The Celestron Reducer/Corrector Lens for SCT Telescopes (#94175)

INTRODUCTION

Imagine having two telescopes in one — a long focal length instrument for lunar and planetary work and a short focal length scope for deep sky observing and astrophotography. With the Celestron Reducer/Corrector Lens that's exactly what you get. Designed specifically for Celestron Schmidt-Cassegrains, this unique lens reduces the focal length and f/ ratio of your telescope by 37 percent turning your long focal length telescope into a fast, short focal length instrument. An f/10 instrument now works at f/6.3 while an f/11 instrument works at f/7. For visual use this means you get lower power with the same eyepiece and a wider field of view. Photographically you also get a wider field and much shorter exposures.

The #94175 Reducer/Corrector Lens is not compatible with Celestron EdgeHD optical systems.

In addition to reducing the focal length and f/ratio the Celestron Reducer/Corrector Lens also reduces field curvature significantly so you get a flatter, well corrected field.

The advantages of the Reducer/Corrector Lens are not limited to celestial photography alone. For terrestrial photography you'll find the faster f/ratio allows you to use slower film or shoot in lower light level situations and still properly expose your subject. And, this fully multi-coated lens provides maximum light transmission with near full-field illumination.

INSTALLATION

The Reducer/Corrector Lens is easy to install:

1. Remove all the accessories from the rear cell of your SCT telescope. If you have a C11 or C14, remove all the accessories, but leave the reducer plate attached to the rear cell of the telescope.

2. Thread the Reducer/Corrector Lens onto the rear cell of the telescope (or the reducer plate of the C11 and C14) by rotating clockwise until tight.

3. Thread the desired accessory (i.e., T-Adapter, 1-1/4" Visual Back, Star Diagonal, or Off-Axis Guider Body) onto the Reducer/Corrector Lens.

The Reducer/Corrector Lens is now installed and ready for use.

USING YOUR REDUCER/CORRECTOR LENS

There is no change in the basic operation of your telescope with the Reducer/Corrector Lens installed. However, because of the shorter focal length the magnification and actual field are different for any given eyepiece. Remember this when figuring magnification and actual field.

Focus your telescope as usual (i.e., turning the focus knob until the image is sharp). The sharpest possible focus for a given eyepiece is about 3 to 4 counterclockwise turns of the focus knob from the best focus point without the Reducer/Corrector lens installed.

Although the Reducer/Corrector Lens diminishes the small amount of field curvature common to all Schmidt Cassegrain telescopes, it does not completely eliminate it. For low power visual use, the sharpest possible images across the majority of the field is obtained by first focusing on the stars at the center of the field. Make sure you come into sharp focus by turning the focus knob counterclockwise. Once sharp, turn the focus knob approximately 1/12th of a turn counterclockwise.

For optimum photographic focus, obtain the sharpest possible focus in the center of DSLR view finder. Make sure you come into sharp focus by turning the focus knob counterclockwise. Once the image at the center is sharp, rotate the focus knob 1/24th of a turn counterclockwise.

Because the field of view is very close to flat, you can leave the Reducer/Corrector Lens in place at all times. High power views will provide flatter fields all the way to the edge, both visually and photographically. If you plan on high power eyepiece projection photography, you may consider removing the lens.

NOTE: Due to the short focal length of the telescope

with the Reducer/Corrector Lens attached, you should NOT use an eyepiece longer than 35mm focal length.

CARE AND MAINTENANCE

One added side feature of the Reducer / Corrector Lens is that it acts as a dust seal for the telescope, preventing various contaminates from entering the optical system. If you leave the Reducer / Corrector Lens on the telescope, be sure to replace the plastic lens cover on the lens when not in use. This will minimize dust build-up on the lens itself. If the lens is removed from the telescope, both plastic covers should be replaced.

When handling the Reducer / Corrector, be careful not to touch the lens itself. Failure to do so may result in smudging the lens.

Special care should be taken when cleaning any optical instrument so as not to damage the optics. If, over time, you do experience dust build-up, use a can of pressurized air to remove it. This is done by removing the caps from both sides of the diagonal and spraying the stream of air for approximately 2 to 4 seconds on each side of the lens.

Further cleaning, if necessary, can be done with cleaning solution and white tissue. You can use commercially-made camera lens cleaner, or mix your own. A good cleaning solution is isopropyl alcohol mixed with distilled water. The solution should be 60% isopropyl alcohol and 40% distilled water.

Apply the cleaner to the tissue and apply to the lens. Remove residue cleaning solution with a clean tissue.