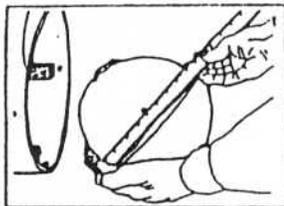


## Aligning The Diagonal



**WARNING! HANDLE MIRRORS WITH CAUTION. SEE PAGE 1.**

A small sticker or decal should be placed at the exact center of your mirror (see frame 102, page 25). This sticker is used to help in the alignment of both the objective and the diagonal.

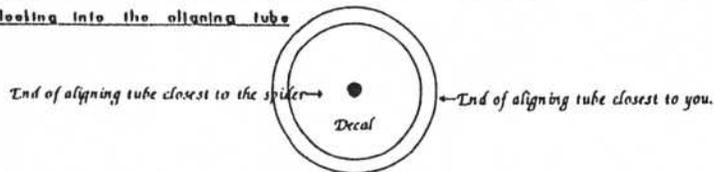
1) Set up the telescope (i.e. place the telescope, with the spider and objective installed, in the rocker.)

2) Adjust the spider in the tube in such a way that you can see the entire objective mirror reflected in the diagonal mirror. You should be able to see the **ENTIRE OBJECTIVE MIRROR**, not just a part of it.

3) Place a piece of metal tubing (about 6" long--the same width as the piece in which your eyepiece is nestled) inside the cardboard eyepiece tube, so that it protrudes out several inches. Now think of the two ends of this metal tube as **CIRCLES**.

4) When you look down the metal tube, the **CIRCLES** (i.e. the two ends of the tube) **SHOULD APPEAR CONCENTRIC**, AND THE **DECAL ON THE MIRROR SHOULD BE EXACTLY IN THE CENTER OF THESE CONCENTRIC CIRCLES**. You will see the three legs (shingles) of the spider reflected in the objective, but for now, ignore them.

View looking into the aligning tube



The way to get the alignment perfect is by fiddling with the position of the spider in the tube. When you have it just right, you can glue the spider in place. Apply a line of glue on either side of each shingle where it contacts the tube.

(Note: Before installing the spider you may wish to screw a small eye-hook dead-center into the 90 degree cut end of the wood block that supports the diagonal. After the spider is installed, another eye-hook may be screwed into the telescope tube, and a string may be tied between the two eye-hooks. This will protect the objective mirror if the spider is accidentally knocked out.)

## Aligning the Objective

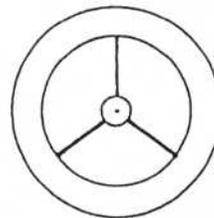
**Remember: Do this Indoors or in the shade!**

We have come now to the final step: aligning the objective mirror.

(We won't need the aligning tube any more.)

To align the objective mirror, we turn the tailgate bolts till the reflection of the eye moves under the decal.

**NOTE:** If the alignment must be done in the dark, you may have to shine a light on your face in order to see the reflection of your eye in the objective.



Through the eyepiece hole, it should look something like this

**NOTE:**

Keep the mirror pulled back against the tailgate during alignment

If you have a friend to turn the bolts, you can watch which way the mirror moves. It is more difficult if you are doing it by yourself.

**As a reward for your pains, your telescope is now completed and ready for public service!**