Polar Alignment   *for deep sky photography.*

The **declination drift method** helps you make a precise polar alignment of your telescope mount, that means to point its polar axis to the celestial pole. Although this method is simple, it is time consuming when first attempted. Hence, try it after a rough polar alignment is done.

YOU NEED: TWO STARS with DEC=0°

You need to **choose two bright stars** near the celestial equator (**0° declination**).
One star should be near the eastern horizon and the other star due south near the meridian.
While monitoring a star on the meridian, any misalignment in the east-west direction is revealed.
While monitoring a star near the eastern horizon, any misalignment in the north-south direction is revealed. **Note: You will monitor the drift of each star one at a time and in declination only!**

YOU NEED: an illuminated reticle

You need an illuminated reticle ocular to recognize any drift. A Barlow lens helps to reveal any drift faster. When looking due south, insert the diagonal so the eyepiece points straight up. Insert the cross hair ocular and rotate the cross hairs so that one is parallel to the DEC axis and the other is parallel to the RA axis. Move your telescope manually in R.A. and DEC to check parallelism.

DO THIS:

1 step: Azimuth
Choose a **star in the south** at DEC=0º ± 5° and approx. 30' of RA from meridian.
Center the star in the FOV and monitor the drift in DEC.

  · If the star drifts south ☼ ↓ veer the polar axis to the west ◄=

  · If the star drifts north ☼ ↑ veer the polar axis to the east =►.

Using the mount's azimuth adjustment knobs, adjust the polar axis to eliminate all the drift

2. step: Altitude
Move to the **star near the eastern** horizon with Alt=20° and DEC=0º ± 5°.
Center the star in the FOV and monitor the drift in DEC.

  · If the star drifts south ☼ ↓ elevate the polar axis **▲ in altitude**

  · If the star drifts north ☼ ↑ lower the polar axis**▼ in altitude**

REPEAT:

Since the altitude-adjustments interact with the azimuth-adjustments ever so slightly. Repeat the procedure again to improve the accuracy, checking both axes for minimal drift.

DEC: Declination, **Alt:***Altitude,* **RA:***Right Ascension*