

SPECTRUM

Northern Cross Science Foundation Newsletter

January, 2017

Looking Up

January 5, Thursday

General Meeting

7:30 p.m.

Show & Tell

Telescope Workshop

Business Meeting to Follow

January 19, Thursday

Board Meeting

7:30 p.m.

Jeff Setzer Home

January 21, Saturday

Candlelight Snowshoe Hike

6:00p.m. - 9:00 p.m.

Horicon Marsh

February 4, Saturday

Candlelight Ski & Hike

6:00 p.m. - 9:00 p.m.

Harrington Beach

February 4, Saturday

Reuss Ice Center

5:00 p.m.—9:00 p.m.

Campbelsport

February 11, Saturday

Candlelight Ski & Hike

6:00 p.m. - 9:00 p.m.

Pike Lake State Forest

DIY Padded Eyepiece Carrying Case *by Michael Vlasov*

Eyepieces, cameras and various astronomical accessories are usually fragile and expensive items. The problem is that transporting numerous accessories, while trying to keep them intact, can become quite a troublesome task. Especially if you keep them in a hard box and have to individually pack each item. I found out that by having all my eyepieces and accessories stored in a hard case with foam, fully padded individual cells - I'm able to fully assemble my 10" equatorial telescope setup in about 15 minutes. Also I never forget anything, since an empty cell will always draw my attention.

In terms of safety this packing method is the best option available, that is why so many manufacturers use it. Due to the thick layer of foam which wraps each item and dampens any impacts - It can easily withstand a 1 meter drop without compromising the safety of your precious equipment. I've seen a 4" Takahashi refractor in a foam padded aluminium box dropped onto a solid rock - no damage was caused to the OTA, even the collision remained intact.



The Case

There are a few types of hard cases:

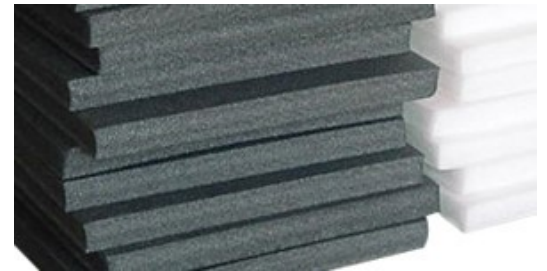
1. Hard plastic "military" cases, such as the ones made by Pelican (top right picture). They are ridiculously expensive, extremely tough and waterproof. If you have a really expensive set of equipment - you might consider getting one.
2. Aluminium cases, such as the ones used for audio equipment (top left picture). They are much cheaper and easier to come by. In my opinion such case offers more than enough protection, unless you plan tossing your equipment into a lake or run it over with a car.
3. Plastic "toolbox" cases. These are quite cheap

but are much less convenient for foam padding due to their form factor and the lack of space for foam in their cover.

The case size is another consideration. In terms of time, price and volume utilization - a large and relatively flat case would be the best option. However I found out that it is easier to pack three small cases into a fully stuffed car rather than one, big box.

The Foam

If you are making case for a heavy piece of equipment, such as an equatorial mount head, you



should really use a hard polyethylene foam rather than a regular soft foam.

However for eyepieces and cameras - I would really recommend the soft, packaging grade "gray"



foam. In case of an accidental drop it will dampen the shock much better, reducing the chances of optical elements shifting and losing alignment.

For all of my cases I simply bought two 1x2m sheets (2 and 4 cm thick) from a store which specializes in packaging.

Some of the cases often come with "peel it yourself" type of foam, which in my opinion isn't all that convenient. It isn't durable and also requires you to make really thick walls between the sections, which reduces the amount of items you can pack.

(Cont Pg-3)

December Meeting Minutes

By Kevin Bert

The December Business meeting of the Northern Cross Science Foundation was held at the GSC Technology Center in Germantown. President Jeff Setzer called the meeting to order at 7:40pm and welcomed 23 members and guests to the required annual meeting. He moved to the main order of business, the election of members to the board. Three vacancies needed to be filled and Jeff recapped the results of last months business meeting along with board member responsibilities.

Jeff opened the floor to nominations and no other names were brought forward. A motion was made by Chris Grenda to close nominations and a unanimous ballot be cast for the three nominees, (Rick Kazmierski, Joyce Jentges and Gene DuPree), to be confirmed by acclamation. The motion carried as all members present responded with eye.

Joyce noted that the SpacePort event with an astronaut in Sheboygan would be re-scheduled.

Rick Kazmierski reminded members to pay membership dues and said he had extra forms available if they wanted to take advantage of the opportunity.

With no other scheduled events in December, Jeff Setzer covered upcoming 2017 events. January 21st is a Candlelight Snowshoe Hike at Horicon Marsh, Febru-

ary 4th is a Candlelight Ski & Hike at Harrington Beach State Park with the Reuss Ice Age Center having a winter viewing opportunity on the same night. The 11th is another Candlelight Ski & Hike at Pike Lake State Park. Members' telescopes would be appreciated to all these events.

With no further business Jeff closed the meeting at 7:50 pm.

Respectfully submitted by Kevin Bert, Secretary.

A New Astronomical League Program: The Astronomical League/OPT Imaging Awards

Oceanside Photo and Telescope has always been a good friend to amateur astronomy and to the Astronomical League. They have now enthusiastically offered to sponsor a new AL award program, the OPT Imaging Awards.

The AL recognizes the efforts of imagers with a program where they can submit their best work that fall under four separate categories:

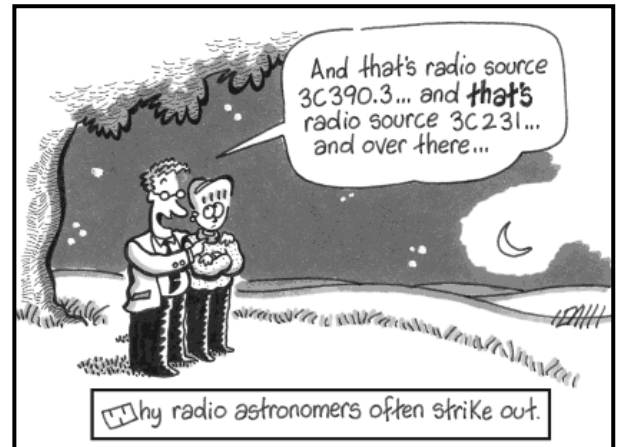
1. Solar System Award: Featuring either the moon, sun, planets, or comets
2. Deep Sky Award: Showing either star clusters, nebulae, or galaxies
3. Wide Field Award: Capturing ei-

ther constellations, the Milky Way, planetary conjunctions and groupings, aurorae, or meteors

4. Video/time lapse Award: Showing movement in the heavens

Each category will have a first, second, and third place. The first place winners will each receive a \$250 gift certificate from Oceanside Photo and Telescope, second place winners will each receive a \$125 gift certificate, and third place winners will each receive a \$75 gift certificate.

Please see www.astroleague.org/al/awards/awards.html for complete details of the exciting new program!



Perseus Galaxy Cluster

By Ernie Mastroianni

At least 75 galaxies fill this frame that spans only a half degree, but the massive Perseus Galaxy Cluster is not known as a major showpiece and is often overlooked by visual observers. NGC 1275, near the center of the photo, is the brightest member of this group but shines at modest magnitude of 11.6 and measures less than 3 arc minutes across. It was first identified by William Herschel in 1786. Though small, it's a strong radio source known as Perseus A. Thousands of galaxies are part of this cluster, roughly 250 million light years distant. It is one of the universe's largest structures, forming a long, dense wall of galaxies nearly 300 million light years across.

Spectrum editor Rick Kazmierski spent two nights and more than three hours of exposure time at his home observatory last November to reveal this rich field. He used a Canon CDS 600D cooled camera on his Mead 14-inch LX850, taking 67 three-minute sub frames, eight dark frames, eight bias frames and eight flats. He used Pix-Insight to combine, align and process the frames, and Adobe Photoshop to fine tune the image.

This image goes deep, revealing dozens more galaxies beyond the 18th magnitude limit of my Sky Safari star atlas.

By Rick Kazmierski



January General Meeting

Main Program

Our Annual Show and Tell

We will have a Show and Tell session for members to display and describe purchases and/or gifts received this Holiday Season or during the year. Have you acquired some recent Astronomy related item you think might be of interest to fellow members? Bring it to the January meeting.

Telescope Workshop

Did you recently get a telescope as a gift? Do you have a New Year's resolution to take your old telescope out of the closet? This session will show you how your telescope works, and more

importantly, how to get satisfying views with them. As part of the discussion, we'll have a number of expert amateur astronomers on hand to give personalized help and one-on-one advise. Bring your telescopes with you to the meeting and get help with setup and maintenance indoors (were it is warm!). At the conclusion of the workshop, weather permitting, we can move outside and help you find objects under a real night sky.

This event is free and open to the public, as all our General Meeting are. Youngsters are especially encouraged. We are looking forward to meeting you!

(Con.t. from Pg-1)

Using a regular packaging grade "gray" foam with cutouts will allow you to pack much more equipment without compromising the safety and durability. It is also cheaper and looks better. For the case cover you might consider using an "eggshell" gray foam.

The Padding

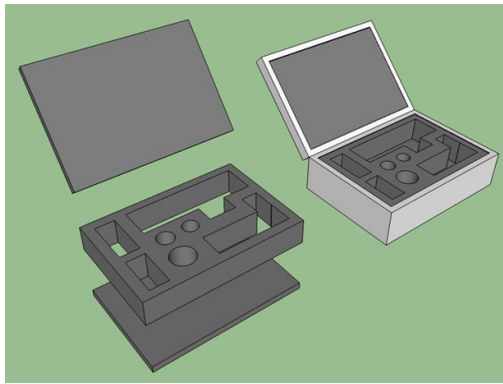
The method is to insert 3 layers of foam into your case. The bottom and the top layers should be quite thin (I used 2cm sheets of foam) and the middle insert is the thick layer which will be cut and form the inner walls. Its thickness should be according to the case height, so when it is fully closed there will be no air left inside, only foam. You may use 2 or more middle layers in case the case is really big. This is the illustration of the padding method:

After you cut the required foam rectangles and put them inside - you should plan the individual cutouts for each piece of your equipment (this was a task I actually enjoyed doing).



Place the eyepieces on top of the middle foam layer, position them in a way you would like them to be stored, and draw an outline around them. Make sure that the outlined cell will be able to accommodate the widest parts, and keep the spaces between each section (walls) thick enough - I recommend at least 2 cm. You can be creative with shapes, however making simple rectangular cutouts it is much easier and it is also less specific (in case you wish to store a different

item in the same cell).



To make the actual cuts you can use a sharp long thin knife, like I did. However with a knife your cutouts won't look quite clean. If you want to achieve a more "factory like" result you may consider purchasing an electric kitchen knife.



Holiday Party - 2016

Rick Kaz

Once again, we celebrated our annual Holiday Party and White Elephant Exchange at the December General Meeting. Good food and camaraderie were shared by the 23 members and family in attendance.

The White Elephant exchange was a big hit, with ooohs, "laughter", groans, and moans as gifts were opened and dreams were dashed. Some of those gifts seemed awfully familiar. I think there must have been some re-gifting from years past.

RELATED INFO

Leaders for Public Viewing

January 21, Saturday

Horicon Marsh

DuPree's

February 4, Saturday

Harrington Beach

Kevin & Dan Bert

February 4, Saturday

Reuss Ice Center

DuPrees

February 11, Saturday

Pike Lake State Forest

DuPree's

Board Officers

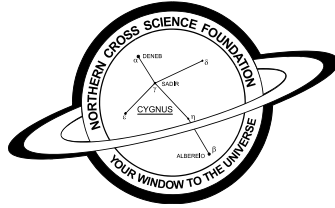
The NCSF Board of Directors elected our 2017 Board Officers at the December Board meeting. The 2017 officers are listed on page 4 of this Newsletter.

Calendars

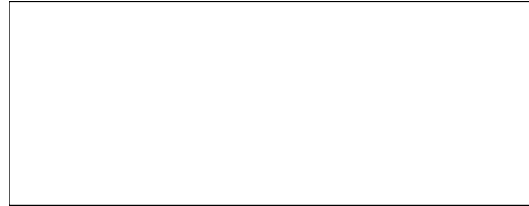
The DuPree's have 2017 Astronomy Magazine calendars for sale for \$8, while the supply lasts. See Gene or Charlotte at the next General Meeting. You can't beat the price!



SPECTRUM
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Jim & Gwen Plunkett
OBSERVATORY



2017 Board of Directors

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Best deal I've seen on Solar glasses. Cheap enough to give away at events.

Solar Eclipse Glasses from the Astronomical League!!



On August 21, 2017, at 10:16 a.m., PDT, the moon's shadow comes ashore just south of Astoria, Oregon, races across the United States and moves out to sea near Charleston, South Carolina at 2:47 p.m. Do you have the equipment to safely view the eclipse and the Sun? These glasses are ideal for viewing large sunspots on the Sun's face and partial, annual, and partial phases of total solar eclipses.

Get ready for the Great Total Solar Eclipse of 2017! Don't miss out, supplies are limited...



1 unit: \$ 1.00, plus shipping	100 units: \$ 60.00, plus shipping
10 units: \$ 9.00, plus shipping	250 units: \$ 112.50, plus shipping
25 units: \$ 20.00, plus shipping	500 units: \$ 175.00, plus shipping
50 units: \$ 37.50, plus shipping	1,000 units: \$ 300.00, plus shipping

Individual pairs of glasses are also available for \$1 each, plus shipping. Available at <http://store.astroleague.org/>. Shipping rates will be added at checkout. Or call or email for shipping rates and options. League office: 816-DEEP-SKY; leaguesales@astroleague.org.

SPECTRUM

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NCSF is a member of the North-Central Region of the Astronomical League.



NCSF supports the *International Dark Sky Association*

This Issue, along with back Issues of SPECTRUM, can be found on the NCSF Web Site.

Monthly Meeting Information

7:00 p.m. Astronomy 101 Mtg.
7:30 p.m. Main Program
Location at the -
GSC Technology Center
W189 N11161 Kleinmann Dr
Germantown, WI 53022

Spectrum Newsletter
5327 Cascade Drive
West Bend, WI 53095

Please send your Questions, Suggestions, Articles, and photos to:
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