

I got a fairly respectable split of Sirius Saturday evening, March 2, 2002, with my 1987 model Astro-Physics 6-inch f/8 (pre-"EDT" triplet), using a Pentax SMC-ED 5 mm orthoscopic eyepiece for a bit over 240x, and an Astro-Physics "Max-Bright" star diagonal. The site was the main parking lot of the Montebello Open Space Area, in the hills just south of the San Francisco Peninsula, south of Palo Alto, at about 3000 feet elevation. That is a popular location where some of us local folks have a permit for night-time astronomy use.

I knew from prior experience that seeing at this site was often very good just at dusk, so arrived early and was set up by then. Sirius showed a mostly steady Airy disc, and several diffraction rings that were mostly in motion. Every so often things settled down for a moment, and at times like those I frequently got a stationary fleck of light at the right position angle (which I knew beforehand) and at about the right separation (I checked Rigel later and used its separation to calibrate what I had seen). The fleck only appeared when things were pretty steady, and not at times when the diffraction rings had broken up into a blur or into rays. I probably saw it a dozen times or more during perhaps ten minutes of observation. I moved the image here and there in the field, to test for being deceived by a ghost or some kind of irregularity in the optics, but the fleck kept appearing at the same position with respect to the primary, no matter where the image was.

There were quite a few people there that evening. I mentioned what I was doing to a few folks near me, but I didn't hollar about it. I guess I was being a little selfish: I figured that if everybody took five minutes to focus and ten minutes to stare, I wouldn't get much more observing done that night. In any case, no one else came over to take a look.

Later, Rich Neuschafer and I looked at Sirius with his AP-155 f/7 EDF at 271x (Zeiss 4 mm Ortho), but the seeing had deteriorated just slightly, and though I once thought maybe I saw a fleck of light at the right position, it was not at all convincing. That is quite interesting, because the f/7 EDF seems to have color correction that is noticeably better for visual work than my older model (though only slightly better); it shows that seeing the Pup is very seeing-dependent.

I had the feeling that a smaller aperture than six inches would have split Sirius with the companion at that separation, but it would have taken a good deal better seeing to do it, and it would also have taken not only good overall correction but also minimal central obstruction and minimal chromatic aberration; Sirius's purple halo in a conventional achromat is, I suspect, more than enough to swamp the Pup unless one goes to much larger apertures or quite long focal ratios. Chromatic aberration is probably a big impediment to splitting close unequal

doubles in classic refractors.

I have split Sirius before, in my C-14 when it was much wider, and in my AP-10 last year. I once suspected it in an 8-inch Newtonian with a large diagonal, but could not confirm; that was also when it was much wider. I have not seen it in any aperture as small as six inches before. The current separation (2002) is about five arc seconds.

I didn't think to try Procyon, maybe next time.

-- Jay Freeman