

## Antares 25mm W70 vs. Orion 22mm Epic ED

By Steve Coe [click to email author](#)

### Introduction

For many years I used the same telescope and essentially the same set of eyepieces. My 13 inch f/5.6 Newtonian was a great scope and I had a 22mm Panoptic and a complete set of Meade UltraWides: 14mm, 8.8mm, 6.7mm and 4.7mm. I added a 35mm Panoptic and felt that life was completeÉ.as far as eyepieces were concerned.



But, things change. After 14 years and completing the deep sky objects in Burnham's Celestial Handbook, I decided to sell the scope to a friend and try something new. I had an Orion 6" f/6 Maksutov-Newtonian for a while and it provided great wide field views.



But, things change. I had a chance at Riverside to spend some time with a Celestron Nexstar 11 GPS. This scope had plenty of aperture and was easy to use. It was just what I wanted. So, I bought one from Starizona and have been happy with the performance of this excellent telescope.



But, things change. I missed those beautiful wide fields of view. So, I traded and swapped and built a 4 inch f/6 refractor that is an excellent RFT. The tube assembly is the Orion 100mm and the mount is the ubiquitous CG-5. So, for now, I am happy.



Once I got into the trading mode, I just couldn't stop swapping eyepieces. I kept the original set that I mentioned above and added several other types. I did this for two reasons. One is that I liked having a set of eyepieces in the same box with the telescope pieces so I could just "grab and go" knowing that I had all the accessories needed. Also, I am a member of the Saguaro Astronomy Club in Phoenix, Az. We enjoy setting up for public viewing sessions and I have always been concerned about using my best eyepieces when I am set up for public viewing. There are too many chances for fingerprints and/or mayonnaise getting onto those optical surfaces. It makes me cringe.



I noticed that there are several different styles of eyepieces in the range of 40 to 75 dollars. I decided to see how they would perform. Before I start providing information about these eyepieces, I feel compelled to let you know that I have no connection to either Orion or Antares. The businesses, not the stars;-)

## **Orion 22mm Epic ED**

The ED eyepieces from Orion have two glass elements that are made from "extra low dispersion" glass. These special materials are added to reduce chromatic aberration (color distortion) and increase the eye relief (distance from your eye to the top element of the eyepiece). The one thing that is immediately evident about the ED series is that the eye lenses are large. No tiny pieces of glass in these eyepieces. The field of view is on average almost 60 degrees in width for these

eyepieces.

## **Antares 25mm W70**

These eyepieces also have a modern design made to provide a wide field of view (obviously 70 degrees) and generous eye relief. These eyepieces also have a large eye lens so that you never feel that you are looking through a peep hole. The advertisement for the W 70 series says that these eyepieces have multicoating and also have the edges of the lens blackened.

Both brands of eyepiece have a rubber ring for a secure grip and a rubber fold down eyecup. I like both of those features. Also, all these eyepieces are threaded for 1.25 inch filters.

Let's get out under the stars



Ok, let's drive out of town and set up the scopes and have an eyepiece shootout. I have had three chances to use these eyepieces side by side. I will discuss specifically the night of 20Aug, 2004, but I have seen the same results from all the times I have used the eyepieces.

This is a good, but not great, night of observing. We are about 60 miles away from the lights of central Phoenix. The faintest stars are 6.0 magnitude and the Milky Way is easily visible, but not spectacular. I have rated the transparency at 5 out of 10. There are a few clouds drifting across the sky, but it is generally clear.

I have my Nexstar 11 and Matt has his brand new 8 inch f/4 RFT, this scope has a Parracor corrector installed. We started out on M 11, the rich star cluster in the constellation of Scutum. I immediately noticed something that I did not like about

the Orion Epic ED. In that eyepiece there is a bright ring around the outer 20% of the field of view. It is prominent to my eye in both telescopes. This is a killer defect to me. I enjoy viewing nebulae and having an outer glowing ring around every object will ruin the view in my opinion. Think of trying to view the outer, faint sections of the Orion Nebula and having the field brightness overwhelm the nebulosity.



Photo Chris Schur 10 inch f/6 Newtonian 60 minutes exposure stacked two photos

I believe that this problem is caused by not blackening the edges of the eyepieces. I am certain that someone in the forum will say, "Well, just take the eyepiece apart, paint the outer rims of the lenses and put it back together". If you wish to take on that task. I applaud your efforts. I don't wish to take my time and risk messing up the eyepiece completely. At least as it is now, I can sell it to someone whose eye is not sensitive to this problem.

The good news about the 22mm ED is that the field of view in the RFT was quite sharp and the stars were small points for the central 75% of the field of view.

That was not the truth in the 25mm W70 eyepiece. In the RFT the stars were short streaks by the time they were 60% of the way out from the center and only got worse from there. At the edge of the field the stars were elongated 3X1!

So, we moved over to the Nexstar 11 and compared the eyepieces. The bright ring is still evident in the SCT, it is actually more prominent because the field my new telescope is so contrasty that the bright ring stands out even more. The field was flat and the stars were small and round across the central 90% of the field. If not for the bright outer ring, I would have enjoyed the view.

Interestingly, the stars in the W 70 eyepiece really got it together when used in the SCT at f/10. The field of view is pretty flat, very contrasty and the stars are points for the central 90% of the field. The view of M11 was excellent, the dark lanes nearby the cluster stand out in good contrast, I counted 53 stars in one quadrant. meaning that there where over 200 stars resolved in the entire cluster. The brightest star is orange in color to my eye and this star is very prominent in such a high contrast eyepiece. I was impressed.

We moved both scopes to M 17, the famous "checkmark" nebula in Sagittarius. Again, the ED shows the stars well, but the glow in the background is too much for me. Also, the ED eyepieces seem to have "too much" eye relief. Both Matt and I have to hold our heads away from the eye cup to stop that "blackout" effect. the fact that some eyepieces wink off the field of view if your head is not in the exactly right position.



Photo by Chris Schur 10 inch f/6 60 minutes on Fuji PJ 400

The W 70 eyepiece does a nice job on M 17. The nebula itself is shown in high contrast and even in the 8 inch there is some wispy glow around the bright "Swan" feature in the middle. The stars are solid points for the central 75% of the field and are not extremely extended from there out to the edge of the field. There are several dark lanes in this wide field and the W 70 shows them off very nicely.

I like the view in the Nexstar 11 better than the 8 inch RFT, but that is just an opinion. The long focal length instrument shows some very nice detail within the nebula and the field is dark so the outer wisps of nebulosity are quite easily seen with the W 70 eyepiece and no filter. Of course, adding the UHC filter makes a tremendous difference in how much outer detail is available for observing. The filter will double the size of this fascinating nebula, there is now lots of the outer nebulosity glowing faintly.

## **Conclusion**

## **What I liked:**

## Orion Epic ED 22mm

- 1) Rubber grip ring makes it easy to hold onto in the dark.
- 2) In short focal ratio scopes, it delivers good star images for most of the field of view.
- 3) Good eye relief—actually too much at some times.

## Antares W-70 25mm

- 1) Rubber grip ring makes it easy to hold onto in the dark.
- 2) In long focal length scopes, it delivers excellent star images over a wide field of view and maintains excellent contrast across the entire field of view.
- 3) Excellent eye relief—a very comfortable eyepiece for my eye.

### **What I disliked:**

## Orion Epic ED 22mm

- 1) The killer for me is the bright ring around the edge of the field, I don't know if I just got a bad one, or if they are all like this, but I will monitor the forums to see what others have to say.

## Antares W 70 25mm

- 1) If you are a user of a short focal ratio telescope, then the distortion in this eyepiece will be too much for your use. Those elongated stars near the edges of the field are very distracting.

My observing buddy for over 20 years, A.J. Crayon, says that eyepieces are "a religious discussion". I tend to agree with him. There are so many factors at play here that you just can't please everyone all the time. An eyepiece that provides

wonderful views for one observer may be no better than a hand held magnifying glass to another observer.

With that in mind, I hope that this review has been helpful. I will look at the forum for the next several weeks and participate in the discussion.

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