2“ Herschel wedge

with FastLock Eyepiece adapter

For visual and Photographic Sun observation
in white light

Instructions • Design
Safety information

APM Telescopes • Quierschieder Weg 38 • 66280 Sulzbach • GERMANY • Phone: +49 (0) 6897 92 49 29-0 • Fax: +49 (0) 6897 92 49 29-9
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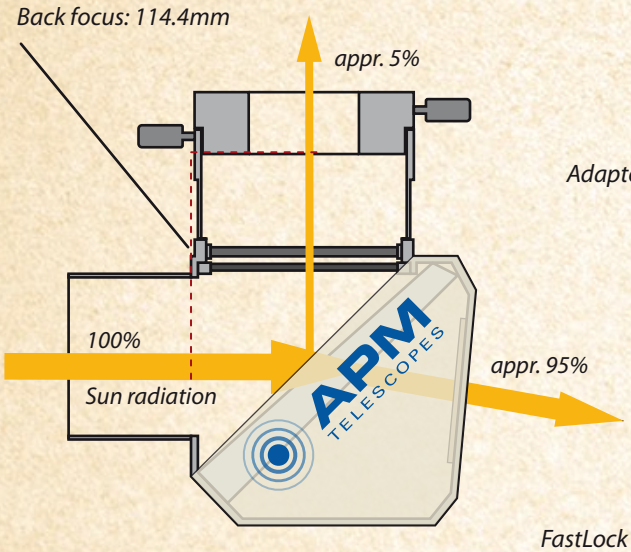
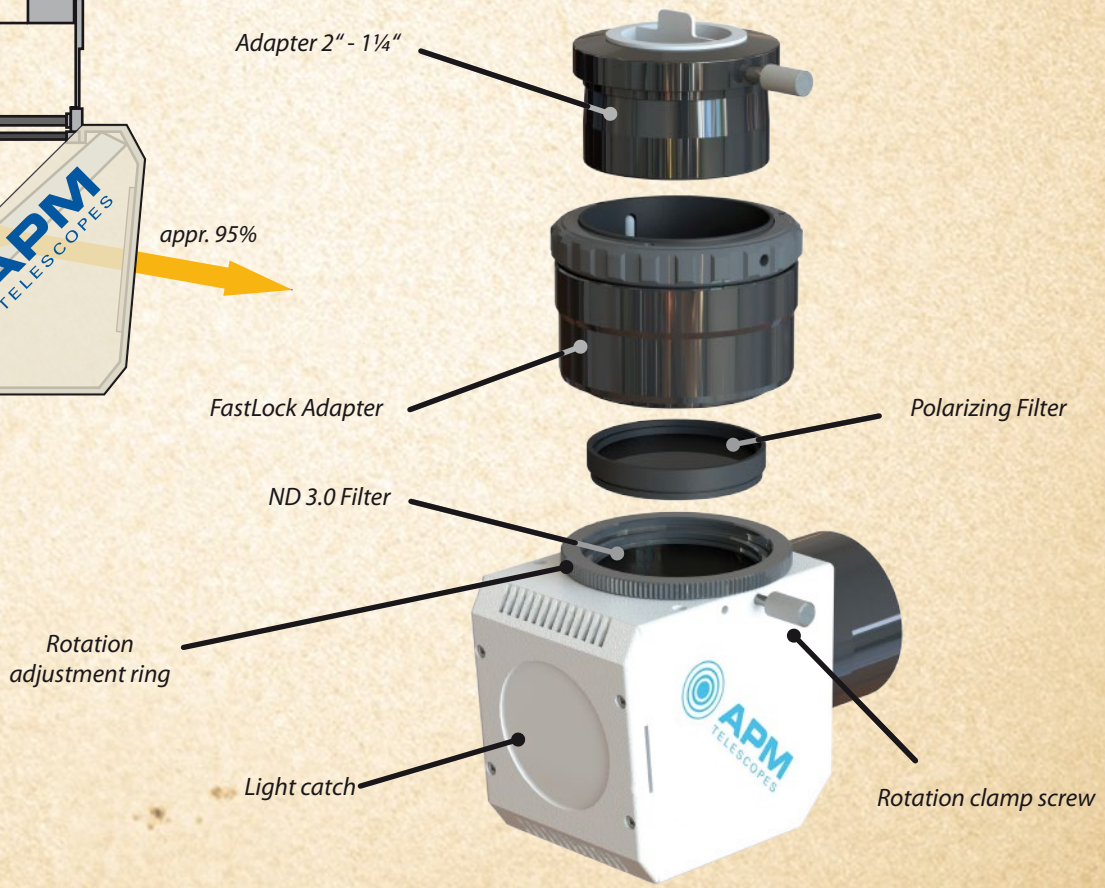
The APM 2" Herschel wedge offers a safe method for visual and photographic observation of the sun in white light. Due to the special reflection element inside, approx. 95% of the light and heat energy from the entering light path is switched off. The special ceramic element (light catch) behind this Herschel element absorbes the residual heat and light energy. A safe observation now is provided. Since the light radiation is still too great, a neutral density filter ND 3.0 (0.1% residual transmission) and a polarization filter (2", changeable) is installed for fine adjustment of the final image brightness.

Never use the Herschel wedge without a visual filter! The radiation is still harmful to your eyes!





Due to the abstinence of reflective surfaces, Herschel wedges showing a higher-contrast, more detailed image of the sun than filter foils or glass sun filters. The direct comparison is immediately visible, granulation and shading of the umbra and penumbra areas around sunspots are clearly better contrasted, flare areas stand out very nicely and three-dimensionally. Also photographically the results with the APM Herschel Wedge are definitely better!

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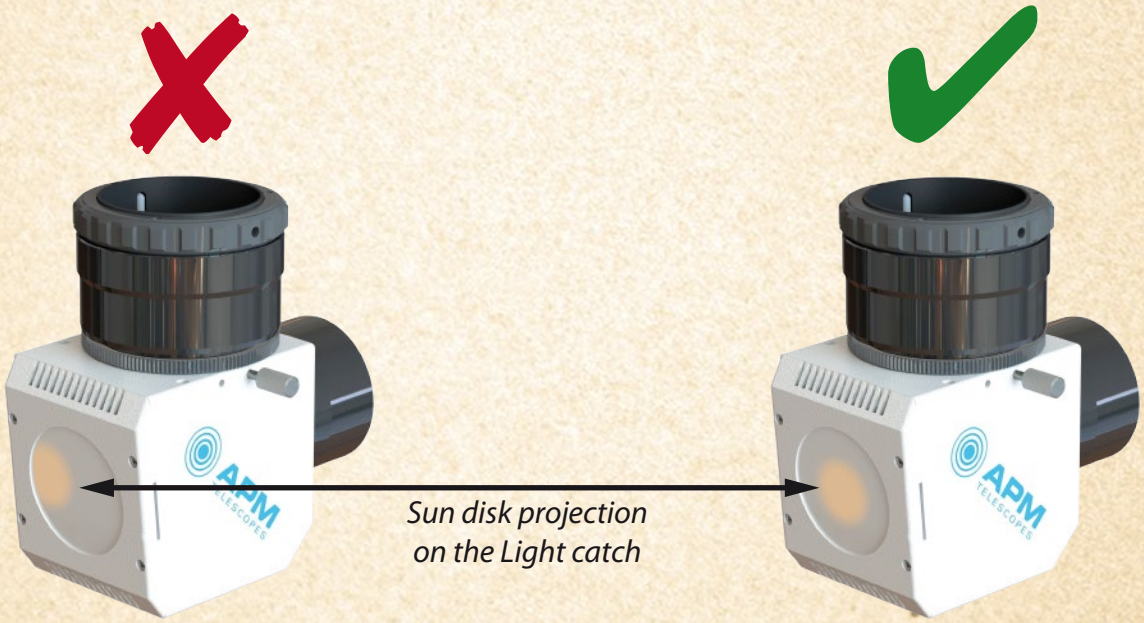
Usage:

The Herschel wedge is only suitable for uncemented refractor lenses without correctors / reducers / flatteners in the light path! Additional optical components in front of the Herschel wedge could overheat and be destroyed.

Connecting the wedge and centering the Sun image

The Herschel wedge can be inserted in the 2" focuser, the sun should be outside of the field of view beforehand. Moving to the sun should be done with the lens cap on the front. A special sun finder scope can be used as an aid. Finder scopes and Guiding scopes must be covered before moving to the sun, risk of destruction! When centering the sun, you can also use the light spot on the light catch for orientation; the light catch can be used as a "sun finder“.



Adjusting the image brightness

The built-in polarization filter allows to adjust the brightness of the image continuously in a certain extend. To do this, loosen the rotation clamping screw slightly and turn the lower knurled ring until the image (e.g. without the eyepiece) appears sufficiently subdued. If the image is still too bright for visual observation, we recommend using additional ND filters with less attenuation (ND 0.9 or ND 1.8, in example). Depending on the size of the lens, different neutral filters are useful in order to adjust the image brightness to the position of the sun, the transparency and the recording camera / viewing habits.

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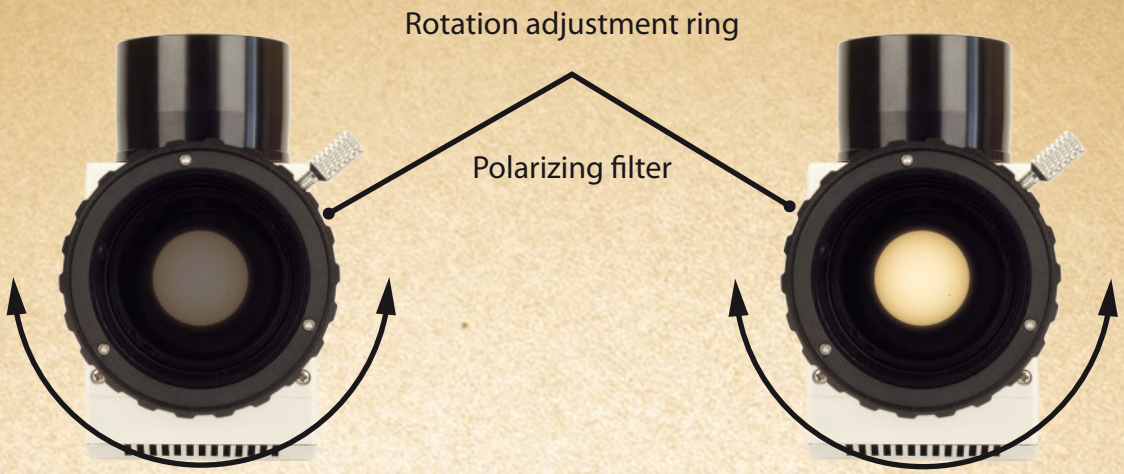
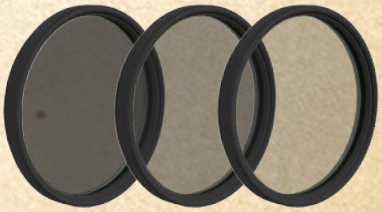


A photographic adjustment of the image brightness can be done in the grabbing software by setting the gain and exposure time values. It makes sense to use low gain values and exposure times that are as short as possible in order to keep the influence of atmospheric seeing as low as possible. The recording camera can be used with an adapter 1¼" - 2" (with the corresponding socket adapter) or with adapters 2" - M42. Most cameras have an M42x0.75 thread connection, you will find the appropriate adapters in our range of accessories.

To further increase contrast and especially to eliminate contrast losses, we also recommend using a narrow-band green filter. A special solar continuum filter with an FWHM of 10nm at approx. 540nm further improves the contrast and resolution of most refractor lenses.

Focal adapter 1¼“ and 2“ to T2 thread

Solar Continuum Filter



Neutral Density (ND) Filters

Data:

Measures: 117 x 63 x 127mm, Weight: 830g
Optical Lenght (Back focus): 114.4mm

Delivery:

APM 2“ Herschel wedge, FastLock adapter 2“, integrated N.D. 3.0 Filter, MC, 2“ Polarization filter, unscreweable, Sleeve adapter 2“ - 1¼“, Transport case

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