

# Tele Vue

# Delos

## Wide-Field Eyepieces That Pack a Planetary Punch

By Erik Wilcox

There's something to be said about dedicated planetary eyepieces. With a large un-driven scope, I've spent much of my observing time over the last several years chasing DSOs. However, on those nights when I turn my scope to Saturn, Jupiter, Venus, Mars, Mercury, or the Moon, I still feel the same magic that I did the first time I ever saw these objects. Viewing them with a wide-field eyepiece has always been "good enough" for me; especially when that eyepiece is a Nagler or Ethos. Though the views can be nice, I've never cared much for "planetary eyepieces," like Orthos, due to their tight eye relief and narrow fields of view. So when Tele Vue announced that the Delos had a 72-degree apparent field of view (AFOV) and 20 mm of eye relief, it definitely caught my attention.

The 10-mm and 6-mm Delos arrived from Tele Vue just in time for the new moon. Upon opening the boxes, I wasn't at all surprised to see the exceptional build quality and attention to detail for which Tele Vue is known. What impressed me right away was the ingenious method of "dialing in" the exact custom amount of eye relief for an individual user. Unlike the Radian's "click-stop," the Delos can be adjusted to the exact spot that a user wants. The amount of eye relief can be adjusted by simply holding the



eyepiece name ring and twisting the eyeguard barrel counter-clockwise to loosen, then pull the eyeguard up to the desired height. When you find the right spot, simply turn the barrel

clockwise to tighten while holding the name-ring. What could be easier? The Delos also features the soft and comfortable “flip-down” rubber eyeguard used on most Tele Vue eyepieces.

Aside from the new moon, the Delos arrived on the evening that my wife and I had planned to meet up with a neighborhood friend for an observing session. Our friend, who lives about four blocks away from us, has a 24-inch  $f/4$  in a 14-foot motorized dome (another guy who lives two blocks from us has a 20-inch  $f/4$ ; it seems as though my 16-inch  $f/4.5$  is the midget of the neighborhood!). After observing a bunch of DSOs, I pulled out the Delos and we spent the latter part of the evening observing Jupiter through the 24-inch scope. Conditions were nearly perfect. Our friend's house is at 5,000-foot elevation, and it was 58 degrees (Fahrenheit) out with a light breeze. My Sky Quality Meter read 21.93, not that it mattered much since our night vision was completely shot as soon as we got within two feet of Jupiter's image shining through the eyepiece in the big 24 inch Dob!

As it was around midnight before we finally pointed the big Dob at the gas giant, Jupiter wasn't yet very high in the sky, and 460X with the 6-mm Delos was way too much magnification for the 24-inch scope on this night. But 276X with the 10-mm Delos was just about right; Jupiter was crisp and its moons were obvious disks at this magnification.

We made several comparisons between the 10-mm Delos, a 10-mm Ethos, a 10-mm Plossl, and a 9-mm Nagler T6. The comparisons with the 9-mm Nagler might seem a bit point-

less since the magnification was different, however, we tried removing the Paracorr for comparisons with the Nagler, which yielded a closer magnification to the 10-mm eyepieces (267X vs. 276X).

One thing I wanted to try and observe was whether the Delos would show a blue tinge on Jupiter as it approached the edge of field. I've owned several Radians in the past and, though I enjoyed using them for planetary viewing, I found the bit of false color to be my main pet peeve with them. Of course, many, if not most eyepieces will show a little false color when observing bright objects near the field stop. But with the traditionally narrower AFOV in dedicated “planetary eyepieces,” and especially when using these eyepieces in un-driven scopes, this becomes more of a concern. However, with the Delos, my fears were completely unfounded. I was surprised and extremely impressed to see that Jupiter maintained all of its natural beauty and color right up to the field stop! A slight bluish tinge was exhibited only as Jupiter exited the field of view. This in itself makes the Delos something special, in my opinion. In this case, “72-degrees of AFOV” is really a full 72 degrees of usable and perfect field.

As far as edge-of-field sharpness, the Delos are literally perfect in that department. No matter where I placed a star in the field of view, it remained a perfect and textbook pinpoint. There was absolutely zero field curvature or astigmatism. I did notice a small amount of pincushion distortion as I panned across the sky, but it was a much smaller amount than seen in the excellent Nagler T6 and did not detract at all from the view.

Jupiter was showing some amazing detail; I counted seven distinct bands, and we could see festoons and swirls within the bands. This was despite the fact that Jupiter wasn't overhead and the seeing was good, but not great. We compared the 10-mm Delos with the 10-mm Ethos again and again. All of us agreed that the Delos showed ever so slightly better detail and color purity than the Ethos. But it was extremely close contest and required some “time-hogging” (mostly on my part) at the eyepiece.

The color aspect is an important one; the Ethos is extremely “pure” and shows realistic color that is noticeably better than the Nagler T6, for example. So I was surprised to see that the color correction of the Delos was slightly more pure still. What I mean by this is that Jupiter was “whiter” through the Delos than through the Ethos. And through the Nagler, it had the noticeably “warmer” tone that the Naglers have been known for. I must say that I prefer what I subjectively consider the more realistic tone that the Ethos and especially the Delos show.

Two nights later, a couple of friends met up with me at my house and we observed Jupiter again with my 16-inch Dob. My house is at 4,500 feet elevation and on this night the seeing was noticeably better than when we'd observed through the 24-inch Dob a couple of nights earlier.

The better seeing on this night made it easier to see the difference in the Delos versus the Ethos and Nagler. We all agreed that the 10-mm Delos showed a view with more contrast. Subtle details within Jupiter's cloud bands were a bit easier to see through the Delos and noticeably easier than

the Nagler T6. This was also made more noticeable due to the perfect magnification (210X) that the Delos provided in my 16-inch  $f/4.5$  Dobsonian with the Paracorr attached. Again, it was difficult to test the 6-mm due to the magnification in my big scope.

On a weeknight several evenings later, I decided to get a “quick look” through my little 80-mm  $f/7$  refractor (which turned into a three hour observing session). Jupiter was just clearing the trees in the southwest so I pointed the little refractor at it and inserted the 6-mm Delos. 93X showed a view that was crystal clear and reminded me why I enjoy the occasional view through a good refractor. The sky around Jupiter was jet black through the eyepiece and it was nothing short of spectacular. I decided to see how the Delos would Barlow so I dug out an old 2X Barlow (I rarely use Barlow lenses) and was surprised to see that it handled it perfectly. The eye relief was

very comfortable and I had no “black-outs” or problems taking in the whole field of view. Of course, the view was even better when I attached my 2.5X Powermate to the Delos.

The waxing Moon was rising in the sky as well, so I also spent a good deal of time on it. Even the bright Moon held up perfectly through the 10-mm and 6-mm Delos and there were no noticeable aberrations of any kind. Once again, the sky around the moon was jet black and this made it look three dimensional through the eyepieces – I almost thought that I was using binoviewers!

I found the 10-mm and 6-mm Delos to be optically identical to each other, aside from the magnification, of course. Using the 2.5X Powermate with the 10-mm allowed me to make some comparisons, and I found there was absolutely no difference that I could see. In my past observations, I’ve always found the 2.5X Powermate to be completely “transparent,” so I felt

that these comparisons were valid.

Overall, I thoroughly enjoyed the time I spent with the 10-mm and 6-mm Delos. The Delos are lightweight (at 14 and 16 ounces, respectively), extremely easy to use, and in my opinion are far better than their predecessor, the Tele Vue Radian (though the Radians are certainly no slouches!). The Delos offer a bit better contrast and detail than either the Ethos or Nagler T6, and that was a real surprise to me as well. With the Delos, the eyepiece simply “disappears” and allows the observer to observe. I could find nothing whatsoever to complain about; the “twist and tighten” eye relief adjustment feature is the best I’ve ever seen in any eyepiece, and the optics are essentially perfect. Tele Vue somehow always finds a way to continuously improve upon their eyepieces and the Delos is certainly no exception. Bottom line: If you’re in the market for a planetary eyepiece, you owe it to yourself to consider the Tele Vue Delos. 