The Astrolabe Quadrant

The earliest known description of an astrolabe reduced to a quadrant with no moving parts was in 1304 by Jacob ben Mahar ibn Tibbon (1236-1304), more widely known by his Latin name of Prophatius Judaeus or Profeit Tibbon. Tibbon's treatise was quickly improved by Peter Nightingale whose account received wide distribution. The instrument was quickly named the *quadrans novus* (new quadrant) to differentiate it from the traditional quadrant or *quadrans vetus* (old quadrant).

The basic idea behind the idea of the quadrans novus is that the stereographic projection that defines components of a planispheric astrolabe is just as valid if the astrolabe parts are folded into a single quadrant. The result is an instrument that can perform many of the functions of a standard astrolabe much lower cost, but without the intuitive representation of the sky provided by the rotating rete.

It is not clear how popular the astrolabe quadrant became as few examples survive. There were, however, a number of treatises on the instrument so there is reason to believe that many were made, perhaps of cardboard or wood. Further, it is possible that brass quadrants were not as highly prized as true astrolabes due to their simplicity and were recycled into other instruments. The astrolabe quadrant was more popular in the Ottoman Empire from the 17th century until the early 20th century.