



## Workflow



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# About this document

This document contains a detailed and illustrated guideline on how to get astrophotography done at our own style

## 1 Workflow

### 1.1 Setting the mount on station

1. In advance, prepare your observation plan, choose a target, study its movement along the sky and decide the timing for imaging. An application such as  Stellarium could be helpful to previsualize the sky and the movement of the target (Figure 1)
2. Choose a convenient observation spot and make sure you accurately identify the orientation of North, South, West, and East. Also, check that here is a good observability of the target, lack of visual obstacles and visibility of Polaris Star (at the north, Figures 5 and 6)). A smartphone with a "Compass" app might be very handy (Figure 2).+
3. Level the tripod such that the equatorial base is perfectly horizontal in both axis: N-S, W-E In this case too, a "Level" app (Figure 3) could help to find the perfect horizontal.
4. Check the weight balance of the mount and the main gear. Find the balance in both AR and DEC rotation axis. In the case of RA, leave a slight bias to the west in the AR axis so that its rotation would be easier.
5. Complete the polar alignment procedure
  - (a) Use an app such as "Polar finder" to know the position of Polaris within the reticle of the mount
  - (b) Using the knobs designed for this, move the mount such as Polaris appears right in the position described in the app.
6. Now the mount is on station. Remember these three important steps, finding a good level of the tripod, balancing the weight and polar alignment, as a strong requirement to succeed in the imaging stage.

## **1.2 Calibrating everything**

For a good imaging session, all the steps must be given with the maximum accuracy. Starting from the cameras which are to be used.

### **1.2.1 Calibrating the main camera**

It is very important for the main camera to be perfectly focused and not only to the naked eye, it must be further. In order to do that

### **1.2.2 Calibrating the guide camera**

### **1.2.3 Calibrating the smartphone for assisted "goto"**

### **1.2.4 Calibrating the guiding software**

## **1.3 Imaging**

## **1.4 Postprocessing**

# **2 The software**

## **2.1 Stellarium**

## **2.2 EKOS**

## **2.3 PHD2**

## **2.4 ASTAP**

## **2.5 Astrometry.net**

## **2.6 Siril**

## **2.7 GIMP**

## **2.8 GraXpert**

1.

### 3 Figures



Figure 1: Using the app Stellarium to prepare the observation

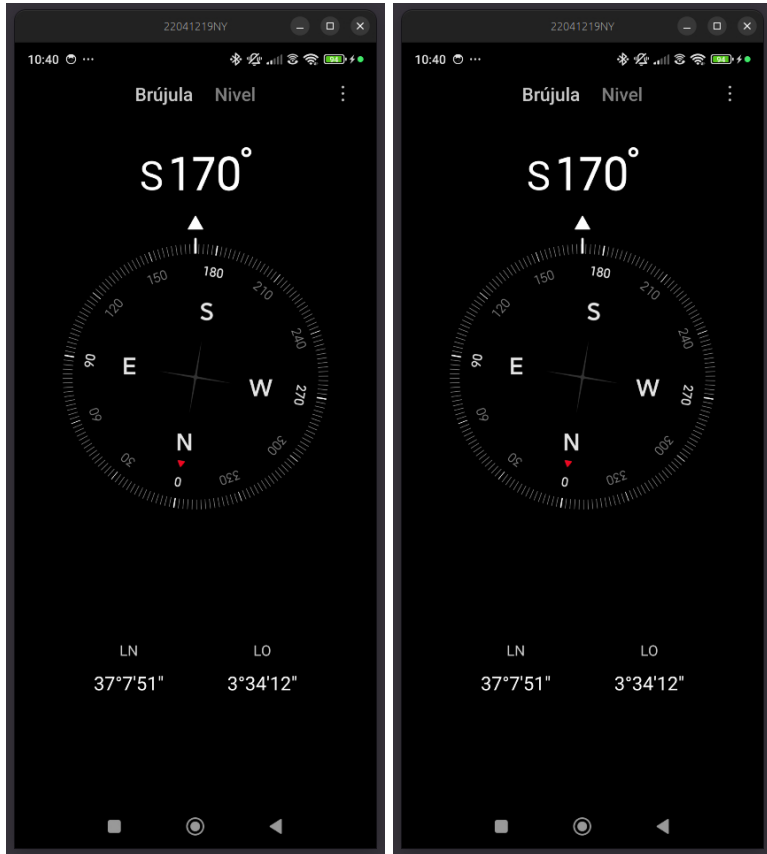


Figure 2: Using the app "Compass" to prepare the observation



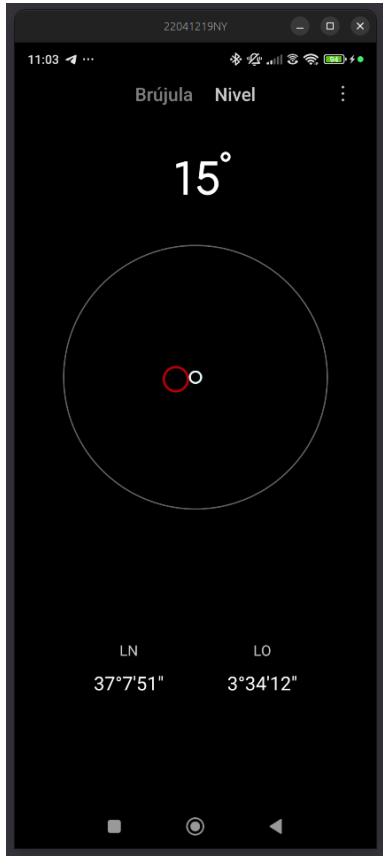


Figure 3: Using the app "Level" to prepare the observation

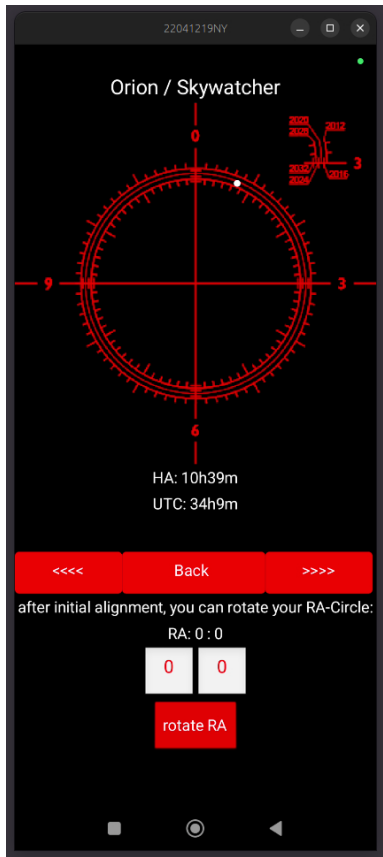


Figure 4: Using the app "Level" to prepare the observation

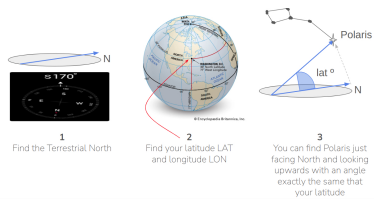


Figure 5: One way to find Polaris. This method depends on your geographical position

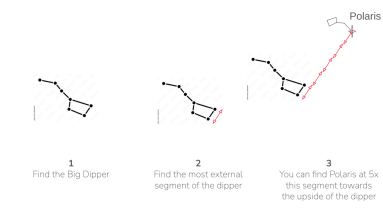


Figure 6: A second way to find Polaris which does not depend on your geographical position