



December Edition

B.R.A.S. Officers
President: Mike Harkey
Vice-President: Dave Lengyel
Treasurer: John Reising
Secretary: Dave Gulyas

http://www.geocities.com/hubal_astro/Guidescope_index.html

Coming UP!!

Black River Meetings

- * December 2nd - Nielson (7-9pm) *Venus and Mars*
- * **December 7th - (7pm) Holiday Dinner Meeting at Beaver Creek**
- * December 15th - BRAS Board Meeting

Locations

Amherst Beaver Creek - 913 North Lake Street Amherst, Ohio 44001

Nielsen Observatory - 13630 Diagonal Road, LaGrange, OH at the Lorain County Metro Parks Carlisle Equestrian Center

Carlisle Visitor Center - The Lorain County Metroparks Visitors Center is on **Nickel Plate-Diagonal Road in Carlisle Township.**

CHRISTMAS POT-LUCK

Black River Astronomical Society's annual Christmas Pot-Luck will be on December 7th at 7:00pm. Bring a dish - and your plate & silverware - and join us for food and good cheer! **The party will be at AMHERST BEAVER CREEK.** It is on North Lake Street, just south of Route 2.

Article of the Month...

Staying Warm in the Cold

Yes folks, it's almost time for that obscene word - SNOW. Along with the snow, of course, is the cold weather (and cold feet). But wintertime observing doesn't have to be an exercise in frostbite - if you dress correctly.

The most common mistake is that people wear layers of cotton on top, tight-fitting jeans below, and shoes that leave their ankles exposed causing cold feet. Layers are important, but they must be the right layers, made out of the right fabric, to get the most warmth from the bulk.

The Interior Layer

In cold weather, you should never wear cotton next to your skin. That goes for ALL underwear & socks! The reason? Cotton doesn't hold in heat very well even when dry and it absorbs moisture, so once it's damp, the moisture conducts heat right through it. The layer right next to your skin should be a synthetic fabric, such as a treated polyester. These go by the tradenames like Capilene, Thermax, and Coolmax. Since polyester is incapable of absorbing moisture, it won't lose its insulating properties when wet and will dry rapidly.

There actually is a natural fabric that will work next to your skin and women have known about it for a long time: Silk. It won't absorb moisture and allows other layers to easily slide over it. It also feels great next to your skin. The warmth it provides given its weight is amazing.

Next...

The second layer should be a long sleeve top, bottoms, sock liners for your feet & glove liners for your hands. These last two items should be lightweight to make room for additional layers. If you get cold easily, put on a short sleeve crew neck poly shirt on top of this layer. This will help keep your chest & back warm. The next layer could be a heavier layer of polyester, or a poly turtleneck, depending on the weather and your own comfort level.

For your outer layer, you can wear a sweater. For reasons discussed above, wool would be a better material than cotton. Wool will absorb moisture though and when it does, it will lose all of its insulating ability. It also takes forever to dry so don't allow it to get wet. Another idea for this outer layer is a fuzzy fleece pullover or jacket.

Cover your Rear...

Next, let's talk about your legs. If you layer up your chest well, but only wear cotton jeans, you'll freeze. Why? A couple of reasons. First, your rump & legs have more surface area than your trunk. Two, cotton doesn't insulate very well and the warm blood that leaves your core will lose its heat as it travels down your legs to your feet and back again, where your core has to warm it up again. Jeans also don't stop the wind.

Silk bottoms under jeans is a first step. Adding poly bottoms between the silk ones and your jeans is another. Wearing flannel lined jeans is another option. Get them roomy enough so you can layer underneath them if need be. Or forget jeans altogether and go with nylon insulated bib overalls, like those you ski in. With your rump & legs covered like this, you'll be very comfortable for long periods of time.

My Feet are Cold...

How to keep your feet warm? Layer them. First goes on a light long sock made of either polyester or silk. Next goes on a heavier sock that will cover your calves. Pull it up over your bottoms. Next you need a shoe that is large enough to let you wiggle your toes and trap heat. If your shoes are too small for these layers, you'll compress the insulation making it less effective and your toes will be jammed together, so they'll get cold. Insulated boots work best. Regular shoes leave your ankles exposed and you'll lose critical heat.

Head & Hands

No on to the hands. Layering works well here also. Start with a lightweight poly or silk glove liner, then an intermediate glove, if you need it, and finally a ski glove. Don't make the mistake of trying to cram your hand with these additional layers on into a glove that's too small. Your hands will be cold and uncomfortable and then you will. You need airspace around your fingers to keep them warm. Since we have to focus, change eyepieces, turn on flashlights and such, many people want to use gloves. But if your hands get cold easily, insulated mittens with a nylon shell over them are warmer because your fingers are all together and mittens have less surface area by far exposed to the cold than gloves. Another tip for keeping your hands (and feet) warm is to apply a little greaseless lotion to them first. It'll act as an additional insulation layer.

Finally, we come to your neck & head. A polar fleece neck gaitor (it looks like a short, wide tube that's open on both ends) will cover your neck and prevent heat loss, which can be substantial in this area of your body. For your head, there are many choices. If you get cold easily, you should wear a silk or poly balaclava then a ski cap or the hood from your jacket (if it has one) over it. A balaclava looks like a sock, sized for your head, with a oval hole in the side for your eyes. It covers your head, ears, nose, mouth and neck. Even a lightweight one will keep you very warm. Stopping heat loss here keeps you warm everywhere else.

Some Additional Tips!

- If you start to sweat, unzip your outer jacket, take off your hat, peel off an outer layer, whatever it takes. The goal is to not sweat.
- Don't sit on a metal lawn chair, bench or even an aluminum framed beach chair in cold weather without first covering the metal with an insulated stadium seat or blanket. Remember that when you sit, you compress all the air out of your insulation layers covering your rump, reducing their effectiveness.
- For a quick warm up, sit on the hood of your car if it's still warm.
- Don't hold on to your eyepieces longer than necessary. The cold barrel will literally suck the heat out of your hands.
- Bring something warm to drink in a thermos.
- If your hands get cold easily, don't wear a metal watch or rings on your fingers, they'll conduct heat away from your body. Put your metal watch in your jacket pocket. Likewise no earrings, etc.
- Eat well a few hours before so your energy reserves are full. Your body burns more calories in colder weather because it's constantly losing heat and it needs to maintain its core temperature.
- If you wear metal framed glasses to see at night, they might give you a headache over a period of time in very cold weather as they draw heat out of your temples where they touch. To prevent this, obtain some 1/8 or 3/16 inch adhesive backed foam weather stripping and attach it to your frames where they touch the side of your head.

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A few extra tips:

- *Remember, Astronomers are relatively inactive.* Dress for temperatures 10 - 20 degrees colder than you think you'll encounter.

- Having a comfortable, adjustable observing chair will make your experience a whole lot nicer. You'll be able to stay at the eyepiece much longer, with a steadier view and see deeper with more detail. But remember, don't sit directly on metal!
- Remain hydrated for maximum efficiency of your cardio-pulmonary system.

Happy (and warm) Viewing!

**Black River Astronomical Society
Monthly Board Meeting
Blue Sky Restaurant in Amherst, Ohio.
November 10, 2005 7:00PM**

At 7:12PM Mike Harkey called the meeting to order with J. Cunningham, J. Reising, T. Kreja, G. Cox, T. Janus, D. Lengyel, K. Hubal, B. Hubal and D. Gulyas present.

October minutes: The October minutes were approved with a date correction.

Treasures Report: Beginning balance & ending balance were given.

Guide Scope: Status quo.

Instrumentation: M. Williams and K. Hubal will collimate the C-14.

Programming:

- December: Holiday dinner (at Amherst Beaver Creek Reservation)
- January: Video about the Earth's magnetic field
- February: Video, TBA
- March: Ken Hubal, Solar flare monitoring
- April: Mike Plas, TBA
- May: Dave Lengyel, Road trip
- June: Tim Kreja, TBA
- July: Barb Hubal, Lunar transient phenomenon

Public observing dates:

- December 02, 2005: 7:00 - 9:00PM - Nielsen Observatory: Venus and Mars.
- December 07, 2005: 7:00PM - Regular monthly meeting: Amherst Beaver Creek Metro Park.
- December 15, 2005: 7:00PM - Regular monthly board meeting: Blue Sky Restaurant, Amherst.

Old Business:

- Eclipse shades have been ordered.
- The wooden replacement tripod legs for the Blue Lady have been ordered.
- Speaker(s) for the 2006 OTAA were discussed. D. Lengyel will research members from the first OTAA and attempt to contact them to invite their attendance in 2006.

New Business:

- Gregory Zmina was unanimously accepted as a new member.
- Orders for nine Otwell calendars have been received.

- J. Reising will contact the Lorain County Metro Parks concerning the public observing sessions that have been interrupted by dew on the telescope optics with suggested solutions.

J. Reising made the motion to adjourn with a second by J. Cunningham at 8:40PM.

Respectfully submitted,

Dave Gulyas
Secretary, Black River Astronomical Society