

# ASTRO-PHYSICS

## 305mm F3.8 Riccardi-Honders Astrograph

### History of the Riccardi-Honders Design

This telescope is the first of its kind. The design of the Astro-Physics 305mm f3.8 Astrograph is based on Klaas Honder's original idea of a fast optical system using a crown glass objective and meniscus correcting mirror in a Newtonian configuration. By adding a secondary mirror and field lens, Italian designer Massimo Riccardi was able to design an ultra-fast astrograph using only crown glass elements.

### Astro-Physics Version

The Astro-Physics design is a modification of the Riccardi-Honders. It features diffraction-limited performance over a huge 3-degree field, which is ideal for capturing large faint nebulae over a wide wavelength range. The design has essentially perfect color correction from 400 to 1000 nanometers (UV to IR), is fully corrected for coma, astigmatism and field curvature. Multi-coatings on all optical elements ensure very high contrast images. The primary meniscus mirror has a rear reflection surface. This means that the reflective surface has almost no scatter, and it will not degrade over the years due to exposure from the air like an ordinary front surface mirror. This type of mirror is used in the Swedish Solar Telescope sited in the Canary Islands.

### Specifications

Clear aperture	12 inches, 305mm
Secondary obstruction	5.9 inches, 150mm
Focal length	45.6 inches, 1159mm
Focus range	1.15 inch, 29mm
Focal ratio	F3.8
Field size	3.0 degrees – 60mm circle
Resolution	0.375 arc seconds
Size	14" diameter x 21" long, with added 4" focuser length
Weight of tube w/o dewcap	65 lb., 29.5kg., dewcap 6 lb, 2.7kg
Diameter of corrector cell (to fit solar filter)	14.50", 368.3mm
Finish	Black anodized cells, pebble white finish
Mirror coating	96% enhanced and protected aluminum
Corrector coating	Broadband multi-coatings both sides

Price not determined