

I wrote two serial articles for the SAS before I left for Washington eight years ago: one was *Deep Skies*, and the other was *The Telescope Nut*. Now that I am not an officer of the club I intend on continuing these in no specific order or continuity. Trevor can use them or abuse them any way he likes. Here is the next installment of *The Telescope Nut*.



## THE TELESCOPE NUT

### "BLACK"

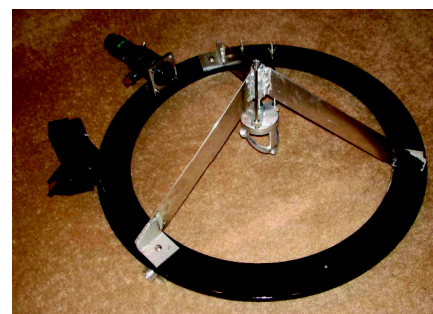
Many of you remember **Black**, my 24"  $f/3.7$  Dobsonian telescope that was at SAS star parties for a decade. Well, Black was really Black #6. Black #1 [1975] was a 10"  $f/5.6$  Newtonian on a German Equatorial Mount [G.E.M.]. Black #2 [1985] was a 12 1/2"  $f/8$  Newtonian on a G.E.M. He was tall and impressive, but managing hundreds of pounds for only 12" of aperture wasn't fun. When I moved to California, hauling scopes wasn't going to happen, so I made a new, smaller Black #3 [1991], which was an 8"  $f/6$ . This was my scope at many SAS star parties and he did well at school star parties, but was not the light bucket I am usually accustomed to.

Between 1990 and 1992 I built a 24"  $f/3.7$  Newtonian on a huge fork mount. We'd drag it up to Peddler Hill on my little trailer, spend 2 hours setting it up with my pick-up truck crane, gawk, then spend 2 hours taking it apart. It was impressive to look at, but deadly to use and manage. Black #4 wasn't working out. So I built a Dobsonian out of him, Black #5. He was still ridiculously heavy, so I re-engineered the whole thing ending up with Black #6 [1994?], *The Black* that the SAS remembers.

Black had a fairly large aperture, fairly short focal length, and could be used without a ladder for about 85% of the sky. He was popular. Then I decided to build a 40" telescope, and I sold Black to fund the project. A year into that project I sold it to the Sonoma Group for their observatory and I moved to Washington.

We finally returned and I needed another Black. So I bought a 24" used blank and started Black #7, a 24"  $f/3.6$ . [By the way, my largest physical telescope was blue and his name was Bloo.]

Black will be a 24"  $f/3.6$  Dobsonian whose skeletal design will mimic David Kriege's *Obsession Ultra Compact 18"*, only scaled wider and stumper. There will be no mirror box, just a tailgate with an 18-pt. flotation cell mounted to an altitude bearing. That jig will hold six truss poles connecting the upper tube assembly [UTA], which also will be minimized. It will only have one ring with a focuser mounted to it rather than two rings connected by poles. It will be extremely open, so caution must be used to prevent damage and light impedance.



*Upper Tube Assembly (UTA) for Black #7*

Fast Newtonian telescopes, which use paraboloidal mirrors, suffer from coma in the outer areas of their field of view. Even though they produce a "perfect" image dead center, they increase in coma as you move away from center. To correct this, I will be using a TeleVue coma corrector called a ParaCorr. I also like Starlight Instrument's Feathertouch focusers, and when Feathertouch and TeleVue announced they were going to collaborate with a unit that had both, I knew it would be the deal. This Starlight Instrument's ParaCorr System [SIPS] unit corrects coma for mirrors as fast as  $f/3$ , and allows the user to place eyepieces in and out without having to adjust the positioning of the ParaCorr, something that the ParaCorr by itself needs. It will amplify my  $f$ -ratio to  $f/4.14$  but will still only be as short as an  $f/3$ .

In my next installment, I'll go in to the mirror-making issues that have hit this project. I am manufacturing both mirrors, primary and secondary, and they both have unusual issues.

*Clear Skies!.....Bald.*