

Year 2009

Article of the month November

Trifilar Sundial

Bernard Rouxel of France designed this original sundial.
It got him second prize in the Italian "Le ombre del Tempo" contest of 2008.

It is a sundial for northern latitudes, on a south facing surface parallel to the pole style.
That is equivalent to a horizontal sundial on the equator.

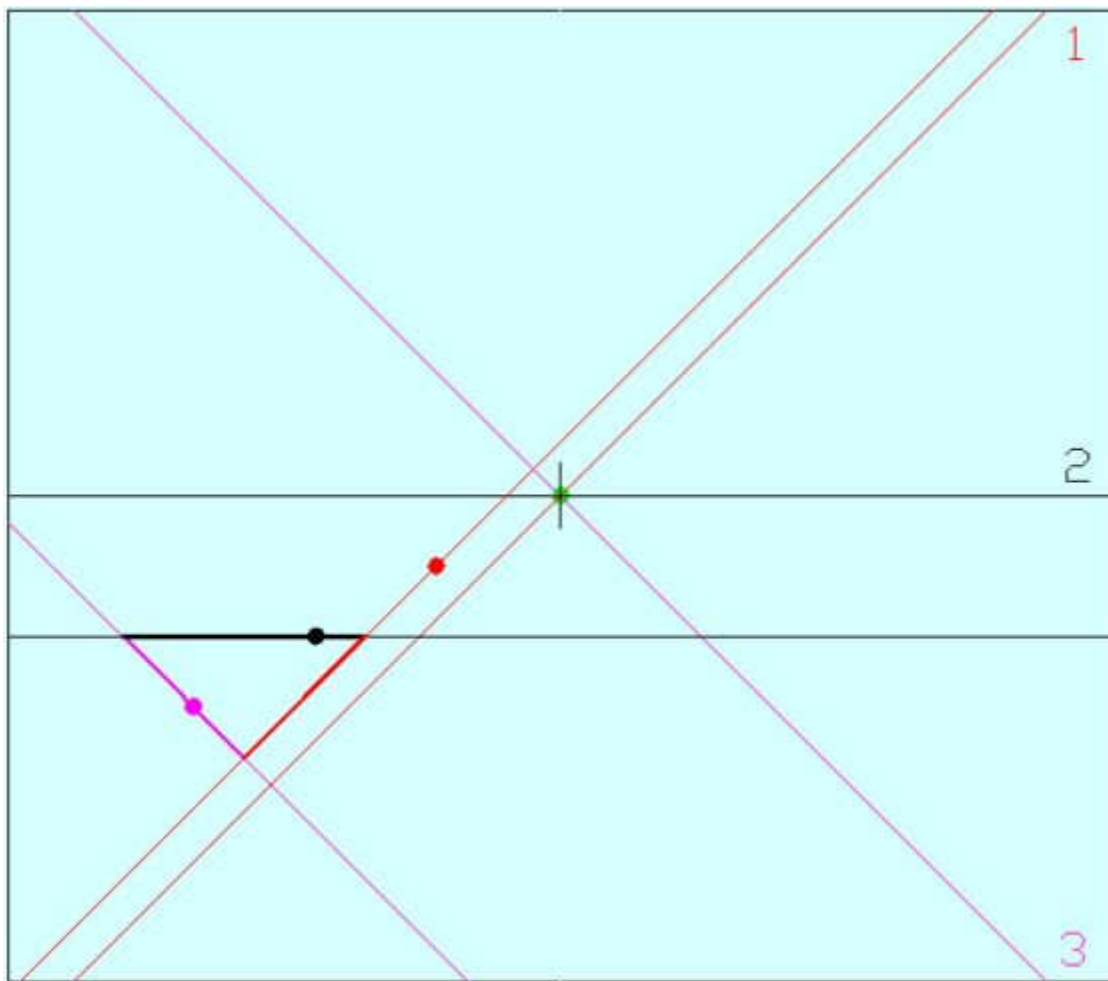


Three wires over the surface serve as shadow casters..
Their heights over the dial face are related as 1 to 2 to 3.
The centre wire runs east-west; the two other wires are rotated 45° left and right.
Viewed from above, the three wires appear to intersect in a single point.

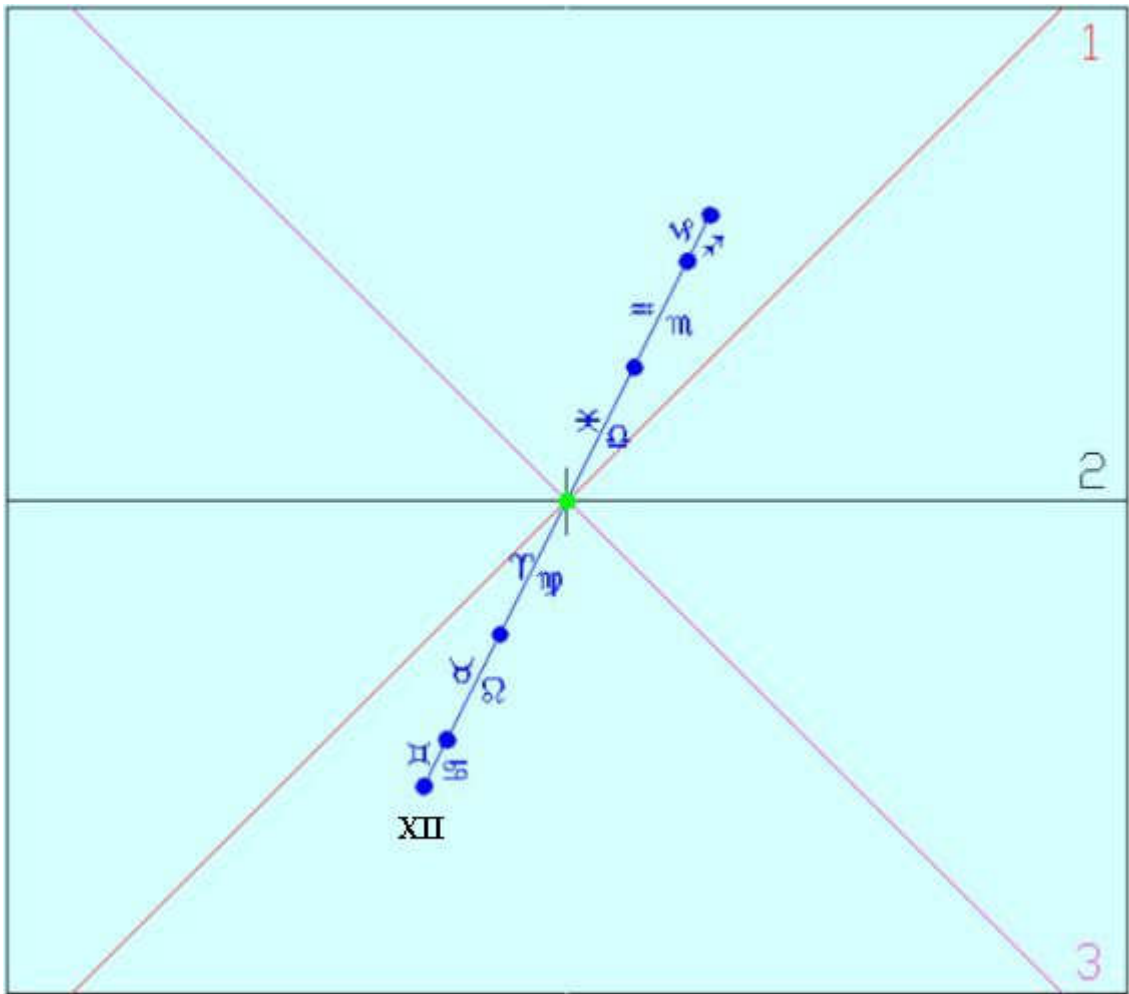
In general, the three shadows of the wires form a triangle.
Over time, this triangle glides over the sundial face, changing shape as it moves.

At XII hours solar time, the triangle collapses as the three shadow lines intersect in a single point.

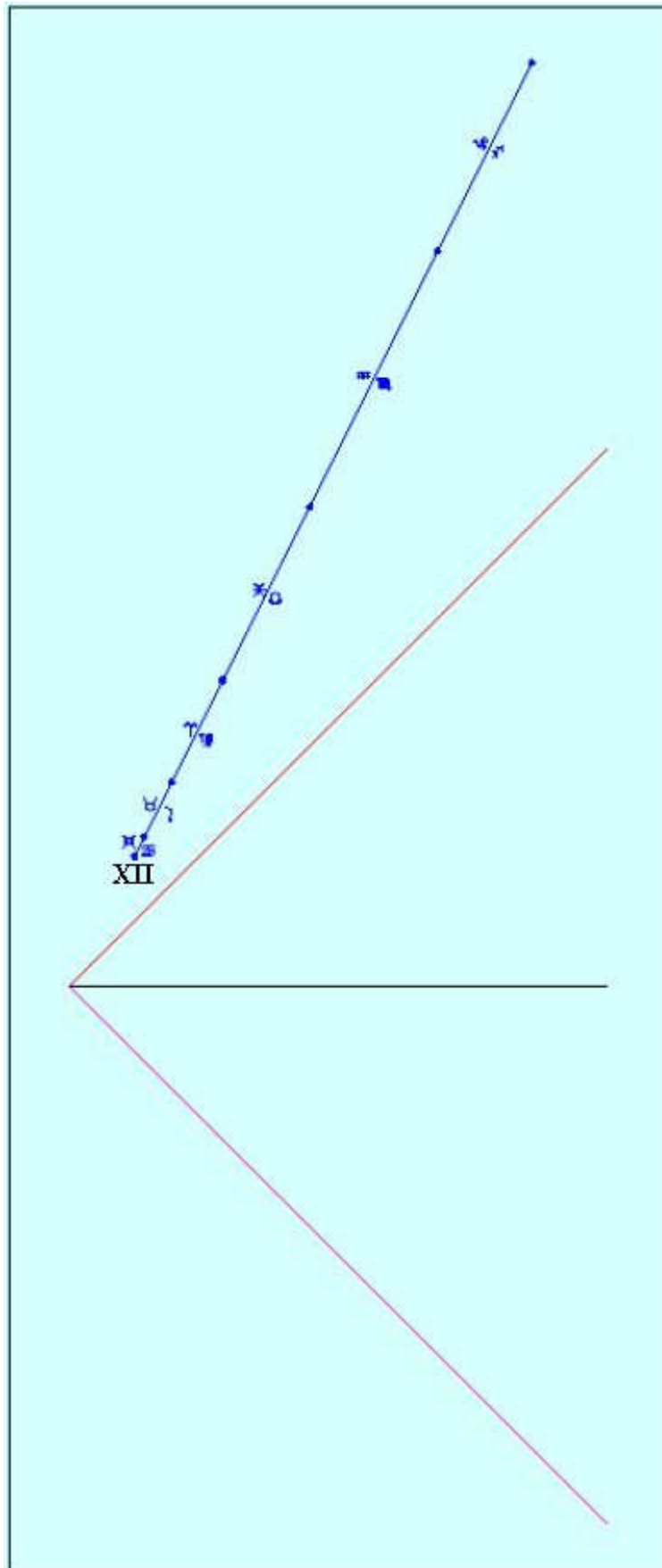
After this instant, the triangle grows again and moves on.



This sundial is limited to reading true noon and the date. The following figure shows its pattern:



Such a sundial may also be constructed for a horizontal plane in a different latitude.
 The example below is for 52° north.



A final comment:
There are some additional degrees of freedom in the design.
More about this in Bulletin 97 for May 2008.

Fer de Vries

Design and realization: Bernard Rouxel, France.

Last Modified 09/04/2020 14:02:47

English translation: RH