



Photographic Reducing Coma Corrector (PRCC) User's Manual



What's Included

1. Photographic Reducing Coma Corrector (PRCC)
2. M48 anodized aluminum thread on dust cover for camera side
3. 2" push on plastic dust cover for telescope side

Specifications

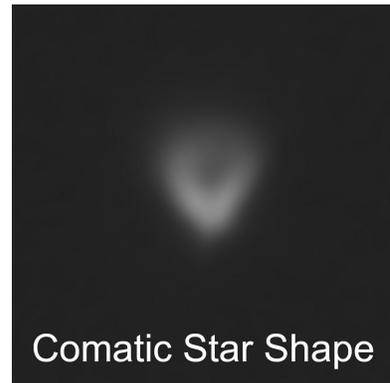
Model Number:	PRCC
Focal Reduction Factor:	0.95x
Corrected Image Circle:	28mm (APS-C)
Focal Ratio Range:	f/3-f/6
Back Focus:	55 mm
Camera Side Threads:	M48 x 0.75
Filter Cell Threads:	2" Mounted (M48 x 0.75)
Size:	2" Focusers
Diameter:	50.75 mm
Height:	81mm
Weight:	9.3oz
Materials:	Anodized Aluminum, Glass

Introduction

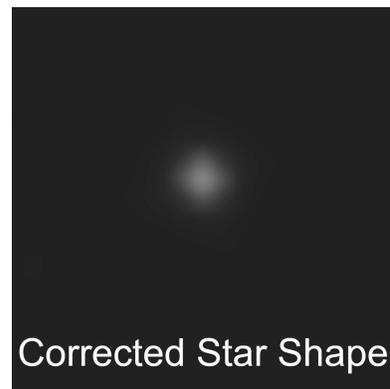
The Apertura Photographic Reducing Coma Corrector is a wide-field three element paraboloid field corrector. Newtonian telescopes naturally produce a comatic star image off axis, as seen in the right hand image. This is undesirable and should be corrected for when imaging with a Newtonian telescope of f/6 focal ratio or less.

The PRCC was designed to be used with the Apertura CarbonStar Imaging Newtonian, though it will work with other telescopes on the market, from f3 to f/6. This manual will cover how to use the PRCC with the Carbon Star Imaging Newtonian.

The Apertura Photographic Reducing Coma Corrector has a well-corrected and illuminated image circle of 28mm, which makes it perfect for sensors up to APS-C. It offers a 0.95x reduction which makes the f/4 Carbon Star telescope operate at f/3.8. When using the PRCC we see up to a 10% increase in signal per pixel on an f/4 system due to the 0.95x reduction, as calculated by the increased arc-second per pixel and verified through real world testing; see graph for as tested results.

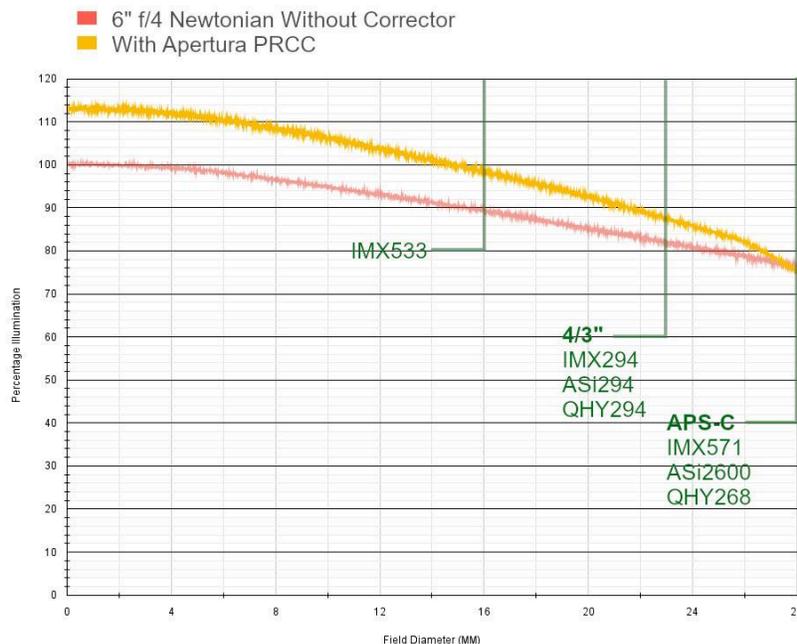


Comatic Star Shape



Corrected Star Shape

Apertura Photographic Reducing Coma Corrector (PRCC)
6" f/4 Newtonian Field Illumination
(normalized to maximum value)



Back Focus

Sub-aperture correctors, like field flatteners, coma correctors, and focal reducers, have a specific working distance built into their design. In the astronomy hobby, we call this back focus. The most standard distance is 55mm. Most DSLR cameras with a T-ring occupy 55mm back focus, and most cooled dedicated astronomy cameras are set up for 55mm of back focus.

The Apertura PRCC has a back focus of 55mm and an M48 mounting thread. This makes attaching your camera to the M48 threads on the Apertura Photograph Reducing Coma Corrector a breeze.

Focusing

When using this PRCC with the Carbon Star 150mm Imaging Newtonian, **the telescope will focus around the 20mm mark** on the focuser's drawtube. This is just a starting point but should allow you to see stars through the telescope upon the first exposure, allowing you to easily make small adjustments to the focus position and start imaging!



Attaching a Filter

A 2" mounted astronomy filter can be attached to the bottom threads of the coma corrector. To attach the filter simply remove the coma corrector from the telescope's focuser, thread the filter in place on the bottom of the coma corrector, and reinstall the coma corrector into the scope.



Warranty

The Apertura Absolute Warranty provides two years of coverage against product defects. After the initial two-year warranty expires, this product qualifies for Apertura's Three-Year Accident Replacement Program. In addition, the Apertura Absolute Warranty is transferable! It is important to keep your original receipt and the product's original boxes and packaging, should you need to make a claim