Thank you for buying the Astro-Tech 2” Coma Corrector and field flattener for f/3 to f/6 Newtonian reflectors.

The coma corrector has three components: the lens assembly, a T-Mount adapter for using the coma corrector with DSLRs and CCD cameras having a standard female T-thread opening in the camera face plate, and a 2” barrel with compression ring eyepiece holder for visual use.

The coma corrector’s 2” lens assembly barrel inserts directly into your scope’s 2” focuser drawtube. A safety groove machined into the lens assembly barrel engages the thumbscrew or compression ring of your focuser to act as a safety stop. This prevents your coma corrector and camera or eyepiece from falling to the ground should the thumbscrew or compression ring accidentally loosen during use. The scope-side end of the lens assembly barrel accepts standard 2” filters.

To use the coma corrector with DSLRs and those CCD cameras that have a nosepiece that can be unscrewed to expose female T-threads for camera connection, the supplied standard T-2 (42mm x 0.75mm thread pitch) male thread T-mount adapter threads onto the camera side of the coma corrector lens assembly. This lets you use an optional standard T-ring to connect a DSLR camera to the coma corrector. It also allows direct connection to many CCD camera and color filter wheel combinations.

Optimal spacing from the last lens surface of the coma corrector to the imaging sensor of your camera is 75mm (73.5mm from the shoulder of the lens assembly as shown in the next column, and 67mm from the shoulder of the T-mount adapter). This spacing is designed for imaging with a DSLR camera connected to the coma corrector by a T-ring.

This 75mm spacing is not a tight tolerance. If it is kept within 2-3mm (+/-0.1”) of the 75mm point, there should be no notable change in visual or imaging performance. This assumes that the system is refocused as a whole for the best focus once the Coma Corrector is in place. That refocusing might shift the Coma Corrector inward or outward from the nominal position by as much as ~5-10mm (~0.25-0.5”).

The spacing from the front plate of a CCD camera’s filter wheel/camera train to its imaging chip will vary, depending on the camera. You may have to add optional third-party T-thread spacers to position your camera’s imaging chip at the appropriate 67mm distance from the shoulder of the T-mount for peak performance, depending on the number of imaging components used and their spacing requirements. Some experimentation will be needed to optimize the position for your particular combination of camera, filter wheel, etc. Exact spacer thicknesses are not as important as proper collimation of the telescope and refocusing for best focus with the Coma Corrector in place.

To use the reducer with eyepieces, thread the 2” eyepiece compression ring adapter onto the lens assembly (without the T-mount adapter). An optional 2” to 1.25” adapter can be added, if desired. Optimal spacing from the shoulder of the 2” eyepiece adapter to the image plane is 26.5mm. You may have to add a 2” extension tube to position your eyepiece focal plane at the coma corrector focal plane.

Set-up for T-thread Camera Connection

| Lens Assembly | 73.5mm optimal spacing (from lens assembly shoulder to camera imaging chip) |
| T-Mount Adapter | 67mm optimal spacing (from shoulder of T-mount adapter to imaging chip) |

Set-up for 2” Eyepiece Use

| Lens Assembly | 73.5mm optimal spacing (from lens assembly shoulder to image plane) |
| 2” Eyepiece Holder without T-Mount Adapter | 26.5mm optimal spacing (from 2” eyepiece holder to image plane) |