

# 2008 CORONADO SOLARMAX 90 SM90155

Review by Stephen W. Ramsden ([spike@solarastrophotography.com](mailto:spike@solarastrophotography.com))

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This is the Astronomics ad information.

**Coronado Instruments SolarMax 90 3.5" f/8.9 solar telescope with dual etalon <0.5 Ångstrom H-Alpha filter and 15mm blocking filter**

\$7,199.00



Click image for close-up

Our Product #: SM90155

Manufacturer #: 0.5SM90T15

## Supplied Accessories

90mm f/8.9 optical tube; <0.5 Ångstrom dual etalon SolarMax 90 filter (90mm external etalon and 60mm internal etalon); T-Max 90 tilt-tuning unit; combined 15mm aperture BF15 blocking filter and 1.25" star diagonal; 25mm, 18mm, and 12mm 1.25" CEMAX eyepieces; 1.25" CEBAR Barlow; lens cover; clamshell mounting ring; Sol Ranger Sun finder; hard case.

## REVIEW:

Ever since I first looked through and then bought a Halpha PST, I had dreamed of owning the flagship Coronado telescope the double stacked 90. Of course, the \$15000 price tag was a little bit of a hurdle to this acquisition so I just lived with the double stacked PST. I can remember seeing the pictures taken with the DS 90 and wishing that I could afford one. When Lunt Solar Systems came out and announced their new product line in 2008 apparently Meade decided to reinvigorate the neglected Coronado family of products by offering the Solarmax 90 series of telescopes at DRASTICALLY reduced prices. I jumped on it and boy, am I glad.

I ordered the .5SM90T15. This is a SolarMax 90mm scope with the standard external 90mm .7A etalon with an included internal 60mm .7A etalon. The combination when matched properly yields a breathtaking view of the solar disk and limb at <.55A. I have now been using it for 4 months and decided to write a review of it

after heavy consistent use. The scope has been used at numerous outreach events and for extended sessions of photography using a DMK31USB monochrome camera and a Nikon Coolpix 5100 via a scopetronix adaptor.

The scope arrived via UPS at my local dealer Camera Bug in Atlanta about 4 weeks after ordering it. It came packaged in a single ply cardboard box. Inside the box was a black leatherette case with three latches. The case was somewhat flimsy and made just like the PST case, only longer. Inside the case was a standard precut foam insert which housed the gorgeous SM90 snugly. Another box containing the included full CEMAX eyepiece kit came separately.

The first thing I noticed about the scope was its weight. It is heavy. I removed it from the case and examined it. There was a metal screw in cover for the external etalon and an orange 1.25 inch eyepiece cup in the blocking filter.

The visual train of the scope consisted of an external 90mm etalon, a 90mm clear objective, an internal 60mm etalon, a long 2 inch drawtube, a shorter 1.25 inch drawtube and a B15 15mm blocking filter contained in a star diagonal.

The scope also had an included SolRanger solar finder that was attached to a clamshell that had three large bolts attaching it to the scope.

I attached a 4 inch Losmandy dovetail plate to it and set it up on my Celestron CGE mount for some visual and imaging use.





The scope is absolutely beautiful and there is no mistake that you mean business when you set this bad boy up at a star party.

I just sat and looked at it for a few minutes having finally realized one of my dreams in solar observing.

In order to focus with any of the supplied CEMAX eyepieces you have to extend both drawtubes out fully and work your way in with the helical focuser. I used a 25mm CEMAX and aligned it on the sun with the CGE. Let me just say that I was absolutely

amazed at the clarity of the image with any of the supplied eyepieces and it was a delight to look through. Surface features felt 3 dimensional and the edge proms just came alive with this scope. I could not stop looking that first day and kept it going until sunset. It was amazing!!



One of my favorite shots with this setup is shown below.



It clearly shows a circular ripple coming out of the center of this AR taken in November of 2008 using the DMK and two CEMAX Barlows double stacked.

I don't know what strikes me about this photo but I just like it. Notice the small filaments in the center. The telescope has really provided me with some awesome pictures.

The telescope has no internal etalon adjustment mechanism and relies on the external etalon for tilting via a brass wheel. The etalon tilt adjustment goes from ghost image at one extreme to an almost completely off band image at the other. It certainly shows the full range of the bandwidth available from the etalons.





The entire etalon assembly tilts with this wheel as shown in the picture to the left.

With the external etalon removed the SM90 becomes a "prominence machine". The image is so bright you can focus easily with a 5x Barlow and a DMK camera. The "little" 60mm internal etalon is fantastic as a .7A prominence viewer.



The telescope's focuser is of helical design. The focuser is pretty good except that it is attached to a cheaply made set of 2 drawtubes. The main tube is held in place by a single small screw. It has a smaller drawtube inserted into it that is held in place by two even cheaper nylon screws. The blocking filter is attached to the end of the smaller tube by one very large chrome screw that gets in the way of tightening the other two screws. It is a silly design that leaves a lot to be desired.



For the life of me I can't fathom how Coronado would put such an inferior focusing setup on the end of their most expensive and sought after Halpha scope.

It is a constant nuisance to try and adjust the three different coarse and fine focusers while imaging.



I understand that JMI corp offers some sort of replacement focuser that is actually usable but wouldn't this scope have the best focuser possible at its astronomical price? Maybe the BF30 2 inch straight

through setup is better, I don't know. It is a \$1600 upgrade to a previously \$12,000 scope and I feel like I invested enough to get a decent focuser.

The case is a disappointment also. Look at this wreck after only 4 months of use:



Anytime you even moderately scrap the case against something or put it on a less than friendly surface, it leaves a tear or mark on the cheap leatherette skin. I have no confidence that this case would withstand any sort of travel god forbid an angry baggage handler.

It also has no locking mechanism. It still holds the scope well inside though. Just don't drop the case friends.



The included SolRanger sunfinder is a big plus. It is very sturdy and is aligned perfectly with the scope by use of predrilled holes in the clamshell. It is awesome.



In general I would say that this scope absolutely rocks and is the cream of the crop of Coronado's product line. It has provided me with countless hours of amazing views through the CEMAX eyepieces. The focuser and the case are a joke but the scope more than makes up for these ill thought out accessories.

I would strongly recommend this scope to anyone who wants to go to the next step up from amateur in Halpha observing. If you would like to see some of the amazing photos that have come from this scope please see go to my site [www.solarastrophotography.com](http://www.solarastrophotography.com) and look around.

Thanks for reading,

Stephen W. Ramsden

A handwritten signature in black ink, appearing to read "Stephen W. Ramsden". The signature is fluid and cursive, with a prominent initial "S" and a long, sweeping tail.