sky? All the constellations shown here are in our night sky (above the clouds!) and should be familiar to you.