

First Looks: Astronomy Technologies AT80 – 80mm F6 refractor

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We live in interesting times.

Never before has so much quality equipment been available for such low prices. The booming industries of the Pacific Rim have reached out and touched the astronomy market – resulting in an explosion of offerings.

Riding this wave, a new company (based in OK, USA) has just appeared on the horizon – Astronomy Technologies - and while they are young, their initial offerings are showing distinct promise.

Take their 80mm f6 achro entry into the short tube war. The first shots in the high quality / low cost achro war were fired by StellarVue years ago with the introduction of their highly regarded NightHawk – still a venerable scope. Since then, competitors have come out of the woodwork to take their respective shots at the small achro market. With each volley, we've seen new features and lower prices. And for consumers – that's a good thing.

Astro-Tech's entry is the AT80. This 480mm focal length refractor with rotating dual speed focuser comes complete with soft case for a mere \$399. Astronomics shipped me one of these new scopes to take a quick peek at, and I have to admit, I'm pretty impressed with what your dollar buys these days. The scope is similar to many of the other 80mm achro's on the market in that it offers a rotating crayford focuser, a cemented doublet for the optics, a press on dew cap, a mounting "foot" that allows it to be fixed to a tripod or

dovetail bar, and a very nice soft case that's cut to fit and holds a 2" diagonal, one 2" and three 1.25" eyepieces. Additionally the case has a cargo pocket on the inside of the flap / cover - handy for slipping maps and such into.

Astronomy Technologies AT80

- 80mm Refractor (Cemented Doublet)
- 480mm Focal Length
- Retracting dew shield
- 11:1 fine focuser
- 2" Rotating focuser
- Calibrated Drawtube
- Press fit Dust cap
- 2" to 1.25" adapter
- Included soft case

Price - \$399

Mechanical construction is first rate, and the scope is finished in a combination of textured paint and anodization. The rubbery textured paint on the majority of the OTA prevents it from picking up fingerprints at every turn as well. Large rubber covered focus knobs are especially gentle on naked fingers in cold weather. The focuser is a

dual speed crayford with an 11:1 reduction ratio. One knob provides the coarse focus while the other offers fine focus. This is slightly different from most of the other fine focusers on the market, and which you prefer will depend on your personal preferences. As mentioned earlier, the 2" focuser is rotate able – an especially nice feature if you intend to use the telescope on a lightweight German EQ mount. It's also calibrated for those wishing to try their hand at basic astrophotography. All fittings feature non-marring compression rings, and a 1.25" to 2" adapter comes standard.

The OTA uses a similar ridged cone type baffle found on several of its competitors in the market – basically the baffle arrangement screws into the lens cell and additionally acts as a retaining ring. While it may not be quite as nice as some of the other options out there, it is cost effective, and at least on telescopes this size, has been shown to work quite well. While product claims 10 ridged baffles, these are really ridges in the cone and not knife edged baffles some might think.

You have a couple of options for mounting the OTA to your mount. First off, the AT80 comes standard with a 1/4-20 shoe for quick attachment to tripods – a feature which also serves it well when it comes to dovetail plates. If you'd rather not deal with the foot – it can be removed - Astronomy Technologies also offers a fairly inexpensive (yet well constructed) set of tube rings to fit the AT80. For most users, the foot is probably all you will need.

For a 3.1 inch telescope, you'll be surprised at just how solid it is. While it could be mounted on some of the heavier camera tripods on the market, I'd only really recommend it on some of the heavier bogen / manfrottos with dedicated astro heads like the Unistar or Microstar. Don't plan on putting it on a flimsy \$35 wally world tripod – you'll be in for a disappointment. You'll probably want to add some from of a unity finder, and finally, you'll also need a diagonal. Astro-Tech offers several to choose from; a 1.25" dielectric, a 2" 97% standard coatings model, and a 2" 99% dielectric model – all are modestly priced and would make a good addition to your setup.

Optically, the telescope is very similar to other 80mm achro's available. It uses a cemented doublet with no provision for collimation – that's either a good thing or a bad thing depending on your outlook. In my opinion, in this price level for a telescope that's apt to get knocked around a lot, a cemented doublet is a pretty decent choice. The one caveat is, of course,



if collimation is out, the telescope usually has to be returned for replacement. But with a cemented doublet, if it's collimated, it's going to stay collimated. If it's out – well, Astro-Tech feels confident enough in their products to offer a 2 year warranty.

Its short 480mm focal length, coupled with the ability to take 2" eyepieces means that with a 2" 55mm plossl you can expect to get true fields of around 5.75 deg, and powers as low as 9x. This scope is superb for sweeping the skies – indeed - low to moderate powers are really where telescopes like this excel. They are also great for grab and go when you don't want to drag out larger heavier setups any time of the year – winter or summer. But I especially like scanning the summer milky way with a nice rich field telescope, and that's where scopes like the AT80 shine.



There was one significant drawback I found with the review sample – when it came time to take additional pictures for this first look article, I simply could not remove the dew cap. (I did get it off for some initial forum posts.) It does not appear to be cocked one way or the other, I tried twisting, pulling, and even tapping it gently to try and break it loose. I even tried disassembling the telescope to press/tap it out from the inside – and I still couldn't get it off. It's just too tight of a fit. While I'm reasonably sure this is a fluke, it's a bit disconcerting just the same.

Aside from this one incident, this looks to be a decent, inexpensive entry in the rich field telescope category and one well worth your consideration.

