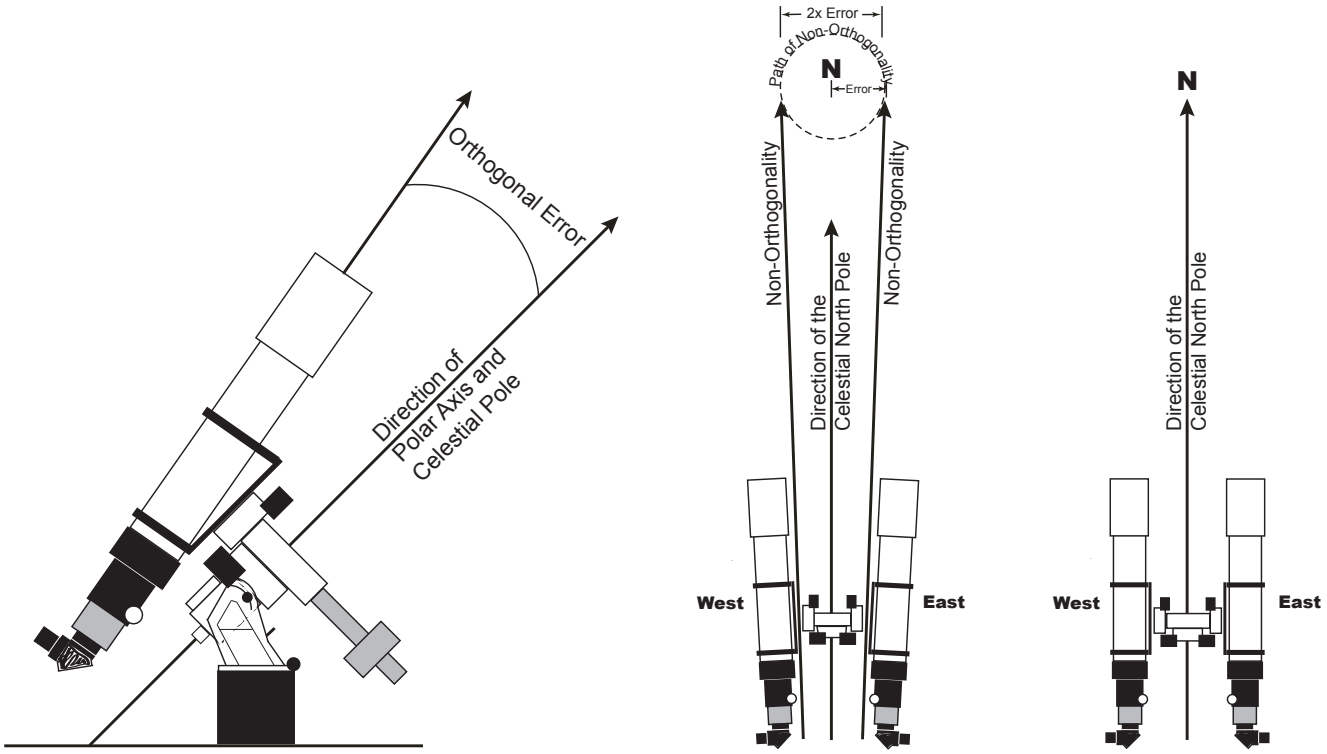
ORTHOGONALITY CORRECTION



Traditionally, correcting orthogonality (sometimes called “cone error”) involves meridian delays and flipping back and forth across the meridian to observe how far from image center that the star falls. This is time consuming and involves trying to remember whether you need to advance or delay the flip time in order to swap sides. Is it east side or west side?...advance or delay?...groan!

Here is a faster method that won’t make your head spin.

Step by step

- Do a GoTo to Polaris. The star will not be in the center (eyepiece or CCD image) if you have any orthogonality error.
- Put the star as close to center in Dec. with the N-S buttons. You will find that it will not move with R.A. with the E-W buttons.
- Push a bit on the telescope tube in the R.A. direction, you will see the star move either toward or away from the center.
- Determine which way the tube must move to end up toward the center.
- Loosen either front or rear scope rings and slip a thin shim under the rings (.005” to .025” as needed).

With the right amount of shim, you can get Polaris exactly in the middle in the R.A. direction while using the N-S buttons to adjust the Dec. direction. You’ll be able to go from one side of the meridian to the other and put every object on the chip or in the eyepiece. Elapsed time...about 10 minutes!