

2008 Mexican Made

MEADE Halpha Personal Solar Telescope (PST)

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

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Here is the manufacturers information (www.coronadofilters.com/products_pst.html):

Personal Solar Telescope Product Description

The PST is the latest innovation from Coronado. This 'little' telescope is another step toward our goal of making it possible for everyone to, "Experience the Sun our way."

Sub angstrom H-alpha systems have long been cost prohibitive for the amateur. Designs other than the Coronado are difficult to use because of temperature and F-Ratio requirements. Not only does the PST have a bandpass of <1.0 Angstrom but it is also thermally stable and requires no more time to operate than putting in a eyepiece and adjusting the focus...

The PST represents the same technology and quality that goes into a SolarMax series telescope but with a few unique design characteristics that allow us to offer it for less than some premium eyepieces. The PST will show you prominences, active regions, filaments, as well as other surface details.

At <1.0 Angstrom it will not reveal as much surface detail as the SolarMax series telescopes and filters but it certainly doesn't disappoint.

- **Aperture:** 40mm
- **Focal Length:** 400mm
- **F/Ratio:** F/10
- **Bandwidth:** <1.0Å
- **Thermal Stability:** 0.005 Å/°C
- **Safety Blocking:** >10⁻⁵ from EUV/IR
- **Price:** \$499

REVIEW:

I received my Meade Halpha PST on October 28th, 2008 via UPS ground shipping from Irvine, CA. The telescope was shipped in a sturdy cardboard box with an inner cardboard box decorated with the Coronado Company's information.

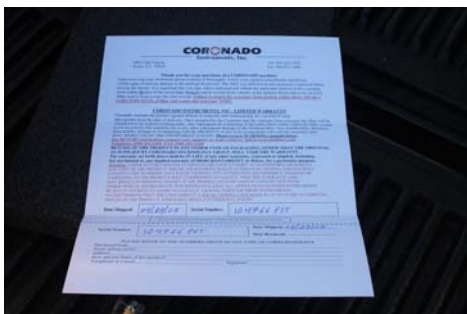
The box was sealed with standard clear shipping tape and felt very sturdy. There were no noises inside when I shook the box.



When I opened up the inner box there was a large piece of black foam covering everything. Upon removing this foam there was the PST securely snuggled into another piece of black foam that was specially cut to house it. Inside that



foam was the PST, a warranty card, a 20mm Kellner eyepiece and an instruction manual with warnings and information on the scope. Here are pictures of the information in the box:



You will be happy to know that the warranty did indeed state 5 years.

The information was interesting and well presented.

I also received a Case and a M.A.L.T.A. mount with this PST and they arrived separately. They were packaged separately in 2 different shipments. This is what the plain case looked like inside. It was made of some sort of pressed wood (cedar?) and had a black leatherette covering all over it.



The case securely closed with 2 latches. It had metal corners and seemed strong enough to handle the telescope for car trips or weekends. I would not suggest it for airline travel though as it did not appear tough enough for that.



The foam inside of the PST shipping box was made to fit into the case after a little tearing and squeezing. There was a precut line down 2 sides of each of the 3 pieces of foam. When torn off they fit snugly into the case and made for a pretty decent fit. It looked exactly as pictured above in the original box except that it was now in the case.

I immediately stored the case and stand for a potential resale customer so that it would be in brand new condition. I own 2

PST's so I choose to buy an Orion standard black case with foam insert and make my own dual PST case. It is pictured below with the SM40 Etalon for double stacking purposes on either scope.



I find this case much more stackable and less prone to damage with a lot of handling.

The M.A.L.T.A. stand is very well designed but didn't seem to be very functional. It consisted of 3 gold legs with rubber boots, 1 altitude azimuth adjustment head, a tightening screw and 2 ¼ inch allen head screws with washers for mounting the PST.



When fully assembled it looked like this:



The mount would be fine for use on a tabletop as long as you didn't want a lot of stability or tracking. I have seen several pictures of mounts that have been attached to the top of a photo tripod and used that way as well. I packed mine away for potential resale.

The PST had some conflicting stickers on it. One on the objective housing said Made in the USA and the other said designed and engineered in the USA and manufactured in Mexico. I only noticed because it looked like it was added on at the last minute.



The blocking filter was the standard PST issue and unscrewed from the eyepiece tunnel if needed.



The Etalon tuner was stiff and had about 2 full turns in its range of motion.

The objective lens was a clear bluish tint and did not appear to have any energy rejection qualities.



There was a red eyepiece insert and a nice plastic cap on the objective with a Coronado logo on it.

I took the scope outside and chose a mount that was inexpensive for this review. I used a 2 inch ADM dovetail to mount the PST on a Vixen Alt/Azm Porta-Mount (supplied for the review by Tim Nix at Camera Bug in Atlanta-\$199).



I also inserted a CEMAX 18mm eyepiece from my collection in order to compare it to the older PST that I already owned using the same eyepiece. My old PST was manufactured in 12/2005. It has a nasty gold objective that is covered with some sort of granulation that I can only assume is the dreaded rust. It has an excellent image though so I have never had it serviced.



The sky conditions were 8 out of 10. It was clear and cold with no wind and no reported jet stream.

The sun had very little activity on the limb or surface so I concentrated on granulation with both scopes. I set up the Mexican PST and tuned it to the current conditions. After a little focus and etalon tuning I found the image to be **EXCEPTIONALLY GOOD**. The disk showed granulation at about a third of the detail of my 90mm Double stacked SolarMax. When tuning the rigid etalon back and forth small prominences jumped out and made themselves apparent. There was also a small filament on the surface that became visible in a certain position.

I would say that the visual results placed it significantly ahead of my old PST and also a little better than my one year old PST which I recently returned to Meade for a problem. I was very impressed.

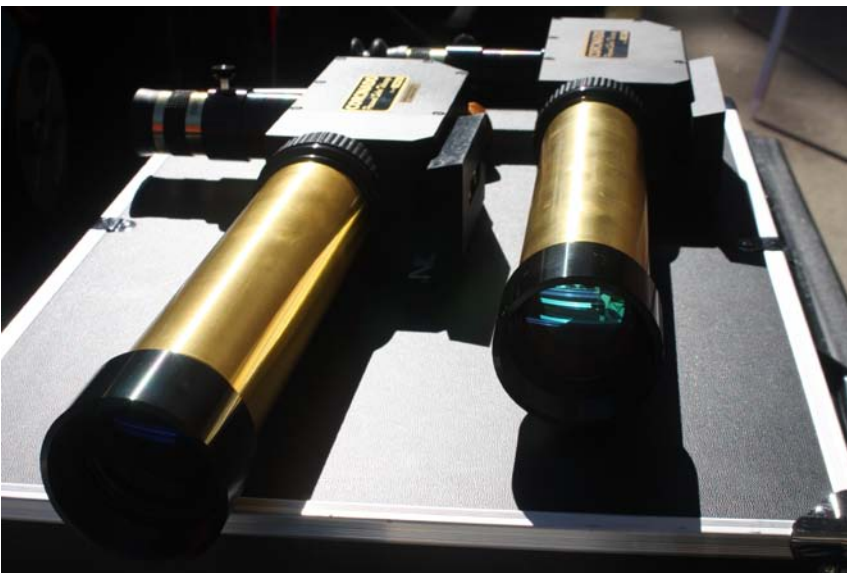
I asked a passer-by to come and look through both scopes and give me an opinion. He appeared to be in his fifties and said he was a salesman with no astronomical background.

I attached the special CMC custom focuser knobs made by Deven Matlick at Criterion Machine Company-\$20 (<http://www.criterionmachine.com/PST%20Accessories.html>) and went to town.



The man said that the image through the new Mexican made PST was significantly better than my older gold objective PST. I agreed. I then did the comparison myself and noticed that the new one had much better surface granulation but that the older one had about the same prominence views as the new one. All in all I would have to say that considering the fact that the older one had a little rust on the objective that my conclusion is that the new Mexican made PST is every bit as good if not better visually than the old one.

Unfortunately in both this new one and the other new PST I owned until recently, the image shift is substantial when focusing. Some of you may be aware of the trouble I had with the other new one that I owned having so much focuser/image shift. This one is the same way. The old one with the Gold objective has almost zero shift. Both of the new ones have a shift of around .75 solar diameters when pressure is applied left, right, up or down on the knob. This problem was obvious and irreparable my Meade. The one I am reviewing is in fact the replacement PST that Meade sent me because they could not fix the other new ones image shift after two trips to their new facility in Mexico.



The double stacking produced a lot better image in the new one than in the old one. The results were along the lines of the single stacked results.

I would say that for the money, the PST is an outstanding value for visual use only. This scope is not adequate for serious photography the way it is shipped from Meade.

I hope my review is useful to you in your decisions concerning Halpha viewing and will

be glad to answer any questions via email at spike@solarastrophotography.com