2011 LUNT LS80T/Ha REVIEW

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MANUFACTURERS INFORMATION

Specifications for 80mm H-Alpha Pressure Tuned Telescope - B1200 - Crayford

Aperture	80mm (Unobstructed)
Focal Length	560mm
Focal Ratio	F Ratio: 7
Bandwidth	<0.7 Angstrom
Blocking	B1800
Filter Type	H-alpha
Weight	14 lbs

Price as of this review: $3000-$3800

REVIEW:

The LUNT LS80THa dedicated solar telescope was double boxed in white/brown cardboard boxes with the standard LUNT shipping tape. The internal hard shell case was surrounded by shipping peanuts and was lined with firm foam padding cut to fit the scope. Three layers of cushioned protection kept the scope in flawless condition through the rigors of shipping. I took delivery of this scope at NEAF and carried it home to Atlanta in the Nerdmobile. That's another story in itself but suffice it to say that this case survived a monster truck ride through 7 states and 2 days of bumps on low profile tires. (see www.neafsolar.com/sunspot.html)

The first thing I noticed when I opened the box at NEAF were all the included accessories. Great work Lunt by including everything needed to put the scope directly on a mount and use it right out of the box, even the necessary Alan wrenches!

The box contained:

LS80THa telescope

B1800 Halpha Blocking Filter

2 inch dovetail plate

Televue Sol Searcher

Lunt Zoom eyepiece

LUNT LS80THa Users Manual

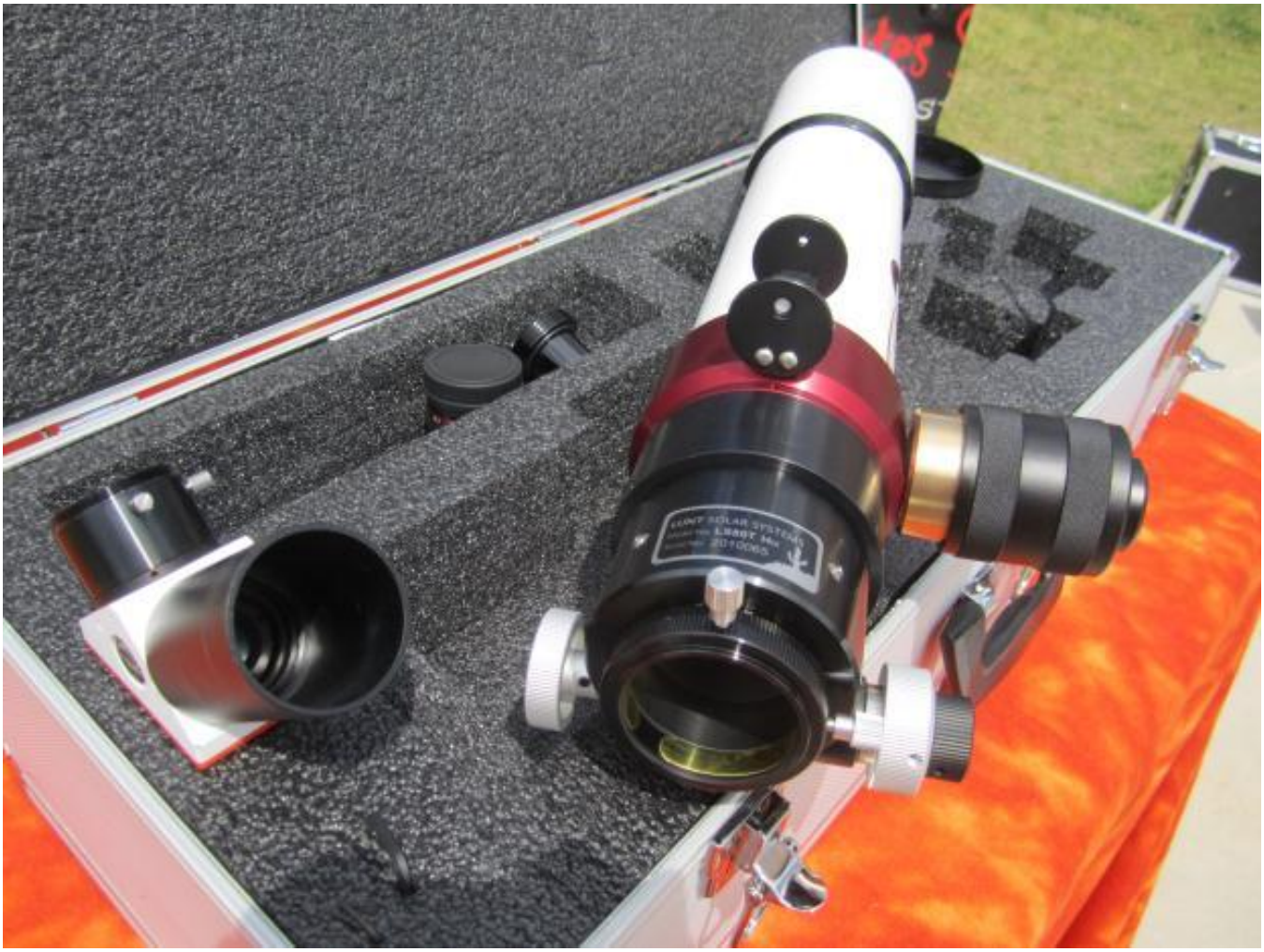
LUNT 5 year warranty card

The case was precut to add the external etalon if desired and also had enough room to add the internal DSII module later if purchased. This layout was well thought out with plenty of room to spare.

The scope was beautiful to look at and well balanced. This particular scope was equipped with the B1800 blocking filter and the standard focuser. The F7 scope was plenty long and when the dew shield is extended it is about the same length and overall size as the Coronado 90mm scope at about half the weight.

From the objective down was a plastic objective cap, a retractable dew shield, a doublet 80mm objective, a very attractive pearly white anodized tube with Lunt sticker (great touch) a red barometric etalon chamber, a pressure tuner, a removable extension ring designed to increase the in focus for binoviewing, a Lunt Crayford 10:1 focuser with brass compression rings, a B1800 blocking filter with 2 inch extension tube for a ton of back focus if needed and a Lunt Zoom eyepiece. The included 2 inch dovetail was quickly attached along with the Televue Sol Searcher and the whole assembled scope fit easily into the large sturdy case. Outstanding presentation of a stylish scope with all the details covered.

The scope did not feel like it weighed 14 lbs as stated on several web sites. It felt more like about 7 pounds. The balance was just right at the etalon chamber and it was up and ready to setup within about 10 minutes using the supplied tools and hardware.



I should say here that the scope came with a B1800 blocking filter but the B1200 that I own from a previous scope did just fine in all the tests. I do not own or use binoviewers but I could see where the B1800 would be preferable with those. There were three ¼-20 holes on the clamshell for mounting the dovetail in any position you like.

I setup the 80mm on the field at NEAF on Sunday as its first test. It was there with the finest dedicated solar scopes on the market and would have to really shine to stand out. Pictured here are Brian Stephens and I posing for the cameras in the "solar forest". I've never been accused of shyness…☺

Here is the LS80THa with dew shield collapsed (on far right) next to the Explore Scientific 127mm APO on an ADM adjustable dual mount plate sitting on a CGEM. It was dwarfed by all the other big guns but it certainly held its own. I find it amusing that the Coronado 90DS and the little Lunt LS80 look like toys next to the other scopes.

The Sun crackled with several active regions, a large flaring crevice and a really nice detached A-shaped prominence upon first viewing. The 80mm showed the faintest of prominences and significant spicules as well as a fair amount of surface detail. I would rate its performance in the .6-.65A range of resolution. It showed more surface detail than the 60mm single and less than the double 60. Of course the image was significantly brighter than the 60mm Lunt and a little brighter than the double stacked 100mm Lunt. It was a pleasure to look through and did not disappoint.

The scope easily focused using the standard Lunt Crayford. After a little adjustment of the tensioner it held nicely.

Several dozen people of all ages came through the display and I heard many comments on the LS80THa, probably because it was one of the relatively cheaper models that the average astronomer could afford. I had every Lunt scope

they made set up in a big row. I also had a couple other manufacturers' products in the "solar forest" to look through. I heard only positive comments about the LS80 and there were a lot of wows and smiles to go around.

The second try was the next week at 3 different solar outreach events scheduled in the Atlanta metro area. These photos show the LS80 with dew shield extended next to a Meade 80mm APO with Lunt B1200 CaK diagonal and DMK41.

Peeples Elementary School

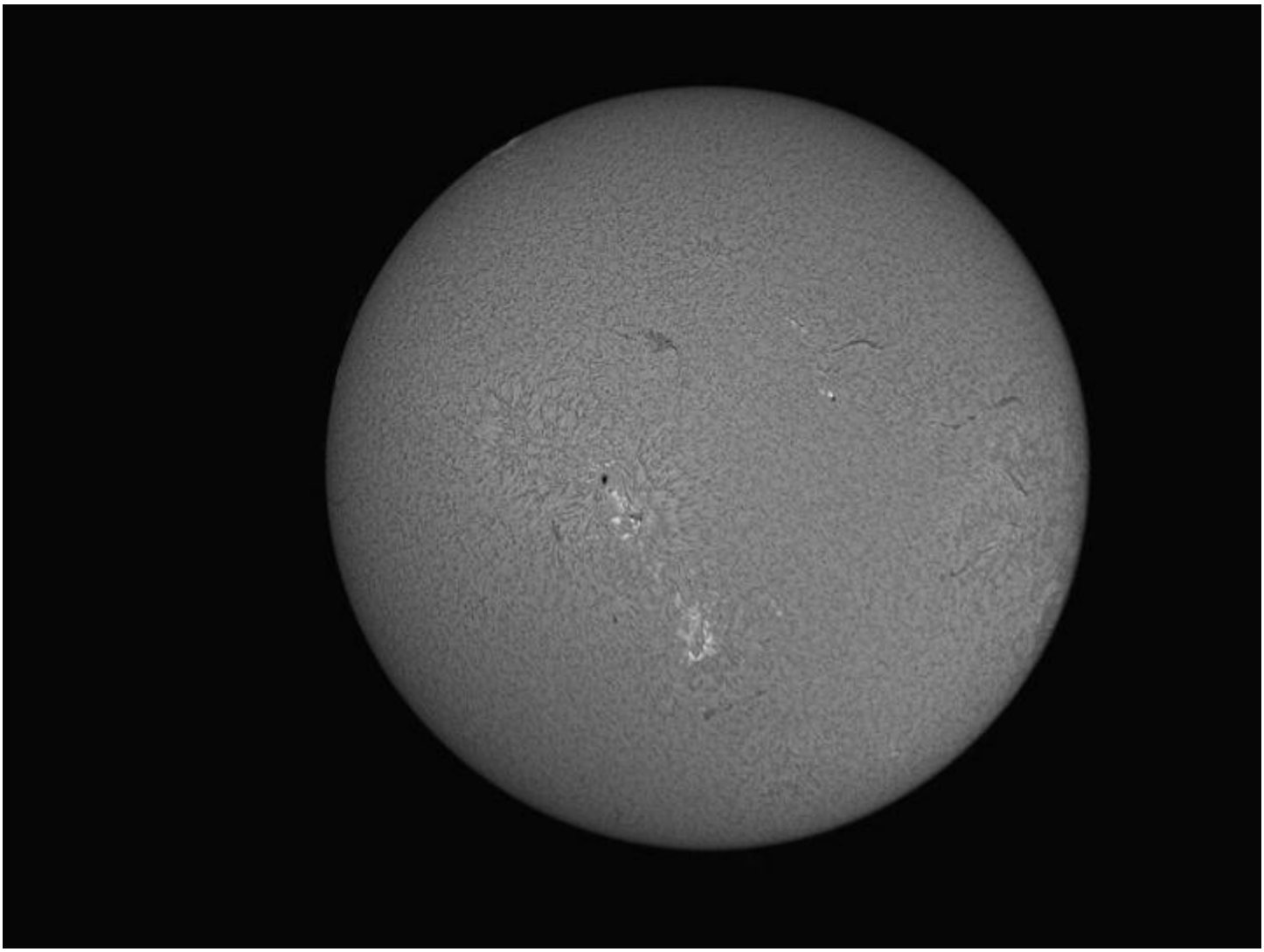
FAA Southern Region Office

Race for Riley Palmetto, GA

At this last event I had the 80mm setup next to the Lunt LS100 in DS and SS mode. The Lunt performed pretty closely to the LS100 in single mode except it just didn't get the detailed spicule resolution that the 100mm and above scopes are known for.

I took several pictures through the scope during all three events. Basically when I do an event I setup a couple of computers and cameras and attach them to whatever scope I feel like using that day to allow the people at the events to come up and find their own features to take pictures of. I rarely get the opportunity to take my own solar images anymore and I find great satisfaction in sending these people their processed images later so that they can see how easy it is to get a picture of solar features.

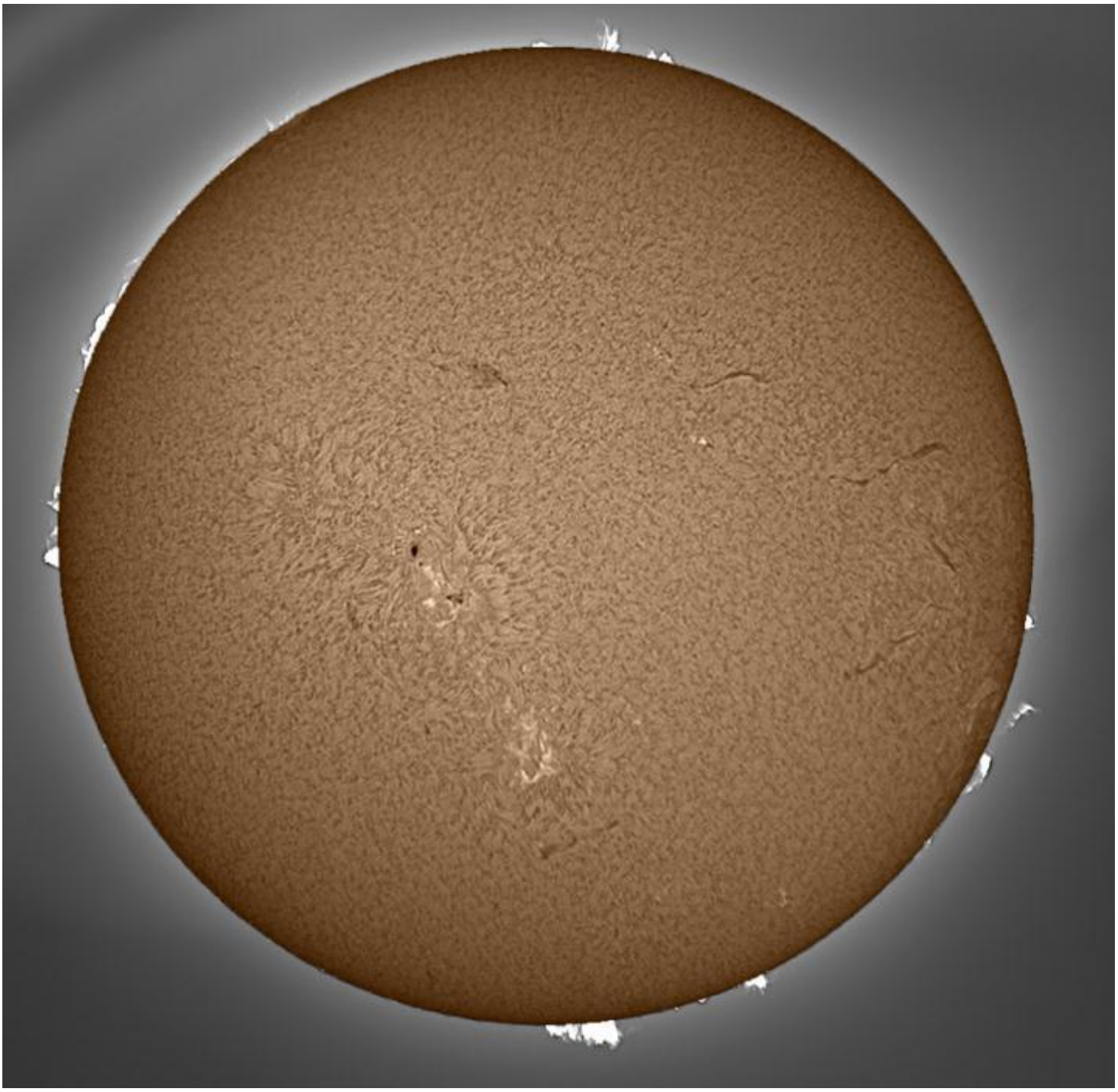
The below images were taken with the LS80 and the DMK41 camera. I hope this gives you some sort of an idea how good the scope does and how easy it really is, with the right equipment, to get pretty good images.



This is the post wavelet image right out of registax with no photoshopping. It gave a really good and even illumination and extraordinary detail, especially for a SINGLE etalon scope. Remember, this is NOT doublestacked.

Lunt seems to be focusing on manufacturing a much higher resolution single etalon system at around .6-.7 Angstroms. All of my Lunt scopes have really good surface detail in the single etalon mode.

The next page shows the processed image from a DMK41 camera of the prominences behind the surface detail. Not a bad image for a little ~~50~~mm etalon.



THE BOTTOM LINE

THIS TELESCOPE ROCKS!!!

I would have to say that this scope feels like the culmination of years of product design at Lunt. The scope is light and compact while delivering a world class H-Alpha image for a reasonable price. I strongly recommend this scope for the novice solar imager or viewer who is looking for a little more than the entry level without breaking the bank.

Pros-

Exceptionally attractive cosmetically

Lightweight

Ease of Use

All necessary accessories included

Excellent case

5 Year warranty

EXCELLENT Customer Service in a market where it is sorely lacking from the “big guys”

Relatively inexpensive

Wide range of infocus and backfocus for all attachments

Great Job LUNT!

Cons-

Not enough of them available for purchase ☺ yet…

Thank you for reading,

Stephen W. Ramsden

www.solarastronomy.org
www.charliebates.org

Charlie Bates Solar Astronomy Project