# Position Angle Scales for 1.25" Eyepieces

① **Print this Page on Cardboard:** Print this PDF-File on a sheet of cardboard 1:1 without any page scaling.

② **Select the Scale for Your Instrument:** If you are using an astronomical telescope with an even number of reflections (e.g. a Newtonian), select the lefthand scale. If your instrument has an odd number of reflections (e.g. a Schmidt-Cassegrain with a star diagonal), select the righthand scale.
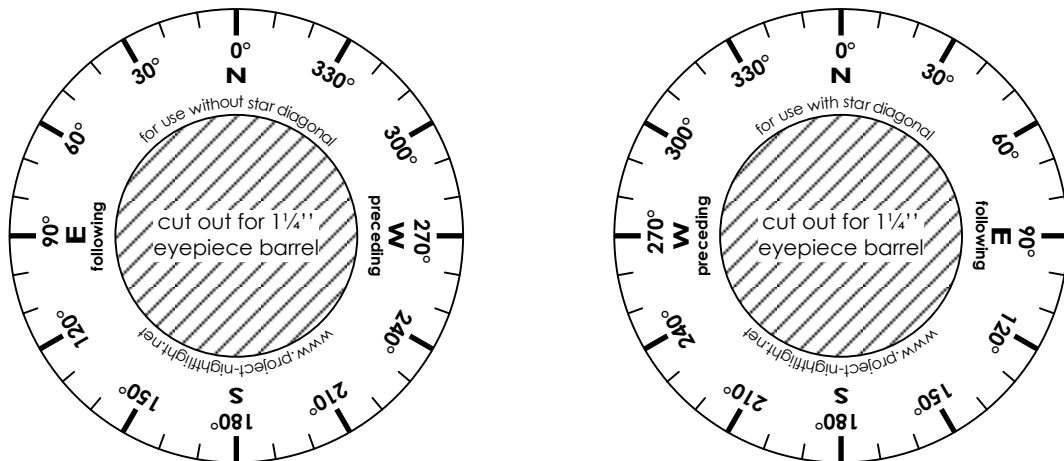
③ **Cut out the Scale:** Use a pair of fine scissors to cut out the selected scale as well as the marked area inside the scale. What remains is a cardboard ring with the scale printed on it.

④ **Insert the Scale between Eyepiece and Focuser:** The cut-out scale should fit snugly on the barrel of any 1.25" eyepiece. Insert the eyepiece with the scale in your telescope's focuser. Lock the eyepiece.

⑤ **Align the Scale:** To align the scale, put a star at the center of the vield of view. Turn the telesope's drive off until the star has drifted to the edge of the field, then switch the motor drive on again. Rotate the scale until W (=WEST) corresponds with the star's position. The position angle scale is now aligned and ready for use.

The position angle scale can be used for a broad range of applications:

Celestial Directions: The scale shows the orientation of the fundamental celestial directions (N, S, E, W) in the eyepiece's field of view. This can be useful e.g. to orient a star chart correctly.

Position Angle: The position angle of a double star or a comet's tail can be estimated to within 10 degrees by using the scale.

Planetary Rotation: The rotational direction of planetary features (e.g. clouds on Jupiter or albedo markings on Mars) can be determined. Planetary rotation always happens from „following" to „preceding" as indicated on the scale.

Lunar Occultations: Predictions for lunar occulations include a position angle value to indicate where the star will disappear or reappear at the lunar limb. For this application, the scale must be aligned with the lunar north and south poles.