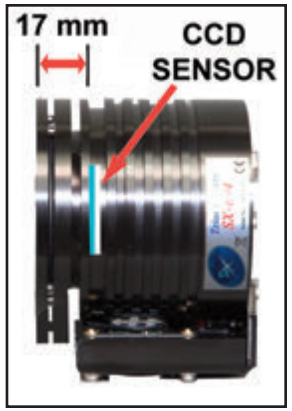
ATTACHING A CCD CAMERA



Unlike DSLR cameras, CCD cameras do not use the standard DSLR spacing. Each CCD camera is different and most have a much shorter distance from the attachment thread to the sensor. To compensate for this a longer set of extensions must be used when attaching the shorter camera to the SFFR130.

First, check with the CCD manufacturer to determine both the precise back focal length and the attachment thread size used on this camera. Please note: If your camera system uses a separate filter wheel and/or autoguider the back focal length will be increased.

Example: The Starlight Xpress SV694C camera shown above has a back focal length of only 17 mm. So when using this camera you will need 52 mm of extension (69 mm - 17 mm sensor depth in the camera). Also, since the camera uses a standard M42 t-thread, an adapter will be needed to convert the astrograph's M69 thread to an M42 thread.

Now if you are using the highly recommended Starlight Xpress SV694 mono camera with mini filter wheel, filters and guider the effective back focal length of the camera increases from 17 mm to 55 mm. So you will need only 14 mm of extension (69 mm - 55 mm).

In this case we suggest using three parts that will provide the proper spacing and thread size for this camera:

1. The M69 - M48 Adapter: #**SFA-M69M48F48-003.**

2. A 1 mm spacer ring: #**SFE-M48-001.**

3. The M48 - M42 Adapter: #**SFA-F48M42-010.**

NOTE: These parts are included with the SX version of the SFFR130.

STELLARVUE ®

SFFR130-3FT
FIELD FLATTENER/REDUCER

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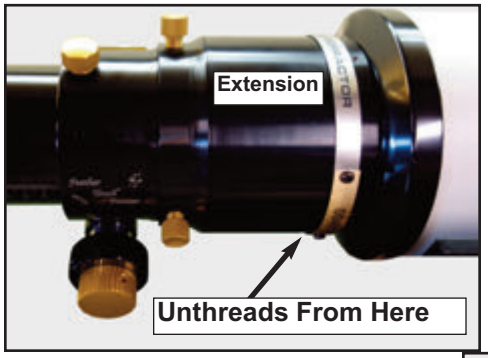
The SFFR130 focal reducer/field flattener is designed for use with the SVA130EDT refractor. It has an M82X1 attachment thread and an M69X1 threaded adapter. The back focal length of the SFFR130 is 69 mm. Stellarvue stocks a large inventory of adapters and spacers allowing the SFFR130 to be used with a variety of cameras.

USING THE SFFR130

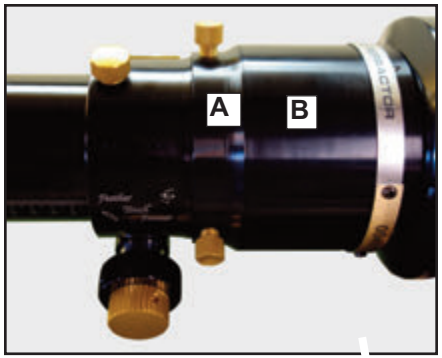
In order to use the large reducer flattener, it is necessary to move the focuser 60 mm closer to the objective. This is easy accomplished by simply unscrewing the focuser and extension tube, removing the extension tube from the focuser and then threading the focuser back into the telescope without the extension. No tools are needed to accomplish this.

Both the focuser and extension tube use matching threads and can be easily unthreaded by hand.



STEP 1

With the telescope firmly attached to a mount, hold onto the extension tube with both hands and turn it counter clockwise to unscrew the extension and focuser from the telescope.



STEP 2

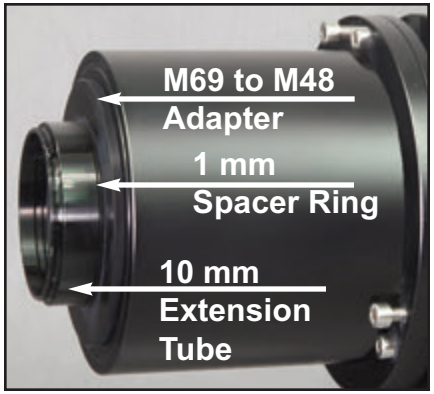
Unthread the extension (B) from the focuser (A).

STEP 3

Thread the Focuser to the telescope as shown above.

ATTACHING A DSLR CAMERA (CONTINUED)

The best performance is obtained when the cameras ccd sensor is exactly 69 mm behind the SFFR130. If you are using a Canon or Nikon DSLR camera with our oversized M48 t-ring attached, the CCD Sensor will be 55 mm inside the camera. This is referred to as the camera's "back focal length." Since the best performance is obtained with the camera sensor 69 mm behind the SFFR130, you will need to attach an extension tube that spaces the camera 14 mm behind it. The 14 mm extension and the 55 mm sensor depth in the camera will place the camera's sensor exactly 69 mm behind the SFFR130 as required.



Here is the SFFR130 with an M69 - M48 mm adapter, a 1mm spacer ring and a 10 mm extension tube installed. This converts the SFFR130's M69 thread to an M48 thread and spaces the camera 14 mm behind the astrograph. This is what you will need when imaging with a DSLR camera with a 48 mm t-ring. Stellarvue stocks a large inventory of adapters and extensions. Call us and we will make sure you obtain the correct adapters needed to produce outstanding astro images. Here are the four parts you will need to attach a DSLR camera to the SFFR130:

1. Stellarvue 48 mm t-ring. Use the **#SFFTCANON** for Canon DSLR's and the **#SFFTNIKON** for Nikon DSLR's.

2 The M69 - M48 Adapter: **#SFA-M69M48F48-003.**

3. A 1 mm spacer Ring: **#SFE-M48-001.**

4. The 10 mm long, M48 extension: **#SFE-M48-010.**

NOTE: These parts are included with the DSLR version of the SFFR130.