2008 LUNT LS60TCaK/B1800/C

Review by Stephen W. Ramsden (spike@solarastrophotography.com)

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Art. No. LS60TCaK/B1800/C

60mm Calcium Solar-Telescope with B1800 blocking filter and 2'' Crayford Focuser

The LS60/CaK is a complete Solar Telescope for the Calcium-K line. The refractor based system has a precision aligned CaK optimized doublet achromat with a 60mm aperture. The focal length is 500mm providing a ~4.5mm image thru the B1800 blocking filter. Fine focus adjustment is achieved with a Crayford focuser with 10:1 reduction.

Internal narrowband filters allow for a <2.4 Angstrom bandpass. Primarily an imaging system due to the difficulty of many to visually see everything that CaK has to offer. Lunt Solar will be introducing an imaging package for use with this system.

Delivered with order:
- optical tube with 2" Crayford Focuser and tube ring
- B1800 blocking filter
- transport case

Pre-orders will be shipped in the order they are received.

Prices are subject to change without notice.

Price 1,299.00 $

REVIEW:

This is a review of the B1800 CaK filter in a LUNT CaK 60mm scope. I ordered the B1800 filter first off (see individual review) and then ordered the LUNT 60mm OTA to go along with it later.

I called Rikki Hocking at LUNT SOLAR SYSTEMS on Christmas Eve 2008 and asked if she could send me the OTA to go along with my LUNT B1800 CaK for a solar show coming up that next week. Even though she was getting ready to leave for the holidays, she stayed late and got the tube shipped out to me that day. That my friends is what is called excellent customer service. The tube was $299 by itself with LUNT's standard 10:1 Crayford style focuser. The B1800 CaK module was originally $1000. So, apparently the price of the B1800 60mm LUNT CaK dedicated solar scope is $1299.

The scope arrived on January 6th from UPS. It was packaged very well as usual in a white cardboard box with the LUNT logo shipping tape. Impressive.

Inside the cardboard was a nicely made silver case which was held in place by 2 Styrofoam end pieces. The case had 2 latches with locks and sturdy corner construction. Inside the case was a LUNT 60mm OTA, a set of keys for the case, a warranty card, a small focuser tension screw and a lot of extra space with predrilled holes for eyepieces and what not.






The telescope had a metal screw on end cap with the LUNT cactus logo. The warranty card is standard LUNT/Coronado style with the date of manufacture and the limitations and duration (5 years) of the warranty.



The telescope was packaged in a large Ziplock bag for dust prevention. I placed the tensioner screw and the diagonal into their proper places and admired the finish and design. The LUNT telescopes are very attractive and have a solid feel. From the business end it had a metal screw on cap, a clear 60mm objective which was held in place by a black ring with the LUNT information engraved on it. Then the white pearlescent tube ran down to the included clamshell. Underneath the clamshell were three predrilled 1/4 20 holes for placement of a dovetail (not included). On the top of the clamshell were 2 predrilled holes designed exclusively for the Televue Solfinder (not included). The LUNT standard 10:1 Crayford style focuser was attached to the other end of the scope and was a black metallic color. The LUNT serial number and info plaque was attached to the top of the focuser assembly. On one side of the focuser is a single silver wheel and on the other is anohter silver wheel with a black fine adjustment focusing knob in the center of it. There is a tension adjustment screw that needs to be tightened for the focuser to move. When loosened a little bit, it prevents the drawtube from moving. On the end of this was a plastic 2 inch cap covering the end of the tube with a brass tension band on the inside of it which is controlled by another silver metal screw.


I inserted the LUNT B1800 CaK module into this end and it fit well and travelled freely in and out. Please see my other review for more detailed info on the LS18CaKMD module.

Below are some other miscellaneous pictures of the fine construction.

I used my standard CGE mount on the Pinnacle portable pier with the three way ADM adaptor to test out the telescope. Mounted on this rig was a 90mm double stacked Coronado, a Meade 80mm White Light setup and the LUNT 60 CaK line.

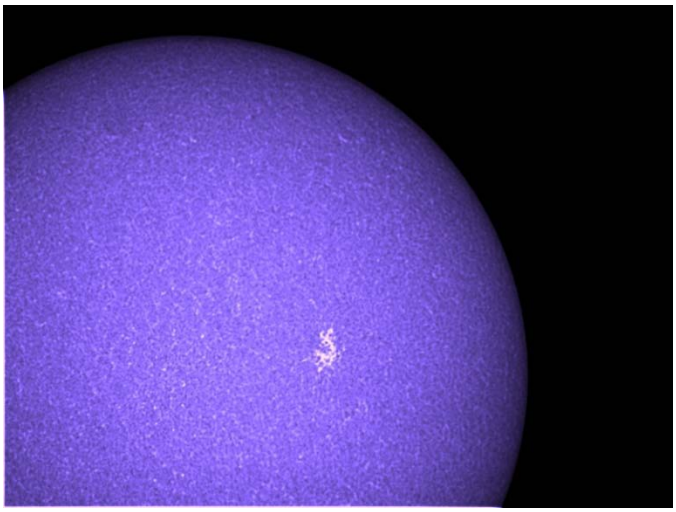
The LUNT made a worthy addition to the outreach setup. I also put out the PST for a little pre spotting of solar features.

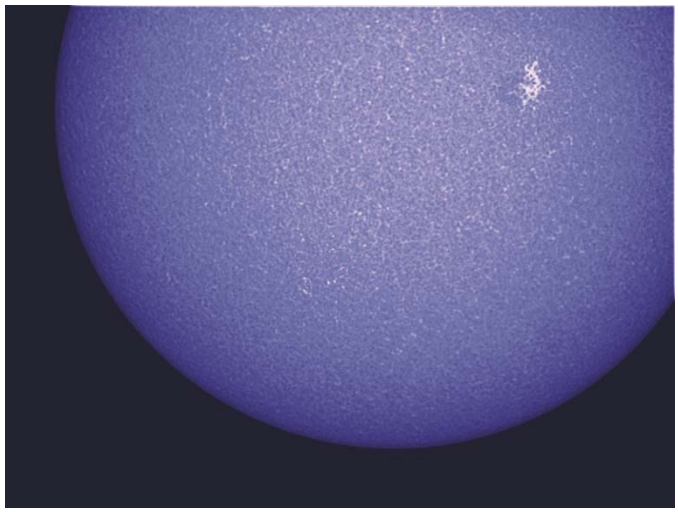
When preparing to mount the scope I realized quickly that I would need to purchase a Televue Solfinder and a 2 inch dovetail. I already had spares in the truck so I kept going. The LUNT 60mm CaK had an 18mm CEMAX eyepiece in it and I used it visually and later with an Image source DMK31USB monochrome camera.

The visual image was full disk and was of a violet color. After focusing it for a minute or two using the finely crafted standard LUNT 2 speed focuser, it became apparent that there were 2 active regions but that was about all that you could tell. The crackle finish indicative of the CaK was slightly visible but in no way is this an accurate visual experience. It is more of a strange, slightly blurred violet image than anything else. If you only want to visually observe then this, or any other CaK scope that I have seen, would not be very good as your only scope. You will get about 10 times more

clarity and details if you cover yourself and the scope's eyepiece with a large black sheet or blanket to allow your eyes to adjust to darkness while viewing. In that mode, there was obvious detail. Since there is no way to adjust the CaK modules wavelength, no prominences or edge features were detectable visually.

If you plan on imaging with this scope you will be very pleased. The CaK line really comes alive with the addition of a monochrome high speed camera. The laptop showed brilliant detail and lots of contrast. There was a small sunspot group that was extremely detailed through this scope. The edges and the blackness of the sunspot center are very inspiring in CaK. It absolutely blew away my white light setup when watching the sunspot group evolve. If you adjust the exposure and gain you can also get some ghostly prominence images that are very strange indeed. Below are a couple of images taken with the Image Source DMK31 USB Monochrome and processed with registax 4 and Corel Photo Paint 10. Seven sunspots are clearly visible at the base of each of the prominence arcs. The picyures also show the amount of the disc that can be captured in one frame with the DMK31. Two shots equal full disc view!





THE BOTTOM LINE

The LUNT telescope had a lot of well made parts which were fitted together well. It was a pleasure to use and it performed flawlessly throughout the entire session. I would have paid a little more to have the solfinder included as it is almost impossible to find the sun manually and then wait for your eyes to adjust to the dim violet image in the eyepiece. Of course, the accessories are where the local dealers make their money so I can see why it is not included. Also, after installing the Televue solfinder and the 2 inch dovetail I found that with these still attached, the case had to undergo some MAJOR foam modifications with my trusty pocket knife before it would close. Uninstalling both of these accessories before putting it in the case each time was unacceptable to me but I have very little patience.

I would strongly recommend this scope for any imagers out there who want to add a new level of beauty and detail to their Halpha or white light setup. Great Job Again LUNT SOLAR SYSTEMS!!

Thank you for reading,

Stephen W. Ramsden

www.solarastrophotography.com