

Worksheet on Parallax

Questions

1. A typical separation of the eyes is about 6 cm. If an object appears to shift by 10° when you cover one eye and then the other, what is the distance to the object?
2. Between 1830 and 1840 three astronomers, Bessel, Struve and Henderson measured the first annual stellar parallax. A star in **Cygni** appeared to have a parallax of 0.0001° thus enabling a first determination of the distance to a star. Calculate this distance in Astronomical Units (A.U.).
3. The annual parallax of the **Centauri Proxima**, the nearest star to the Sun, is measured to be 0.76 arcseconds ($0.76''$). Calculate its distance from the Sun in Astronomical Units.
Then find the same distance in parsecs by using the Small-Angle Formula $d=1/p$, where d is the distance in parsecs and p is the parallax angle in arcseconds.
4. Would it be more or less accurate to measure the parallax of a star from Neptune? Explain why.