

(NPR-2073) 0.8x Reducer for NP Telescopes

Introduction

This 0.8x focal reducer was specifically designed to be used with the NP127is and NP101is. While it can also be used to enlarge the field of other Tele Vue Petzval type telescopes, it will not provide additional correction for those models. This reducer was designed to minimize vignetting with camera sensors up to 43mm diagonal (Full Frame) and is a replacement for the previous 0.8x reducer, the NPR-1073, which worked best up to APS-C sensors. When combined with a Tele Vue Petzval type telescope, it reduces the focal length of the telescope by 20% and makes it that much faster. This increases the telescope's field of view by 25%.



Objective Side

For Imaging System scopes, install an I.S. Imaging Adapter to the front of the reducer. If you find that the drawtube extends more than 1.5 inches in order to reach focus, install spacers between the reducer and I.S. adapter. For use on other Tele Vue Petzval model telescopes with 2-inch focusers, use the RAD-1074 Adapter instead of the I.S. Imaging Adapter. Note that when used with 2" focusers there will be increased vignetting for full frame sensors because of the inner diameter of the 2-inch barrel.

Camera Side

The reducer has a nominal Back Focal Length (BFL) of 68mm, measured from the reducer rear shoulder as shown in figure 1. This BFL will work best for most color imaging applications such as OSC and DSLR full-frame and crop sensors, and in monochrome with either LRGB or HST palette filters (but only with crop sensors). Imaging with DSLRs is only possible with this BFL because 68mm is large enough to support the 55mm needed for DSLRs. For DSLR use, install a 1/4 inch I.S. spacer (TLA-0250) and then a camera adapter such as the CWT-2070 or NWT-2073.

In the special case of imaging in full-frame monochrome with either LRGB or HST palette filters, a BFL of 50mm should be used, as shown in figure 2. This BFL includes a +1mm focus shift required for a single 3mm filter. In this configuration, star images in isolated wavelengths focus sharper at the very edges of the field than they would have in color cameras.

