

## SEXTANT 纪限仪



The Sextant was completed in 1673, the 12<sup>th</sup> year of the Kangxi Emperor's reign in the Qing Dynasty. Despite being widely used in Europe, the sextant did not make an appearance in Chinese astrological history before Ferdinand Verbiest designed one and began to use it in China. It measures eight feet in radius and the scale of a sextant is 1/6 of a full circle. The sextant was used to measure the angle of elevation of a celestial object above the horizon, and to calculate the angle between two objects limited to 60 degrees of arc. It also measured the angles of the sun and the moon. Its structure and design were based on the Tychoonian sextant.

纪限仪：

纪限仪造型独特，在清朝以前，中国没制造过这种测量任意两星之间角距离的仪器。纪限仪在结构功能上主要配有一个可作三维运动的机械运动的装置，安装在仪面背面，与仪面中心的主干相连接，可使仪面做左右、高下、平侧的运动，使该仪可以测量任意两星（ $<60^\circ$ ）的角距。仪面的运动由手轮及半圆齿轮来带动，并辅之以一滑车带动主干做上下的移动。仪面是 $60^\circ$ 的弧面，弧面半径长6尺，弧面上铸有精美的花纹，既有装饰的效果，又有保持平衡的作用，使整架仪器的重心正好位于立轴上，仪面可绕立轴任意旋转。

在测量时，将仪面调整到与待测两星同一平面，然后用挂于仪面顶端横轴上的窥衡对准一星，再用弧环上的游表对准另一星。这样，游表与窥衡之间的读数差，就是这两星的角距。整架仪器通过立轴坐在一个游龙盘绕的圆座之上，圆座上铸有精美的云海条纹。仪面上曲线优美的欧式花纹与底座上中国传统的云海苍龙交相辉映，在中华文明的背景上再现了西仪的风采，不失为了一件中西合璧的精品。