

## Astrolabe as pendant *MB 07*

Brass, without numbering

Diameter: 50 mm

Weight: 30 grams

The instrument is based on the *Sicilian Astrolabe* in the *Museum of the History of Science*, Oxford, which was probably made around 1300 (inventory no.: 40829). However, it is designed as a simple north astrolabe. In contrast, the original is a combined north-south instrument with equinoctial rete.

This astrolabe is only set up for the latitude of 45° North. Still, it can be used between 42° (Rome) and 48° (Paris) without significant error. It is kept simple. Azimuth circles and the lines of the unequal hours have been omitted. On the other hand, the back shows the ecliptic and calendar circles (15th century), in contrast to the *Sicilian astrolabe*. The back also shows the diagram of the unequal hours, a shadow square and an alidade (without reticle, thus unsuitable for measuring altitude).

The outer circle of the front shows a 360° circle and a narrow 15° or hour scale without figures. The almucantarats are spaced at 10° intervals. The 30° and 60° circles are highlighted for easy orientation. The four unnamed stars of the rete correspond to those of the *Sicilian astrolabe*.

		RA (ca. 1400)	Dekl.(ca.1400)
alpha Tau	Aldebaran	60°	+15°
alpha Leo	Regulus	144°	+15°
alpha Oph	Ras Alhague	257°	+13°
alpha Aql	Atair	290°	+08°

**Application example:**

Regulus is  $18^\circ$  above the eastern horizon (left). Aldebaran culminates in the south at  $60^\circ$ . Ras Alhague and Atair are below the horizon. Assuming it is the autumn equinox (sun at  $0^\circ$  Lib, 16 Sept, 15th century), the mean local time = 04:00 is found at the edge ( $180^\circ$  in the south, up to  $240^\circ = 60^\circ = 4$  hours). The sun's opposite point ( $0^\circ$  Ari) is  $22^\circ$  above the western horizon. So the sun is now  $22^\circ$  below the eastern horizon. Dawn has not yet begun.

Free design according to:

*Sicilian Astrolabe*

Original in the *Museum of the History of Science*, Oxford

Around 1300 (?)

Inventory no.: 40829

As an addition to this, a description of the classic astrolabe is offered as a PDF download within the SERVICE section of our website.

*CHRONOS MANUFACTORY, June 2023*