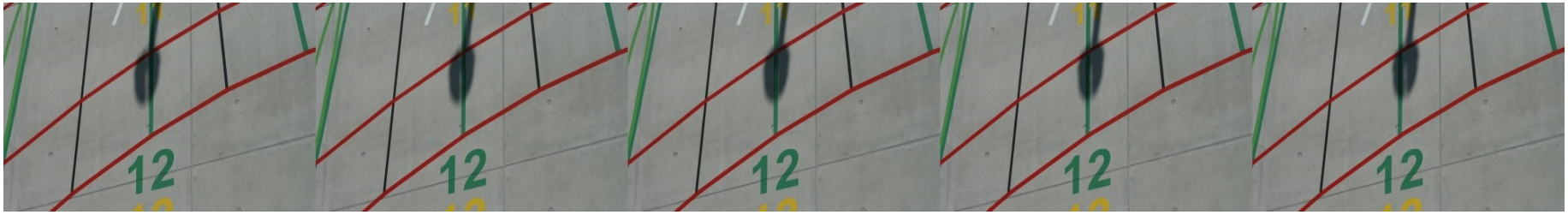


# Earth L.A.T. 12:00

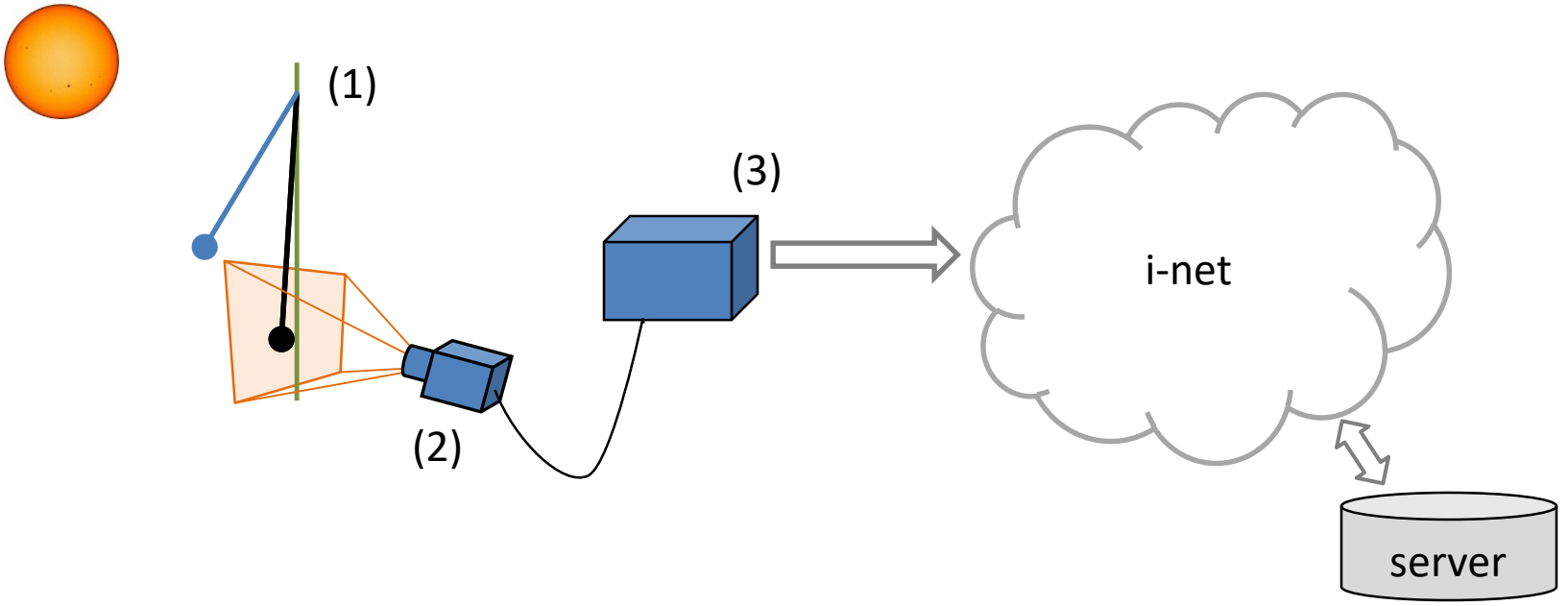
Watch the Rotating Earth

https://EarthLAT1200.org

## How-To – Simple Sundial


Three items have to be fulfilled by a partner station:

(1) A sundial which shows a moving shadow/reflection of the gnomon/nodus/sun across a noon line (meridian).
(2) A fixed camera producing a live stream of the shadow/reflection moving across the noon line.
(3) A device sending this live stream via ftp or similar to the server.




This how-to shows the simple creation of a proper sundial – costs nothing:

- The sun shining at a **vertical stick** makes a proper shadow moving across the **horizontal ground**.
- While the shadow moves across the **north-south meridian** the sundial shows **LAT 12:00** – resp. "**high noon**".

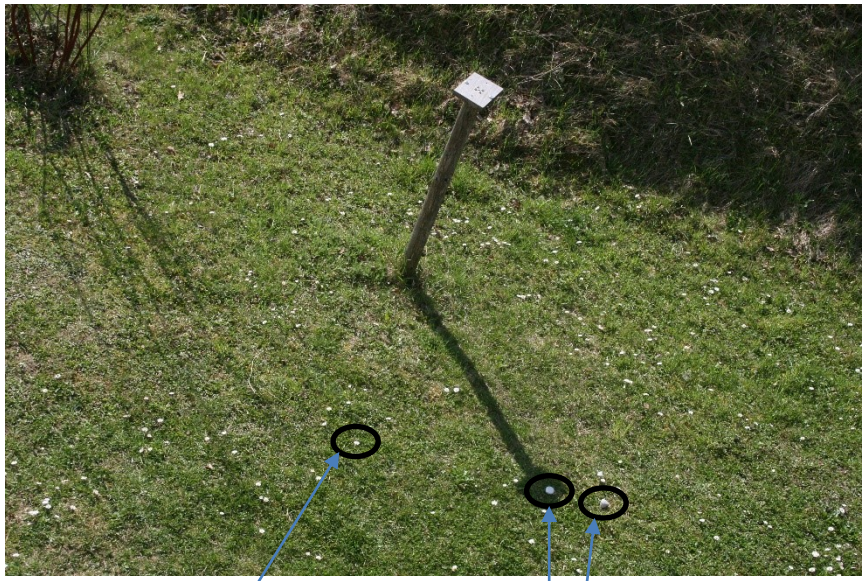
- You can **calibrate the sundial** by a simple **observation** and **two steps of metrology** – there is no need for compass, GPS-data, exact geometrical metrology devices, or even a land surveyor/geometer.

- This method works well for an **+/-2 min estimation of LAT 12:00**.

A vertical stick in my garden about 1 m height
(just left the platform for the birds food box – not necessary).

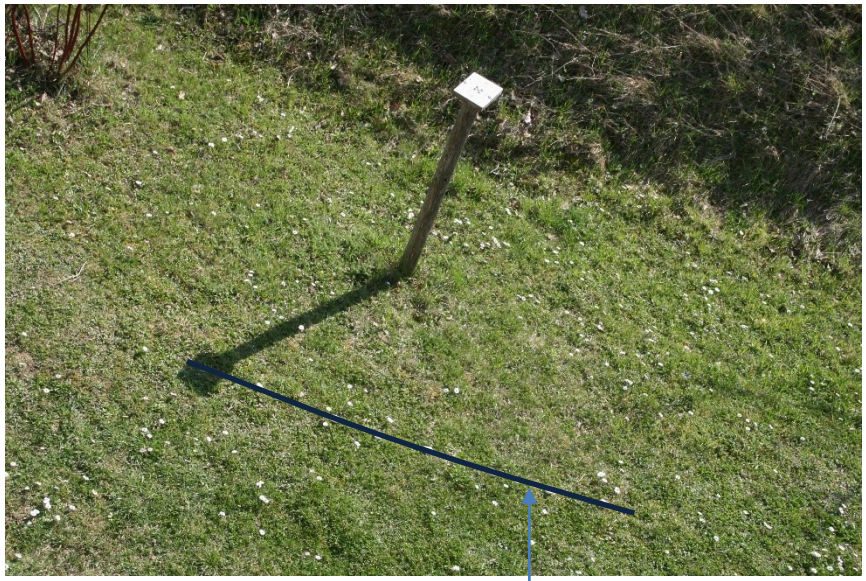

This how-to shows the simple creation of a proper sundial:

1. Get a shadow position line of the upper end of the stick around -/+2 h of midday.



Daisy

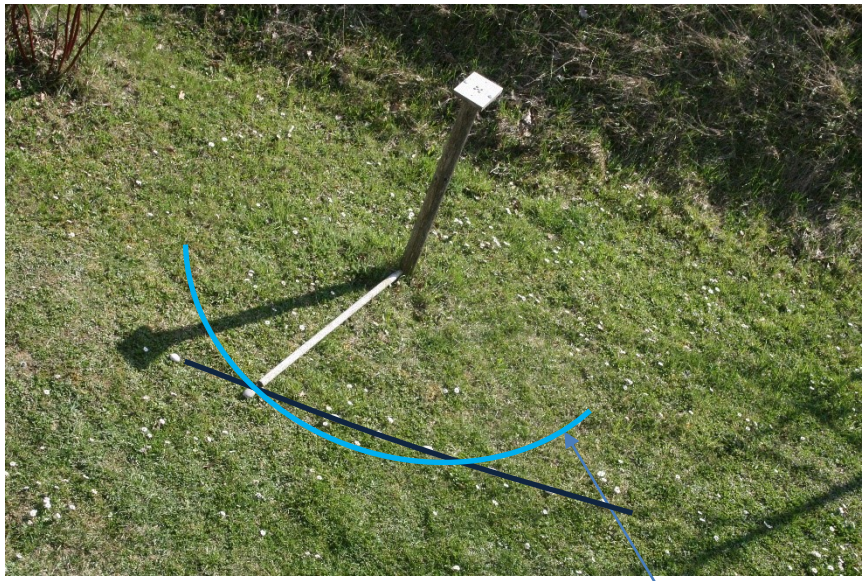
marker objects for upper end positioning of the shadow

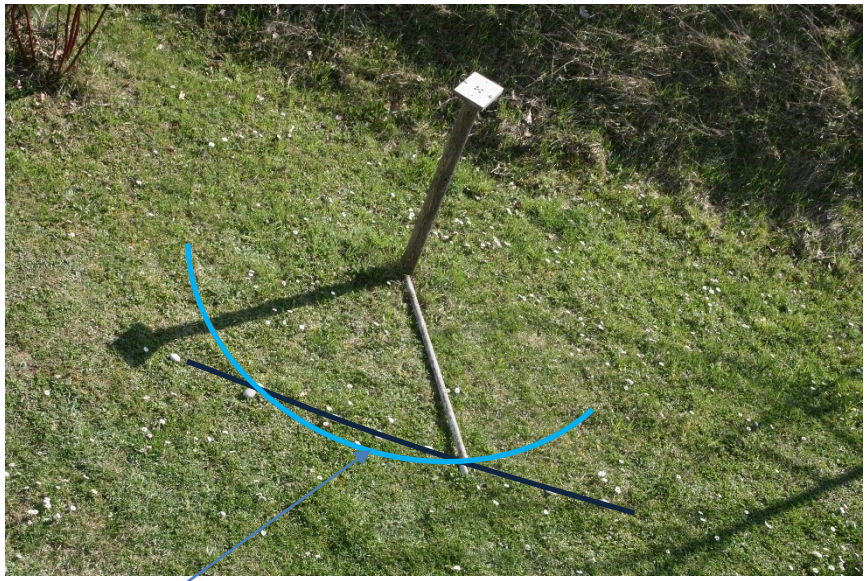


shadow position line connecting the markers


This how-to shows the simple creation of a proper sundial:

2. Intersect this line with a circle around the stick.

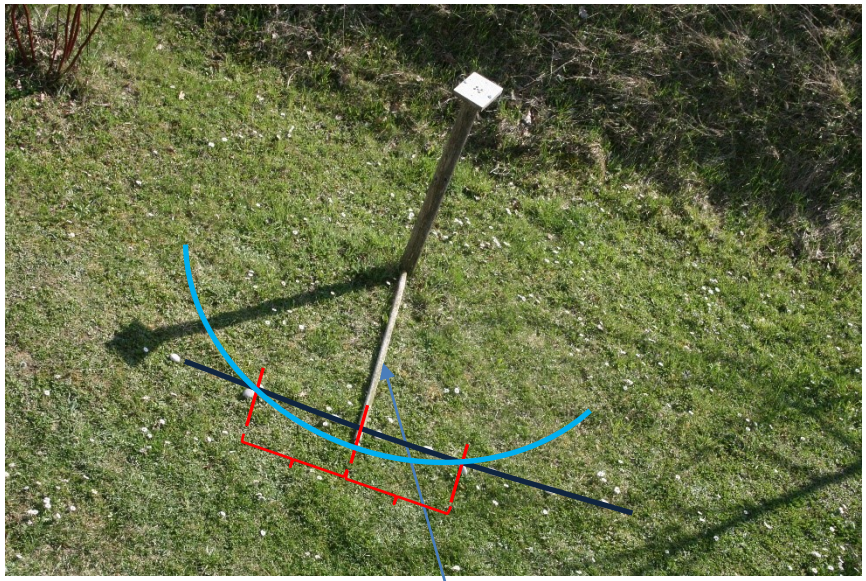




circle around vertical stick
with radius = length of bright stick


This how-to shows the simple creation of a proper sundial:

3. The center in between these two intersections defines the north-south meridian.

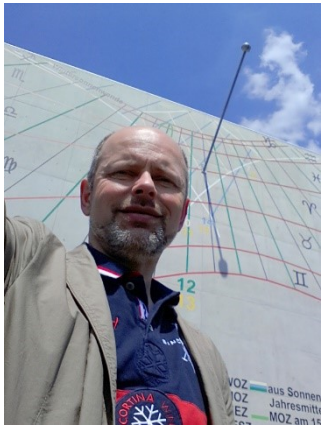


Center line of these intersections = north-south meridian

When the shadow of the vertical stick crosses the **north-south meridian** it is **LAT 12:00 / high noon**.

This works all the year – southern or northern hemisphere.

The north-south meridian intersects the shadow line perpendicular.



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Fields: metrology, image processing, automation engineering

Design & Implementation of the huge sundial https://KEPLERUHR.eu
Initiator of a local group volunteering astronomy https://FHAstros.blog

Interested in putting STEM to the public.

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