

PROPER MOTION OF WEISSE XXIII 175.

W. A. COGSHALL.

This star is also known as Beta 182 and was measured as a double star as early as 1876. Its large proper motion was recognized soon after. There are two small stars near the bright pair from which the proper motion may be found—only the more distant one is bright enough to be seen with any degree of certainty in our 12-inch telescope.

I measured the distance and position angle of this star with respect to the bright pair in November of 1901, 1902 and 1903 and again in 1925, thus getting a determination of its motion over a period of 24 years.

In 1901 the position angle was $160^{\circ}.1$ and the distance $155''.99$. The mean of the 1925 measures give, angle $162^{\circ}.1$, distance $131''.30$. This gives a total motion for the 24 years of $30''.44$, or $1''.38$ per year, in angle $206^{\circ}.6$. Burnham gives $1''.30$ in angle 200° .

Observations were started on this star with the hope of finally deriving a parallax. This idea was abandoned in view of the limited equipment and low declination of the star, but its parallax has been accurately determined by Mitchell at the University of Virginia.

This star has a parallax of $0''.028$ and from this we may get an idea of its velocity through space, or at least may get a value of the lower limit of this velocity. At a distance corresponding to a parallax of $0''.03$, an annual motion of $1''.38$ means that the star must travel at least forty-six times the distance from the sun to the earth. In order to do this it must have a velocity of 138 miles per second.

In case the star is either approaching the earth or receding from it, this value would have to be increased, and it might be anything larger than the above value. As far as I know its radial velocity has not been determined.

