## **Balance and Focus Positions**

In this document will be the current focus positions and configurations for cameras and eyepieces on the Phillips Telescope.

#### Mounting

Our camera and eyepiece focuser are mounted directly to the telescope rotator and fastened with 4 thumb screws. These screws should be placed ever 3 positions along the bracket.

#### **Changing Focus Positions**

Different positions may be needed for different instruments. To do so simply open Maestro4 and then select the Focuser tab on the left hand side.

Once this is selected you should see an area for Go To just type in the position you want the focuser to move and click the button.

00	Maestro4 - Version 0.09.005 - X
File	View Settings Stop All
Dome Telescope	Status         FocusPro2: Connected         Move Mode       Fixed       Ambient Temp       16.9       Deg C       ✓         Position       12500       steps       Top Limit/Fault       None
FilterWheel Rotator Focuser	Actions   Start Out Out GoTo steps   Jog 1000 steps Halt   Start In In Home At Home   Fast
Recent Messages (most recent on bottom) View All Message	
Maestro Status: Program version 0.09.005 starting Maestro Status: Focuser communications established. Maestro Status: Telescope communications established. Waiting for status u Telescope Status: Polling loop active. Status is valid.	

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## Main Camera (SBIG STX16803)

#### **Balance Position**

With the main camera on there are no additional weight needs to achieve balance. Confirm that sides of the telescope looks like the below:



#### **Focus Position**

Our main camera achieves focus just around **12500** counts in the Maestro4.

## Focuser (FeatherTouch)

#### **Balance Position**

The Phillips is considered balanced for Focuser/Eyepiece viewing when the six ~2lb weights are

installed three on either side. They are labeled and the their mounting positions are as well. Below is a picture of their positions.



#### **Focus Positions**

The focuser with most of the time be used with just eyepieces but, on occasion, other instruments and cameras may want to be installed. As such this section provides guidance on as many of these options as possible.

#### Eyepieces

The Focuser achieves focus at **12,500** counts in Maestro4. That position was selected so focus is right at the middle of travel on the FeatherTouch focuser using a TeleVue 41mm eyepiece.

# **NOTE:** Focus is only achieved at 12,500 when both the diagonal AND rotator ring are attached

DSLR

To use a DSLR (Canon, Nikon, Sony) can be attached with their respective adapters with a few focuser changes. First, the Eyepiece and Diagonal must be removed. NOT the rotating thingy, just the diagonal. Once that is removed change the focus position to  $\sim \sim \sim$  counts and you should be very close to focus.

#### Planetary Camera (ZWO with ADC)

To use a Planetary camera, specifically our ZWO ASI183MC with ADC, remove the diagonal from the telescope (just like with a DSLR) and attach directly using the 2in adapter that is already mounted to the Planetary Camera. The camera will focus around  $\sim \sim \sim$  counts.

### Other

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