

Helio-STELLA Heliophysics Spectrometer Kit Build Sheet

Build Instructions

Step	Do this:	Done
1	Use a small sharp knife to cut the LED trace on the back of the AS7341 spectrometer module to disable the green LED on the front. (Fig. 1.)	<input type="checkbox"/>
2	Cut a piece of corrugated cardboard to 8.5 x 11" or a little larger.	<input type="checkbox"/>
3	Apply glue stick to the back of the layout sheet, then stick the layout sheet to the cardboard.	<input type="checkbox"/>
4	Cut the two holes marked on the layout sheet, through the sheet and the cardboard.	<input type="checkbox"/>
5	Apply pieces of double sided foam mounting tape to the back (flat side) of the modules. Trim the excess.	<input type="checkbox"/>
6	Stick the modules to their corresponding locations on the layout sheet.	<input type="checkbox"/>
7	Connect the modules using the cables provided. The cables are built so they only connect in one orientation. Don't force the connections. (Fig. 2.)	<input type="checkbox"/>
8	Slide the micro SD card into the slot on the back of the microcontroller.	<input type="checkbox"/>
9	Click the power button to turn the Helio-STELLA instrument on. If it's already on, it's helpful to turn it off, wait a second, and turn it on again.	<input type="checkbox"/>
10	The instrument should start up, showing the display screens in the boot cycle. See the operating instructions for more information on the screens.	<input type="checkbox"/>
11	Cut the ping pong ball in half, leaving some tabs for taping it down. (Fig 3.)	<input type="checkbox"/>
12	Position the ping pong ball over the AS7341 spectral sensor, and tape it down at the edges or on the tabs. Don't run tape over the surface of the ping pong ball, to keep the tape from affecting the light reaching the sensor. (Photo TBD)	<input type="checkbox"/>
13	Place the instrument in direct sunlight. Leave it running throughout the eclipse!	<input type="checkbox"/>

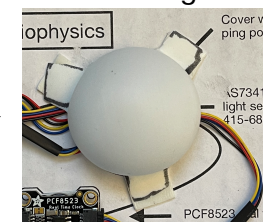
NASA Heliophysics 20240304 Paul Mirel

Figure 1.



Cut this trace to disable the green LED

Figure 3.



Cut the ping pong ball in half, leaving mounting tabs

Figure 2.

