Museum With No Frontiers
Discover Islamic Art Project

Objects form

Name of object:
Astrolabe, West-Arabic (Moorish)

City and country housing object:
Stockholm, Sweden

Museum housing object:
The National Maritime Museum (Sjöhistoriska Museet)

Museum number for object:
S 1565

Dimensions:
Diameter 12.2 cm

Material(s) and technique(s):
Brass, engraved

Period / Dynasty and date(s):
729 A.H. (after Hedschan)
(=year 1328-29)

Provenance:
Spain, Alcalá (nearby Sevilla)

Name of original owner (provide names of later past owners if this is of importance):
Major Arvid Wester bought it in Marocco in 1907.
The museum bought it in December 1931. (The owner was not A. Wester at that time)

Name of current owner (in case object is on loan to museum)
No

Name of craftsperson(s):
Ahmad ibn Ali Sarafi

Which difference is there between a land and a maritime astrolabe?

The typical astrolabe was not a navigational instrument although an instrument called the mariner´s astrolabe was widely used. The mariner's astrolabe is simply a ring marked in degrees for measuring celestial altitudes.

How to use the object

The practical use of the astrolabe is to find the time during the day or night (by altitude of the sun or the stars) and the time of a celestial event such as sunrise or sunset and as a handy reference of celestial positions. It is an application of the Ptolemaio`s planisphere. Simply, Astrolabes are used to show how the sky looks at a specific place at a given time.
To use an astrolabe, you adjust the moveable components to a specific date and time.

Composition/structure of the object

The astrolabe is made up of several separate parts. The main-part is a disc of brass called the Mother (Mater). Into the Mater fits seven thin discs, called the plates or tables. Over these are placed a skeleton plate called the net or spider. The net is an equatorial projection of a sphere. The plates are projections of the same sphere, from the same point to the same plane. This projection shows well the apparent motions of the heavenly bodies. As the

net rotated, any one star pointer is seen to cross one altitude circle after another rapidly when far from the Meridian, more slowly as it approaches it, reaching its highest altitude on the Meridian and receding in the reverse order.
All the plates have a central hole corresponding with one in the centre of the Mother.

The seven plates are each engraved and represent the usual projection of the sphere varied only for the particular latitudes for which each was made.

Description; which towns/regions do the inscriptions indicate?;
The inscriptions indicate various places within the boundaries of the Arabian dominion such as Mecca, Seville, Cordova, Bagdad etc. etc (and all places of each same latitude).

What's to see on the back?
The back of the astrolabe is engraved with seven concentric circles. Beginning from the centre circle we find the edge numbered from 5 to 90 by fives representing the 90 degrees of each quadrant. Of the remaining circles, the first three contain the Zodiacal signs and the thirty degrees into which each sign is divided. The inner of the three is divided into Twelve compartments containing the names of the signs themselves; the next into letters having the values 5, 10, 15, 20, 25 and 30, and the outer actually divided into thirty degrees for each sign, or 360 in the circle.
The three inmost circles again must be taken together. On the smallest circle are engraved the names of the months of the Julian calendar with names in Arabic letters, while the outer of the three contains segments representing the actual number of days in each month, and the middle circle the letters enumerating the cas in groups of five.
Within theses circles and below the East and West line is a square marked with scales of umbra recta and umbra versa, divided and numbered 2, 4, 6, 8, 10 and 12. The square of the shadows was for taking and computing altitudes. Above the East and West line is engraved, in half a circle, the name of the contructor: "Achmed Ben Ali Asch Scharfi, constructed in Al Kaa in the year 729 after the Hedschea"

How was object obtained by museum?
The astrolabe was bought in Fez, Marocco, in 1907 by Major Arvid Mörner.
The Museum bought it in December 1931 from Count Otto Hamilton and others.

How was object dated:
The object is signed and dated "Achmed Ben Ali Asch Scharfi, constructed in Al Kaa in the year 729 after the Hedschea" (=1328-29)

How was provenance for object established:
The inscription mentions Alcalá, a village near Sevilla as the place of making.

Selected Bibliography: if there is a publication with more information about this astrolabe or Medieval Islamic astrolabes in general in Swedish
Sjöhistoriska museets årsbok 1979-80 page. 166 (year-book in Swedish)
Sjöhistoriska museets årsbok 1988-89, page 108 (year-book in Swedish)