

EQUATORIAL ARMILLA 赤道经纬仪



The Equatorial Armilla was completed in 1673, the 12th year of the Kangxi Emperor's reign in the Qing Dynasty. It was one of the instruments designed by Ferdinand Verbiest. It is composed of several layers: a meridian circle, an equatorial circle and a right ascension circle. The equatorial armilla is six feet in diameter and was used for measuring true solar time as well as right ascension differences and the declination of celestial bodies. Its structure was based on the Tychoonian separable equatorial armillary sphere and was simpler than the traditional Chinese armillary sphere so as to ease observation work.

赤道经纬仪：

制于康熙八年至康熙十二年（公元1669-1673年），赤道经纬仪由子午圈、赤经圈、赤道圈和支架等部分组成。子午圈安放在一个半圆的云座之中，由一条南北拱立、昂首修尾的苍龙托起，龙的四爪牢牢地固定在下方的十字交梁上。交梁四脚安有螺柱，用以校正水平。

赤经圈可在赤道圈里绕南北极轴旋转，极轴中部横出一个高三寸的横表。赤经圈和赤道圈上分别装有四个游表，在测量时，通过游表上的狭缝和横表（或极轴）即可对准距星和待测星，然后从游表所指的环面上读出该星的赤经和赤纬的度数。

赤道经纬仪的主要用途是测量天体的赤道经度和纬度。测真太阳时，它不同于浑仪和简仪直接用窥管观测天体的方法，而且打破了浑仪环圈叠套，各种坐标共于一仪的传统，方便了实际观测。