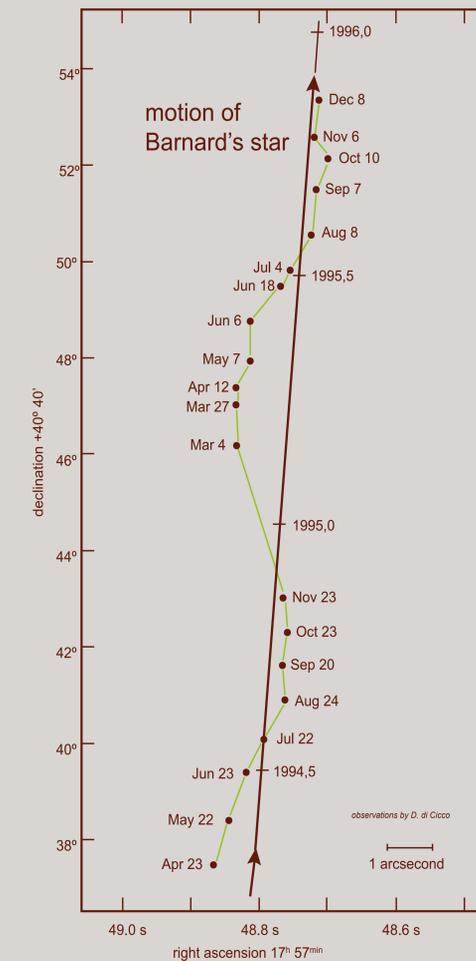


Stars move

300 years ago it was discovered that stars move relative to each other and the constellations slowly change their shapes.

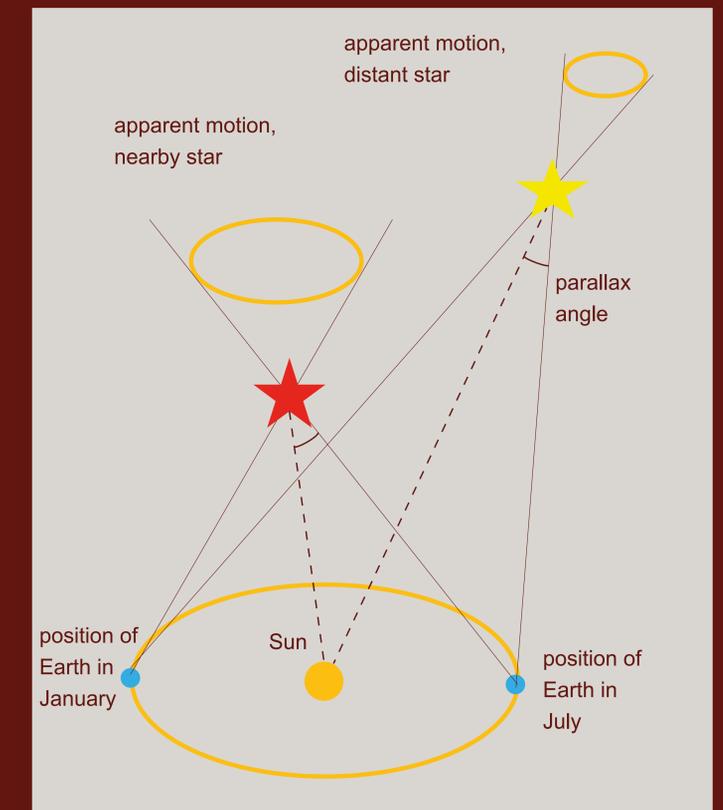


The images to the left show Barnard's star, which has the largest proper motion of all stars. It moves by 10.4 arcseconds per year and its parallax amounts to 0.55 arcseconds. Can you spot the star in the photos to the left?



Parallax

The annual motion of the Earth relative to the Sun causes stars to follow a small elliptical path in the sky. The size of the ellipse (parallax angle) tells us about the distance to the star. The smaller the parallax, the further away is the star.



Parallaxes are very small

The closest star has a parallax of only 0.74 arcseconds. A star near the centre of our Galaxy has a parallax of about 0.0001 arcseconds. In order to measure such small angles we need an instrument like Gaia.

The first credible parallax was measured for the star 61 Cygni in 1838.

The shape of Ursa Major throughout time

