LUNT SOLAR SYSTEMS 2 INCH SOLAR WEDGE

Review by Stephen W. Ramsden ()

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Manufacturers Info: www.luntsolarsystems.com

2" LUNT WHITE LIGHT SOLAR WEDGE
$288.00 (Includes ND3) Art. No. LS2SP/HW

2" barrel for professional Solar-Photography and White Light Solar Observation. Polarizing Filter Sets are optional. For photo-visual use we recommend 1 pc ND 3.0 (Included) and 1 2" Polarizing Set

Includes:
• 2" Lunt White Light Solar Wedge
• 2" ND3 Pre-installed Filter
• Metal Carrying Case
• Die Cut Foam with room for Accessories

Recommended Accessories:

• 2" Polarizing Filter Set (US$149)

• 2" to 1.25" Reducer for 1.25" Eyepieces (US$20)

• Lunt Zoom Eyepiece (US$149)

REVIEW:

I ordered a LUNT 2 inch Solar Wedge in mid January, 2010 and it was delivered before the end of the month. I ordered directly from LUNT Solar Systems in Tucson, AZ. The package came via UPS ground in a triple boxed package with peanuts between the first and second layer. Inside the internal box was a sturdy silver case with two latches.

The case contained custom cut foam to fit the Wedge assembly and two polarizer filters along with one precut rectangular empty slot for another filter. The wedge itself was contained in a plastic bag and the entire package arrived in perfect working order and damage free.

The filters were an additional cost of $149. They were 2 identical 2 inch B+W polarizers in plastic cases. Total cost for my order was $437 plus sales tax and a $20 delivery charge.

The wedge itself is extremely well made and solid. It is about the weight of a palm sized rock. It is made of black anodized aluminum as far as I can tell and there is a brass compression ring in the 2 inch eyepiece tube. Inside the eyepiece tube is a 2 inch ND3 density filter which is permanently mounted and included in the original price. The eyepiece tube is non removable and there is an available 1.25 inch adaptor that is not included. It had a white plastic end cap in it. The 2 inch insertion tube is solid and unscrews from the assembly. It came with a black rubber end cap.

The wedge body is fully enclosed and has a LUNT logo and serial number plate on it. It is very stylish. The back of the wedge has a red circular heat sink which is located just under a series of vent slits for heat dissipation. There is no way of observing the full light from the Sun through any part of this device. The prism is fully enclosed in the diagonal and there is no reflection of a disk or any other full brightness image to be seen.

I attached the wedge to a 127mm Explore Scientific refractor mounted to a Celestron CGE mount on a Pinnacle Portable pier. I screwed the polarizers onto the bottom of a William Optics 28mm UWAN 2 inch eyepiece and inserted them into the wedge.

The Sun was bright and it was a cloudless day.

The image was very bright initially and easy to focus. I turned the eyepiece each way to initialize the polarizers. The image dimmed to a usable level visually and I found it to be extremely crisp and clear. There was a small sunspot group and a lot of granulation visible. The spot was black and the surrounding penumbra and umbra were clearly visible in the eyepiece. I was very pleased with the view and found it to be superior to either the Baadar film or the Thousand Oaks glass filter that I have used on the same scope. There was so much granulation visible that it almost appeared like a narrowband image.

I removed the eyepiece and took off the polarizers to see what it would look like. It was too bright to see visually so I inserted my DMK 41 monochrome camera to see if it was a usable image photographically. I had to reduce the exposure time all the way to its lowest setting of 1/3000 second and the image was still not suitable.

I then placed a 1.25 inch #58 green filter over the camera snout and put it back in without the polarizers. It was a beautiful site to see. The detail and contrast just jumped out of the frame and grabbed you. There was an obvious active region on the limb of the Sun visible in white light. The tiniest spots were extremely well defined and crisp.

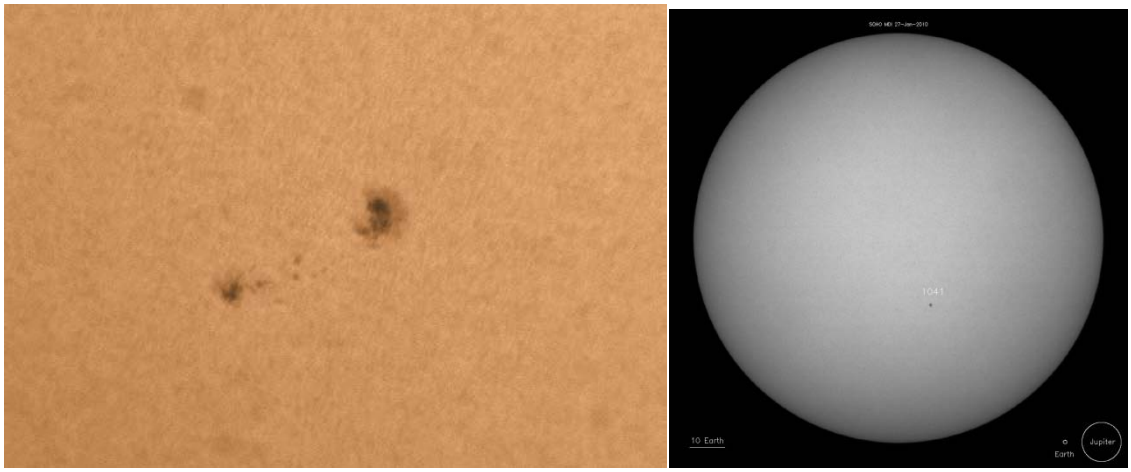
I decided to try it out in another scope the next day. I used a Meade AR6 152mm refractor at F8 with a 2 inch Moonlite focuser on the same CGE mount and Pinnacle Pier.

The scope is pictured next to a LUNT LS100THaPT/B1800.

I was very pleased visually with the image again so I went to the DMK41 camera.

The image was astoundingly clear and very detailed through the camera. I was extremely impressed with the ease of use. The polarizers were not necessary as I used the green #58 filter again. I did try a Meade polarizer in between the camera and wedge but it extended the focal length too far to focus so I just took it out. I tried the camera with a 2X, 3X and a 5X Barlow lens and was able to focus and get a decent image with all Barlows.

The below image was taken that afternoon with the LUNT Solar Wedge. The size of the spot is shown on the SOHO image on the right for scale. This wedge has great resolving clarity.



THE BOTTOM LINE

This wedge is a steal at $288 and I would highly recommend it.

Thank you for reading,
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