Model 2 Direct Replacement Spider
Anti-Dew Heater Installation & Use

Rev 3/23

General Information

Having the anti-dew heater built into the secondary support eliminates the need to add wiring along the spider vanes, or attach a heater to the secondary mirror. The heated mirror holder is designed to uniformly warm the optic. The red LED on the face of the spider hub indicates when the heater is active. Your own wiring leading up to the spider connections should be fuse protected, though most commercial field battery power supplies have this feature built-in.

Installation

Direct replacement spiders with the anti-dew heater option include two custom-made insulating bushings for connection to the spider. Since the telescope tube is metal, the electrical connection to the spider must be insulated from the tube to avoid a short circuit. A typical external connection scheme is shown in **Figure 1**, though other methods are possible.

The **positive vane** (+) has a small red paint dot near the tip of the vane, and the **negative vane** (-) has a white dot. Use the two hook-up lead wires supplied with the kit. Install the lugs between the vane mounting screws and the black isolator bushings.

Figure 1

Protostar offers optional wiring harnesses to make most hook ups easier. Both RCA (p/n: HW-RCA) and phono plug (p/n: HW-PH55) style male connectors will interface with common heater controllers available on the market. See our website for more information.

Joining the Holder To the Spider

Fully extend the mirror holder's heater wire, and connect the micro-plug to the female plug on the spider (see **Figure 2**). The plug's polarity is not important. Push the wire into the holder body as you join the spider and holder. This connection is more easily made outside of the tube before the spider is installed.

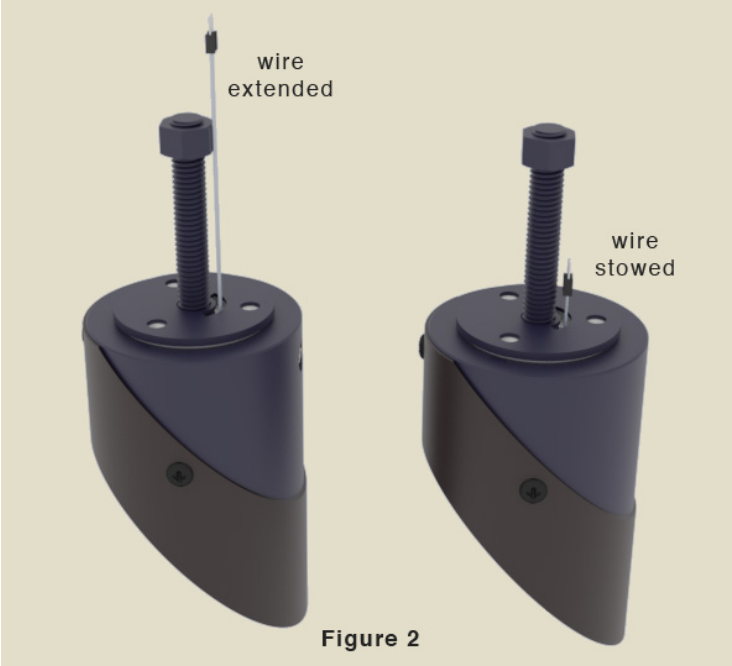

Figure 2

Using the Anti-Dew Heater In the Field

If conditions at your observing site indicate a possibility of dew, it's best to use the heater in a "preventative mode". Power the heater with 4-6 Volts DC (VDC) throughout the observing session. It requires a *very* small amount of power to prevent dew from forming.

If dew surprises you and forms, applying full voltage (about 13 VDC) will clear the dew within about 15 minutes without having to wipe the secondary mirror's optical surface. It's not recommended to leave the heater at full power during the observing session, as it can create subtle thermal currents in the optical path.

Protostar P.O. Box 368 New Albany, Ohio 43054 USA
614-375-3146 protostar@fpi-protostar.com