

# ZONNEWIJZER

## UW ZONNEWIJZER OP MAAT THE SUN SHINES FOR EVERYONE

### Using the left square at the back of the astrolabe

Suppose, you are walking on a hiking trail on February 17 and you see your own shadow, or you take a break for a coffee somewhere and you see the shadow of a teaspoon on the table where you are sitting. How do you tell the time from your own shadow or from the shadow of the teaspoon?

Let's take the teaspoon as an example. Hold the spoon upright on the table. Look at the shadow and measure how many times the spoon itself fits into its own shadow. See [figure 1](#), the teaspoon in this example fits 2.75 times in its own shadow.

### The altitude of the sun

The altitude of the sun is the angle the sun makes above the horizon. You can read this angle using the left square on the back of the astrolabe. See [figure 2](#), set the ruler to 2.75. The ruler indicates the altitude of the sun on the edge of the astrolabe. In this example, the sun is  $20^{\circ}$  above the horizon.

### Set the astrolabe for the altitude of the sun

On February 17, the sun is at  $29.2^{\circ}$  in Aquarius (you can read how to find this in a previous manual). On the front of the astrolabe we set the ruler to  $29.2^{\circ}$  in Aquarius and then rotate the ruler together with the star chart so that the sun is at  $20^{\circ}$  altitude. See [figure 3](#). You read on the edge that it is 14:10 local solar time.

The 14:10 local solar time gives for Utrecht 15:04 winter time (CET). This is 14:10 plus 40 minutes of longitude correction plus 14 minutes of equation of time. You can read in previous manual how to perform this conversion using the astrolabe.

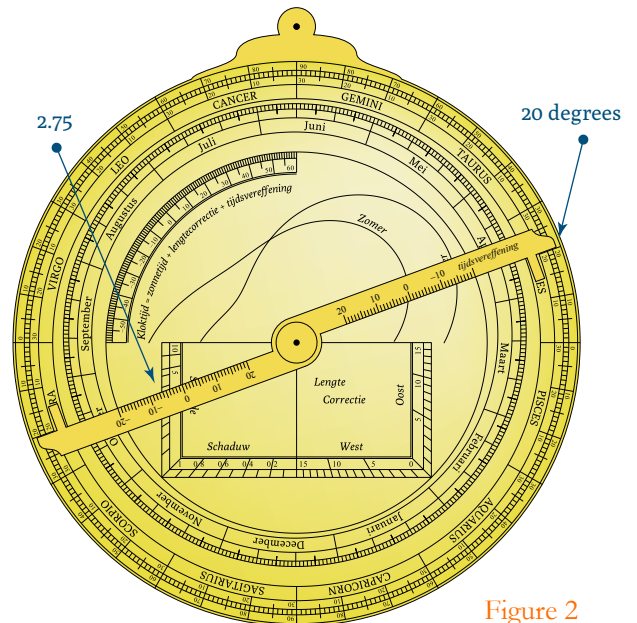


Figure 2

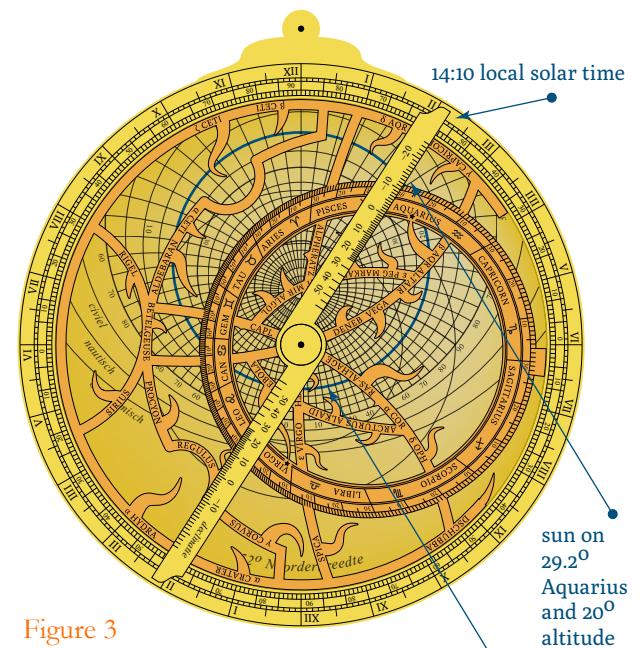


Figure 3

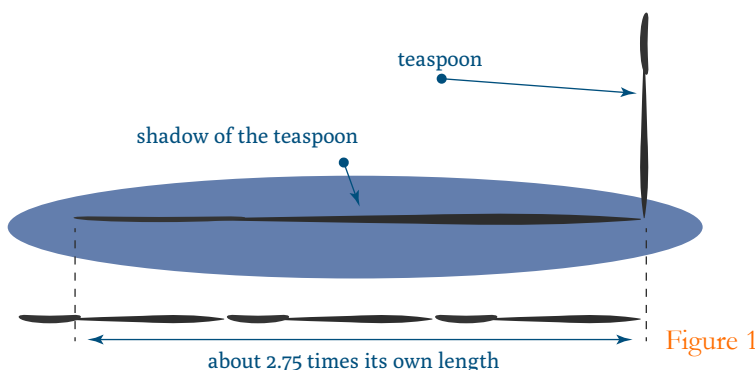


Figure 1

### Uw Zonnewijzer op maat

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