

# V-Block Filter

#5595, 1.25" version

#5597, 2" version

The Orion V-Block filter allows you to observe bright objects with refracting telescopes without the annoying effects of chromatic aberration. Chromatic aberration literally means color distortion. Whenever light passes through one material to another, light of different wavelengths (color) is bent by different amounts. This is a problem that plagues refractor-type telescopes, since light passes through both air and glass to form an image. Bright astronomical objects emit a spectrum comprised of many different wavelengths of light, so each wavelength will be bent by a slightly different amount when passing through a lens. This results in each color of light reaching precise focus at a slightly different point. The most common visual effect of this is a purplish halo around the object being viewed.

The V-block filter solves this problem by filtering out the colors most commonly seen as a result of chromatic aberration. With the V-block in place, you see bright objects without the distracting purple halo, and get the added benefit of overall improved contrast.

## Using the V-block Filter

To use the V-block filter you will need to thread it into a 1.25" (#5595) or 2" (#5597) eyepiece that can accept threaded filters. Any Orion eyepiece can accept such filters. Simply thread the filter into the eyepiece barrel until it is finger tight. You may also



"stack" filters by threading another filter into the bottom of the first.

After threading the filter into the eyepiece, place the eyepiece into the telescope and bring it into focus. You should now be able to observe without the effects of chromatic aberration. Be aware, however, that the filter imparts a slight yellow-green tint to objects. The filter was designed with the overall color balance in mind, so the bit of added tint should not detract from the view.

The V-block filter should only be used when observing bright objects, such as the Moon, the bright planets (Venus, Mars, Jupiter, and Saturn) or bright stars. The V-block will not have any effect when observing faint objects, such as deep sky objects, because they do not emit enough light to cause visible chromatic aberration.

## Cleaning and Maintenance

When not in use, the V-block filter should be kept in its original padded case. Given proper care and storage, the filter should last a lifetime. Should the filter need cleaning for any reason, use the following directions to clean the filter without damaging it.

Any quality optical lens cleaning tissue and optical lens cleaning fluid specifically designed for multi-coated optics can be used to clean the glass surfaces of your filter. Never use regular glass cleaner or cleaning fluid designed for eyeglasses.

Before cleaning with fluid and tissue, blow any loose particles off the surface with a blower bulb or compressed air. Then apply some cleaning fluid to a tissue, never directly on the optics. Wipe the lens gently in a circular motion, then remove any excess fluid with a fresh lens tissue. Oily fingerprints and smudges may be removed using this method. Use caution; rubbing too hard may scratch the glass.

