If you haven't seen Apple's new iMac, then you've got quite a kick coming. It's candy for the eyes. You can just eat it all up in one gulp. No sharp corners or beige tones. It's translucent sides reveal its tempting innards and teardrop shape. The rounded corners make you want to slide your fingers on the keyboard. It looks like a work of art. The monitor and CPU are all in one piece, eliminating the need for cable management. It's a beautiful piece of technology.

Away from the Eyepiece
by John Herrgott

Last month I promised a report on Star Hill Inn. My intent was to spend a week at the inn and then to write of my experiences under their skies. The trip did not take place due to an unavoidable family obligation. Nonetheless I can still tell you what I learned about the resort.

Star Hill Inn is a resort located in northeastern New Mexico at an altitude of 7000 feet in the Rocky Mountains. The accommodations offered consist of housekeeping cabins of various sizes. The resort is intended primarily for astronomy enthusiasts but also caters to general travelers. The sky at Star Hill Inn is spectacular and the resort is designed to provide a peaceful and relaxing environment.

Solar Observations
by Marty Kunz

Have you seen the sun lately? It looks as if 1999 is getting off to a good start. Every 11 years the sunspot cycle reaches its maximum. Usually a few spots will appear with increasing numbers as the maximum approaches. However this cycle has started out with a lot of spots and may be the most active maximum in 50 years. Recently there have been very large groups appearing on the sun's surface.

SETI@home
by David Olceski

SETI@home is a scientific experiment that will harness the power of hundreds of thousands of Internet-connected computers in the Search for Extra-Terrestrial Intelligence (SETI). You can participate by running a screensaver program that downloads and analyzes radio telescope data. There's a small but captivating possibility that your computer will detect the faint murmur of a civilization beyond Earth. To take part in this endeavor, go to http://www.setiathome.ssl.berkeley.edu

Lights... Camera... Action
Getting Started in Astrophotography
by Clayton Kessler

Astrophotography does not have to be a big "production". You can take very satisfying, very professional looking astrophotos with fairly minimal equipment. If this is a part of the hobby that interests you I urge you to take the plunge!

Let me give you some background. I have been in the hobby of astronomy for about three years. I don't make

Steve Greene
by Ceil Bondono

Before you learn more about the topic of this month's 'In Focus', Steve Greene wanted me to be sure and mention that as the WAS incoming president he promises no impeachable offenses! On a more serious note, Steve says that his goal is to add to the Club rather than change it.

After spending a few months participating in the Warren Astronomical Society as a visitor, Steve joined in October, 1997. Ben Tolbert had just received Steve's membership dues when, prior to announcing Steve's new
any claim to be some kind of "expert", I am just an average schmoe with less than average patience. I did, however, have a driving force. Ever since I was a child I have been fascinated by the astrophotos taken by observatories and placed in magazines. I did not realize that many amateur astronomers were getting similar results, and getting published, using equipment available to us all. I will let you in on a little secret, many of the photos that I see, in magazines, are piggyback exposures through regular camera lenses. Secret #2 - piggyback astrophotos are relatively easy to take! In piggyback photography you take pictures through a camera lens - not the telescope. The telescope is used to make "guiding corrections," or correct any errant drifting of the stars by watching a star through a crosshair eyepiece.

What is needed to take astrophotos? Well.... a camera, of course, and you need to be able to hold the shutter open for a length of time. This means the camera should have a "bulb" or "B" setting. An older Single Lens Reflex (SLR) is perfect. You also need a cable release, if you touch the camera to trip the shutter you will blur the photo. You also need some kind of mount that will track the stars. This is not as difficult as it seems. Look at your telescope, is it a fork mounted SCT?, a Newtonian on a German equatorial mount?, does it have a motor drive? If so, you are golden. You just need to attach your camera to the telescope, OR THE MOUNT, and start to take photos. The mount, you say? How come? Well a lot of scopes, notably 4.5" reflectors, come with a small GEM and a motor drive is a frequent accessory. This small mount is fine for visual work but somewhat light duty to drive both the telescope and the camera. The solution? Remove the telescope! This takes enough strain off of the motor that you can use the mount for photography with shorter focal length lenses. Without a telescope you cannot guide the mount but this is not so critical with a short focal length lens.

Ok, you have a camera and a motorized equatorial mount - now what? Well, we need to attach the camera to the mount. Many mounts or telescopes have the facility to attach a "piggyback camera mount" and these are available from scope dealers. The cost for a piggyback mount runs from 30 to 50 dollars and they will support a camera and up to a moderate telephoto lens. When you are just starting don't use more than a moderate telephoto (135mm or so). If your scope does not have any way to attach a piggyback mount there are other ways.......

You need to look at the mount and be creative. Often there are screw holes that can be used to attach a "ball swivel camera mount" available from a camera store. Every mount is different so take a look. If you see something that you think will work try it! You can even use a piece of wood, a 1/4-20 screw and a roll of duct tape (or "Doug" tape at the NCO). Attach the camera to the wood with the 1/4-20 screw (sink the screw head
into the wood so it will not scratch anything). Duct tape the wood to your telescope tube near its' balance point.

Take astrophotos. Is this an elegant solution? Heck no! Does it look good? Heck no! Will it take astrophotos? You Betcha!!

What else do you have to do? When you set up you have to POLAR ALIGN your mount very carefully. Polar alignment is critical to good astrophotos - especially if you want to use that 500mm telephoto. Polar alignment means you are going to adjust your mounts' polar axis parallel with the axis of the earth. If your scope has a polar alignment finder scope this is easy. If not you may have to rough align with a compass and protractor and do a drift alignment to perfect your alignment. The method for drift aligning a scope is written up in many reference books far better than I could here. If I could give you a hint, find someone at a star party that is proficient in this and have them teach you. It is not hard and takes around 20 minutes or so. If this seems hard, don't worry! It is not difficult and if you are going to take photos with short focus lenses (35mm, 50mm, 100mm) just set north with a compass and set your latitude with a protractor. Sight on Polaris through your finder scope and start shooting!

OK, we have a mount, a camera and a cable release. We have duct taped our camera to the scope. What else do we need? How about film! It must take some special kind of high speed scientific film to take astrophotos, doesn't it? Nah, you don't need any special film, the ones available from your local drug/department/camera store are fine. What kind do I recommend? Well - stay away from black and white. It is hard to get developed, most places have to send it out. You really don't need Tech Pan 2415 that has been hypered for this kind of astrophotography. Leave that to the "pro-amateurs" that get published in the national magazines. Color film is much more impressive! There are lots of colorful things in the sky that are so dim we see them as shades of gray. Color film, however, shows lots of red emission nebulas and blue reflection nebulas. In addition, stars themselves have lots of color variation and look great on color film. I can recommend several common color print and slide films that should be easy to get a hold of. Kodak sells Royal Gold 400, Max 800, Ektachrome Elite II 200 and Ektachrome 1600. The Ektachrome films are slide films. Fuji also has several very good films that you can get anywhere. Fuji Super "G" 400 and Super "G" 800 are getting hard to find but are great films. They are being replaced with Superia 400 and Superia 800 X-tra. The good news is that the Superia films are very nice and good replacements for the Super "G" series. In general start out with about an ISO 400 speed film and you won't go far wrong.

How long do you expose the film? This depends upon sky conditions and the "speed" of the camera lens. Generally speaking, the darker the sky - the longer you can expose the film. I can give you the rule of thumb that I use from "moderately dark" skies.

Camera Lens Speed   Exposure Time
f 2.8   10 minutes
f 3.5   20 minutes
f 5.6   30 minutes
f 8     45 minutes

Another hint I can give is to "stop down" your 50mm lens to at least f2.8. This will reduce or eliminate the coma that is present in all camera lenses. This coma does not show up in terrestrial subjects but stars are pinpoints and they show aberrations that would otherwise not be noticed.

So! You took some photos - now what? You have to get them processed. Color print films can be processed at your favorite "One Hour Photo" joint. But be prepared for some more work when you get them back. Many photos will be very washed out looking, or they may be a strange green color. This is quite normal, your photos have to be "color balanced". Most automatic processing systems have no idea what an astrophoto is, and neither do most processing machine operators. If you have the necessary computer hardware and software to do this yourself that is wonderful, but most people do not. This is where a good photo processor is a jewel. Cultivate your local shop, bring your stuff in at a non busy time and schmooze. Ask what they can do to darken the background and bring out details. Bring in magazine pictures and show them what you want. Most places like happy customers and will make the adjustments necessary to make your photos look their best. Before I became computerized with this stuff I had a great deal of satisfaction with Quicksilver Photo in Plymouth and Photo 1 in Cadillac. Both shops have done a very fine job with my astrophotos but it took communication to let them know what I wanted.

Well, we didn't talk about how to take astrophotos if you have a dobsonian, or how to take prime focus astrophotos or where to take astrophotos. Maybe some future articles there. Go out, set up, take astrophotos and show them off!

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Treasury Note

by Steve Greene

As of January 1, 1999 the dues rates will be changed. This decision was made at the November 12, 1998 board meeting. This rate will keep the club solvent for the upcoming year. The rates will be as follows: Family $37.00; Individual $30.00; Sr. Citizen & College Student $22.00; Student $17.00. All new memberships and renewals will be billed at these rates after January 1, 1999.
JOHN from page 1

bird watchers, hikers and outdoor lovers in general. The resort has a dedicated observing area with a library and warm-up room to boot. If you don’t want to bring your own telescope equipment, there is a wide selection of optics available for rent for various time periods. One word of caution. After I had made my reservation (a deposit) I received a letter from the inn that a four-wheel drive vehicle was recommended. Also, if I encountered any recent moisture I was to call them before attempting the drive up to the inn. They would come and pick me up! This news did not excite me at all. Now December is a perfectly good time to observe at their locale, but the idea of treacherous driving to get there turned me off. Nonetheless the place still has dark sky appeal to me and perhaps there will be another day.

Dark skies will be available at the Nebraska Star Party August 7 through August 14. Just got the info in the mail. Last year they advertised a naked eye limiting magnitude of 6.5. This year’s literature has the limiting magnitude up to 7.5 and 8. Well the location is the same as last year with camping, cabins and distant motels available. This event has grown in popularity in recent years and their brochure recommends you act quickly if you wish to reserve a cabin or motel in the area.

The International Space Station is now under construction. This facility, as it grows in size, will offer some interesting observing. The orbital inclination is over 50 degrees. I recall once seeing the Mir Space Station and the Space Shuttle spread out over about 45 degrees of sky on their way to a meeting together. Their time of passing was perfect to the Sun and my location and the duo passed directly overhead. I have to tell you I was impressed. So impressed in fact that I would be willing to go out of my way to see it again. It was beautiful.

There is one problem with the new space station though. The space station currently being built is in the wrong location. I guess that statement makes me one of the naysayers. So be it. I reached adulthood in the sixties (one of the few!) and remember the space programs that culminated in multiple Moon missions and landings. I think “Freedom” would look much better on the moon. Think about it. We once had a complete space transportation system in place to go to the moon at will. Not only did men land there, they got out of the lander and drove cars around the place while the rest of us watched and listened on TV. This was incredible! Sure, we did it for all the wrong reasons. But we did do it. I feel if you can rocket to the moon and drive a vehicle around, it probably would not take too much more effort to set up housekeeping. So what would be required in addition to what is lifting payloads today?

Two vehicles would be required. One would be an Earth-Moon transfer vehicle to move habitat/work modules and supplies to lunar orbit. The second vehicle would be for lunar orbit to lunar surface use. It would simply go up-down transferring equipment from lunar orbit to the surface. Neither of these additional vehicles require any advanced technology, engineering or thinking. The first vehicle is simply a mass driver that attaches itself to shuttle payloads and accelerates, slowly if desired, to escape velocity. It transfers shuttle loads to moon orbit and returns to earth orbit. And the second a lift body working in one-sixth earth gravity. There is nothing new here.

What would be new is the design and construction of cranes and regolith-moving equipment. This equipment would be used to lower the structures from the ravages of the solar wind and micro-meteorites and also to assemble a solar power grid. At this point we have reached essentially the same state of affairs that will be Freedom’s problem. On the moon we’ll go for the water with the goal of becoming self-supporting in food and energy. There will be no need to be boosted up to higher orbit like Freedom will have to be every so often. We have more protection from the hazards of space. Our “Moon” space station will not wear out and will almost certainly last far longer than Freedom. Every trip to the moon will enhance the project with equipment and material to become increasingly independent. This will not happen with freedom. It’s going to be resupply, repair, resupply and more repair. And in the end, guess what? Its gotta come down. It will wear out and have to be disposed of somehow.

Well, I’ve been very negative towards Freedom. Now that freedom is a fact, I certainly wish well for the project and especially for the safety of those constructing the station. I don’t know where manned space flight is headed. But one thing is for sure, it will almost certainly originate from the international space station and not the Moon.

Clear Skies!
John Herrgott

MARTY from page 1

pearing on the sun. On December 12, 1998 one group spanned about one quarter of the diameter of the face. Although individual spots within the groups are not very big, I think as we approach maximum this will change. If you don’t have a solar filter get one soon. With all of this activity mine will be well used.

Observing the sun in the winter can be challenging. The first problem with winter solar observing is that the sun isn’t up when most people are home. We go to work before sunrise and come home after sunset. Then hope for a clear weekend. If you plan a little you can get a small telescope that you can take out at lunchtime.

For hydrogen-alpha viewers most people put their filter away for the winter. This is because the H-alpha filter needs a temperature of about 115 degrees F to operate. The little built in heater just can’t keep up with 10 degree weather. However i have found a way to use an h-alpha filter all year round. I went to my local drug
store and bought a wrap around arm heating pad. This pad acts as a heater and insulator. The pad only has to heat up to about 70 degrees while the filter heater will do the rest. I DO WANT TO WARN YOU THOUGH. Do not get a big flat square heating pad. These can get too hot and may damage your filter. The best one to get is for wrapping around an elbow or knee. For my first tests with a heating pad I used an indoor outdoor thermometer. The kind that has a copper bulb and capillary tube. I slipped the bulb into the pad next to the filter to monitor the temperature. The square pad got too hot and had to be switched off and on all of the time. The arm pad has 3 settings and a smaller heating element of which I was able to leave on without changing settings all day.

The November deep sky observing session at Doug Bock's Northern Cross observatory was an interesting night. Comet Giacobini-Zinner was visible at 9.5 magnitude. The planet Jupiter put on a good show as 3 of it's moons disappeared in front of and behind the planet's disk within 10 minutes. I started on the new Herschel II list until clouds rolled in at midnight. Clear skies until midnight in November means 6 hours of observing.

Don't forget to watch Jupiter and Venus on Feb. 23, 1999. These planets will appear very close to each other. I know it's cold outside but keep on observing Jupiter. After March it will be behind the Sun and then up before sunrise in the early morning sky for quite a while.

One last note on solar observing this winter. The SOHO spacecraft is back in operation and you can once again see the sun online. Search for the SOHO home page from NASA.

CEIL from page 1

membership, he told the club that Steve had already been nominated for the Club Treasurer position by Kim Dyer. Steve spent his first full year's membership in that role. He says that he found the position to be very rewarding. Steve did a number of things to simplify the treasurer's responsibilities including the creation of a common dues date for all members.

'Always inquisitive' is how Steve describes himself. He says that there isn't much that does not interest him. Steve first became interested in astronomy after acquiring a 1 1/4" pocket-type pirate's telescope when he was a Buccaneer of 10. He used to enjoy observing the moon with it, but with no tripod to hold it still, his interest waned. Some 28 years later Steve renewed his interest in astronomy using binoculars attached to a tripod. Steve found himself in Florida visiting his parents. He had his binoculars and a tripod with him, but no way to steady the binoculars on the tripod. He asked his dad if he had any ideas to steady the binoculars and his dad said he did. Right there, on top of everything the toolbox contained was the bracket that was needed. After attaching the necessary piece of hardware, the two of them ended up observing for several hours. After noticing the very bright Jupiter in the night sky, Steve's interest was piqued. He enjoyed observing that planet, then comet Hale-Bopp took center-stage. He also took pictures of the lunar eclipse. Steve had enjoyed about ten months of independent observing when he noticed an article in the Detroit News for a WAS-sponsored activity at Metropolitan Beach. He visited the event that night and even though the night sky was a cloudy one, Steve met a number of WAS members that evening. He was impressed by the friendliness of the group and made particular note of the lack of competition among attendees. He realized then that the club was a group of people formed to support each other's common love of astronomy.

These days, Steve says that the thing he likes best about astronomy is the 'search'. He likes knowing that he's located an object by himself. He also likes to share his knowledge of astronomy with others. During 1998 he gave a lecture to a local eighth grade class. He showed them star charts, demonstrated the proper use of the Club's blue Dobsonian, and explained the solar system and deep sky objects. Although Steve does not own his own telescope, he jokingly refers to that Dobsonian as his own but mentions that someone recently 'borrowed' it.

Steve grew up in Buffalo, New York, spending 26 years of his life there. He graduated from West Seneca West Senior High School, or WSWSHS if you prefer... just try saying that quickly five times in a row! He graduated from the State University of New York at Buffalo with an undergraduate degree in Mechanical Engineering. His budding career took him to Indiana to work on a project for a company that was installing a Hummer-Jeep assembly line. After working for that firm for awhile, Steve resigned and went to work for another small engineering firm in the Detroit area. They contracted Steve to General Motors and GM ended up hiring him on the spot. Steve has been with GM for 13 years and currently works in the Vehicle Architecture Department. He simplifies his job description by explaining that he is responsible for making sure that 'everything that needs to fits under the hood'.

Steve is married to Nancy who he met 13 years ago. They married in 1987. They share the hobby of visiting historical and science museums together. They live in Macomb Township with their sons Tom who is 22 and Michael who is 8.

Steve's other interests include reading and leading a local Boy Scout troop. In addition to taking his love of astronomy to the troop, he fosters their inquisitiveness using various techniques. This year for example, Steve bought each scout in his troop a socket set then set them free with a variety of broken appliances to take apart.

What does Steve plan to do after his term as president expires? He is hoping to be the Club's 2nd Vice-President next year so that he can adopt an observatory. Steve describes his club membership 'as if it is his second job'. Given Steve's commitment to his office's responsibilities, it is clear that the presidency continues to be in good hands with Steve at the helm.
President Dave D’Onofrio opened the meeting at 7:42 PM with 31 members attending.

Items to be discussed this evening are:

1- The upcoming Christmas Party. Dave went over the details of the party to be held on December 17, cost $22.00, 6:30 PM starting time, cash bar, raffle, awards, good food, good time, this year we are going to raffle the items sent in by very generous vendors & the beautiful centerpieces that were made by Maryann & Gerry Greuling. There will be a video presentation featuring David Levy made at the Kensington outing on May 2, 1998.

2- Club dues, at the last board meeting it was decided that there will be an increase in our annual dues. Starting next year dues will be raised $5.00 across the board. There has not been a raise in dues for about 8 years. This is being done to keep our club solvent.

3- OFFICER REPORTS:

Blaine McCullough, 2nd VP, there were two outings at Stargate with 7 adults & 30 scouts. Observed Jupiter for about 20 minutes, clouds came, took the group on a solar walk. Went out on Tuesday hoping to see the meteor shower, cloudy.

Chris Mehling, 1st VP, the program for tonight is a question & answer session, ”ASK THE ASTRONOMER”. Coming in the future will be a program on astrophotography, date to be announced. We are hoping to set up a speaker exchange with the Royal Astronomical Society of Canada.

Bob Watt, Secretary,

Steve Greene, Treasurer, Steve has tickets for the Christmas Party.

The program, ”ASK THE ASTRONOMER” was moderated by Chris Mehling, in the hot seats were Doug Bock, Larry Kalinowski & Riyad Matti.

The meeting ended at 10:15 PM

President Dave D’Onofrio opened the meeting at 7:40 PM with 26 members & 3 guests on hand. Subjects to be covered tonight are:


2- Light Pollution

3- Incorporation, should we go that route, pro’s & con’s.

4- Officers Reports

5- The program for this evening

OFFICERS REPORTS:

Chris Mehling, 1st VP, Chris went over the many upcoming events & programs.

Blaine McCullough, 2nd VP, Blaine tells that all is going well at Stargate.

Bob Watt, Secretary,

As my time as secretary runs down I would like to thank the people that helped make the job easier, MaryLou & Blaine McCullough, Larry Kalinowski, Randy Rubis, & Jeff Bondono. I really appreciated all the advice & help. Good luck to our new secretary, LoriAnn, any help I can give feel free to ask.

New Members

by Joe Van Poucker

The thing that makes the Warren Astronomical Society a great are its members. We are very happy to announce the following new members who joined during December of 1998. Please extend them a warm welcome.

Scott & Theresa Bennett, of Royal Oak

Paul & Lisa Zook and Family, of Shelby Township
Many universities, including Michigan, Michigan State and Wayne State, will begin working on the next improvement in world wide communication. It will be called INTERNET2. The old Internet has gotten bogged down too much for the government and all the universities tied to it. As a result, there will be an attempt to modernize the Internet system, which includes both hardware and software. It's not going to happen overnight. Internet2 is really a development program which may take years to develop. However, the end results will open up new vistas for academia and the general public.

The 1998 Awards Banquet proved to be quite a success, even with the increase in prices. If you've never been to one of our banquets, you're missing something. Bob Watt's rendition of David Levy's Kensington talk captured the soul of all who attended. It was a great show, meal and mind meld. I hope to see more members at the next banquet.

The January computer meeting will be held at Gary Gathen's home on Thursday, the 28th. His address is 21 Elm Park. Three blocks south of the 696 expressway and about half a block west of Woodward in Pleasant Ridge. You can reach him at 248-543-3366 for further information.

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**LARRY**, from page 1

nating one cable dangling problem. The only problem is, more thought went into the stylish design than went into the hardware design. You won't notice it at first but there's no floppy drive. You have to pay extra for one. Could it be that Steve Jobs thought file exchanges with your friends were passe'? The CPU speed is only 233 megahertz. Most computers sold today are in the 300 to 400 megahertz range with 500 to 600 being readied for the general public.

Here's an interesting fact about Sirius, the brightest star in the sky (except old Sol, of course). It's tied to New Years Eve, the evening we all go gaga over at the end of the year. It's almost on the meridian (south) at midnight, every year (for a few years anyway, until precession moves it on its way) shining like a beacon. That's quite fitting, considering the celebrations that take place at that time. It reminds me of the last ember of an exploding skyrocket that refuses to go out.

Many universities, including Michigan, Michigan State and Wayne State, will begin working on the next improvement in

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### WAS Calendar of Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>Jan Sat 16</td>
<td>4:00 pm</td>
<td>NCO Club meeting with Star Party to follow at Doug Bock's</td>
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<tr>
<td>Thu 21</td>
<td>7:30 pm</td>
<td>Meeting: Macomb Community College South Campus, Bldg. B, Room 209</td>
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<tr>
<td>Feb Mon 1</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Sat 13</td>
<td>4:00 pm</td>
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<tr>
<td>Thu 18</td>
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<tr>
<td>Mar Mon 1</td>
<td>7:30 pm</td>
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<tr>
<td>Sat 13</td>
<td>4:00 pm</td>
<td>NCO Club meeting with Vernal Equinox Star Party to follow at Doug Bock's</td>
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<tr>
<td>Thu 18</td>
<td>7:30 pm</td>
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<td>Apr Mon 5</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Thu 15</td>
<td>7:30 pm</td>
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<tr>
<td>Thu 15- Sun 18</td>
<td>NCO Wilderness Spring Star Party at Doug Bock's Boon site, west of Cadillac. BYO Everything.</td>
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<td>May Mon 3</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<td>Thu 20</td>
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<td>June Mon 7</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Fri 11- Sun 13</td>
<td>16th Annual Summer Solstice Star Party at Doug Bock's Northern Cross Observatory.</td>
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<td>Thu 17</td>
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<td>Aug Mon 2</td>
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<td>Thu 19</td>
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<td>Sept Sat 11</td>
<td>4:00 pm</td>
<td>NCO Club meeting with Autumnal Equinox Star Party to follow at Doug Bock's</td>
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<td>Mon 13</td>
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<td>Thu 16</td>
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<td>Oct Mon 4</td>
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<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Wed 6- Sun 10</td>
<td>NCO Wilderness Fall Star Party at Doug Bock's Boon site, west of Cadillac. BYO Everything</td>
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Get the latest-breaking events information at the club's home page. Follow the Upcoming Events link from http://www.eaglequest.com/~bondono/WAS/ and be sure to check the link at the bottom of that page to Doug Bock's NCO Schedule of Events.
<table>
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<th>Sunday</th>
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Detroit, MI

Solar Eclipse February 16 1:35

Key to times:
SunRise MoonRise
SunSet MoonSet

WASP
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P.O Box 1505
Warren, MI 48090-1505