

PHD2 settings/Meridian Flip

First, make sure focal length settings are set according to your own equipments. Also, at the connection menu, in camera settings, use 16-bit output mode. Then in PHD2 settings under camera tab the ADU values should be set to 65535. Now click open “Advanced...” under guiding tab, and set calibration steps to 7 or 8. Set calibration distance to 30 for guide scope users, and 40 for OAG users because OAG usually has longer focal length. Do not change anything else.

Also, all OnStep mounts must have “**reverse Dec output after meridian flip**” enabled.

Calibration Calculator

Input Parameters

Focal length, mm: 264 Pixel size, microns: 0.10

Camera binning: 1 Guide speed, n.nn x sidereal: 1.01

Calibration steps: 7 Calibration distance, px: 30

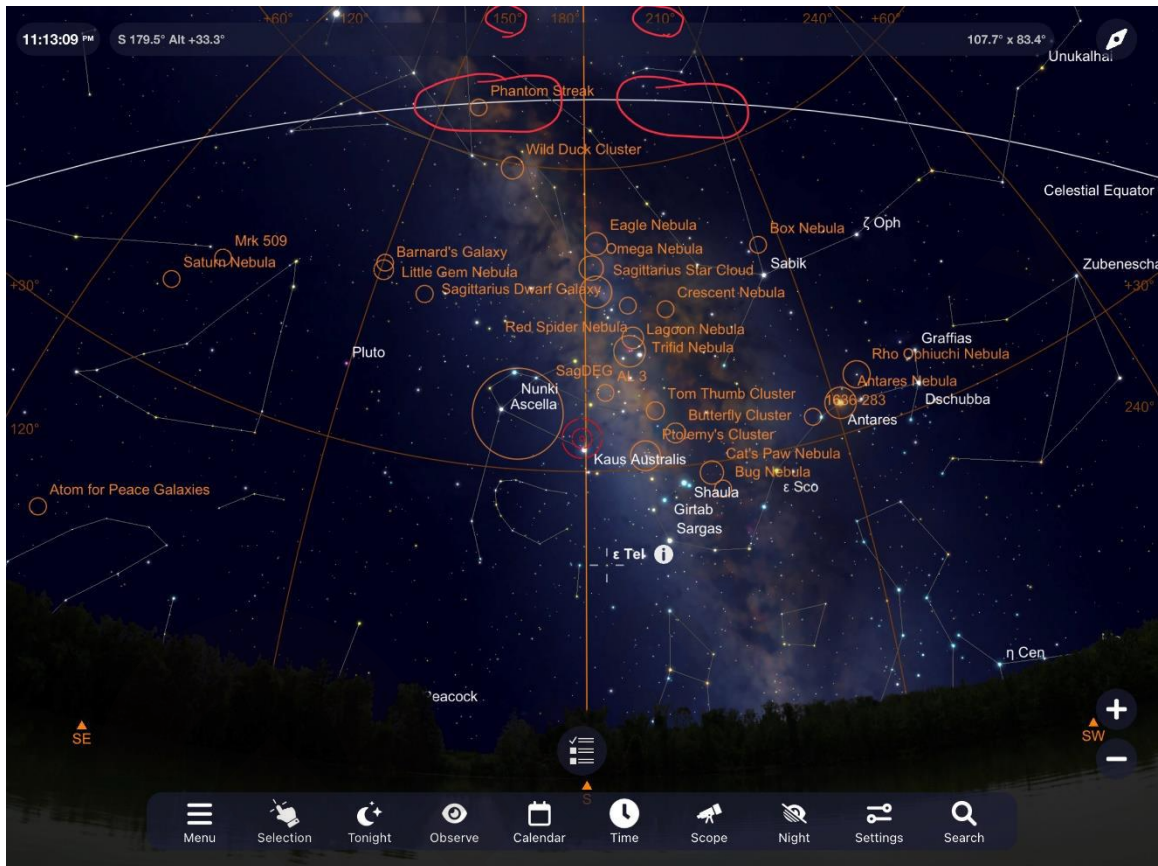
Calibration declination, degrees: 60 Reset

Computed Values

Image scale, arc-sec/px: 0.08 Calibration step, ms: 50

OK Cancel

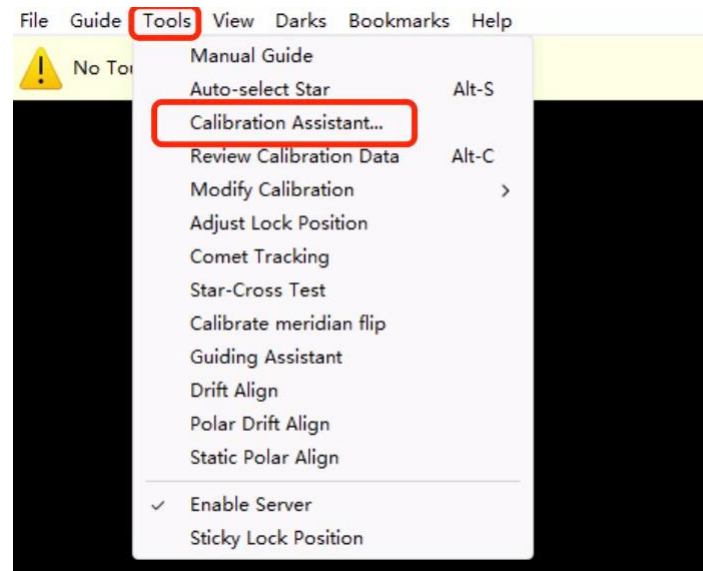
Theory: The screenshot below shows the celestial equator and meridian (highlighted orange line). It has the latitude set to about 23°26'N, near the tropic of cancer, in which case an ideal set of alt/az coordinates to calibrate at, for example, is 70° for alt/160° for az and 70°/200° for az. At the end of the day, the coordinates you choose should be somewhat close to the intersecting point of meridian and celestial equator, around the areas circled out below.



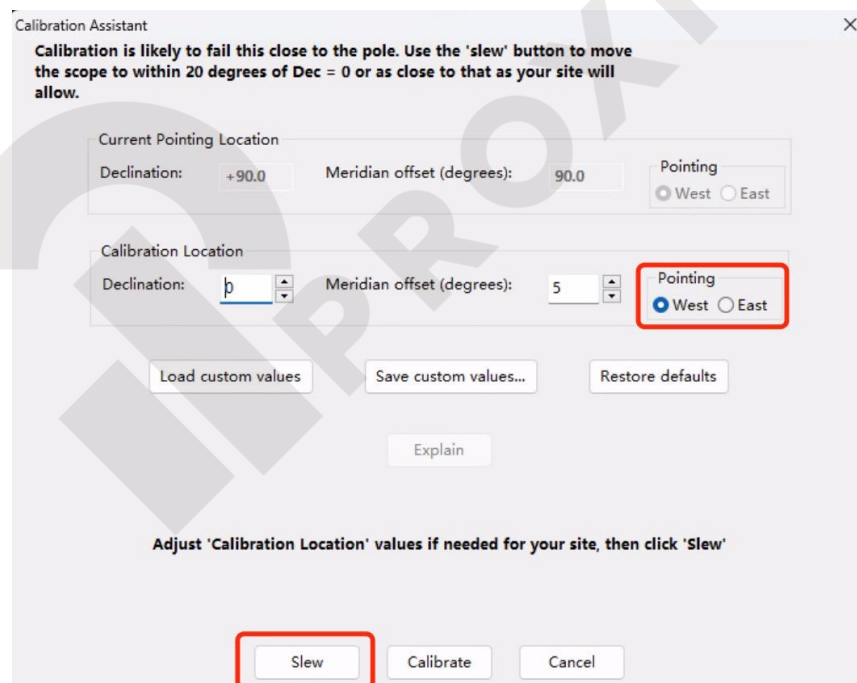
For me imaging around 40°N for example, since most imaging sessions start by pointing the scope towards east, I often choose a coordinate of 50/160 (so that the scope is still pointing east, closer to my target than pointing west to 50/200).

Practice: Now that we have the “Calibration Assistant” tool, it’s simpler than ever.

1. Open Calibration Assistant under “Tools” tab



2. Leave everything at default. If you’re starting your session pointing East then it’s recommended to choose “East” for pointing, saving a bit of time for slewing. Vice versa. Click on “Slew”.



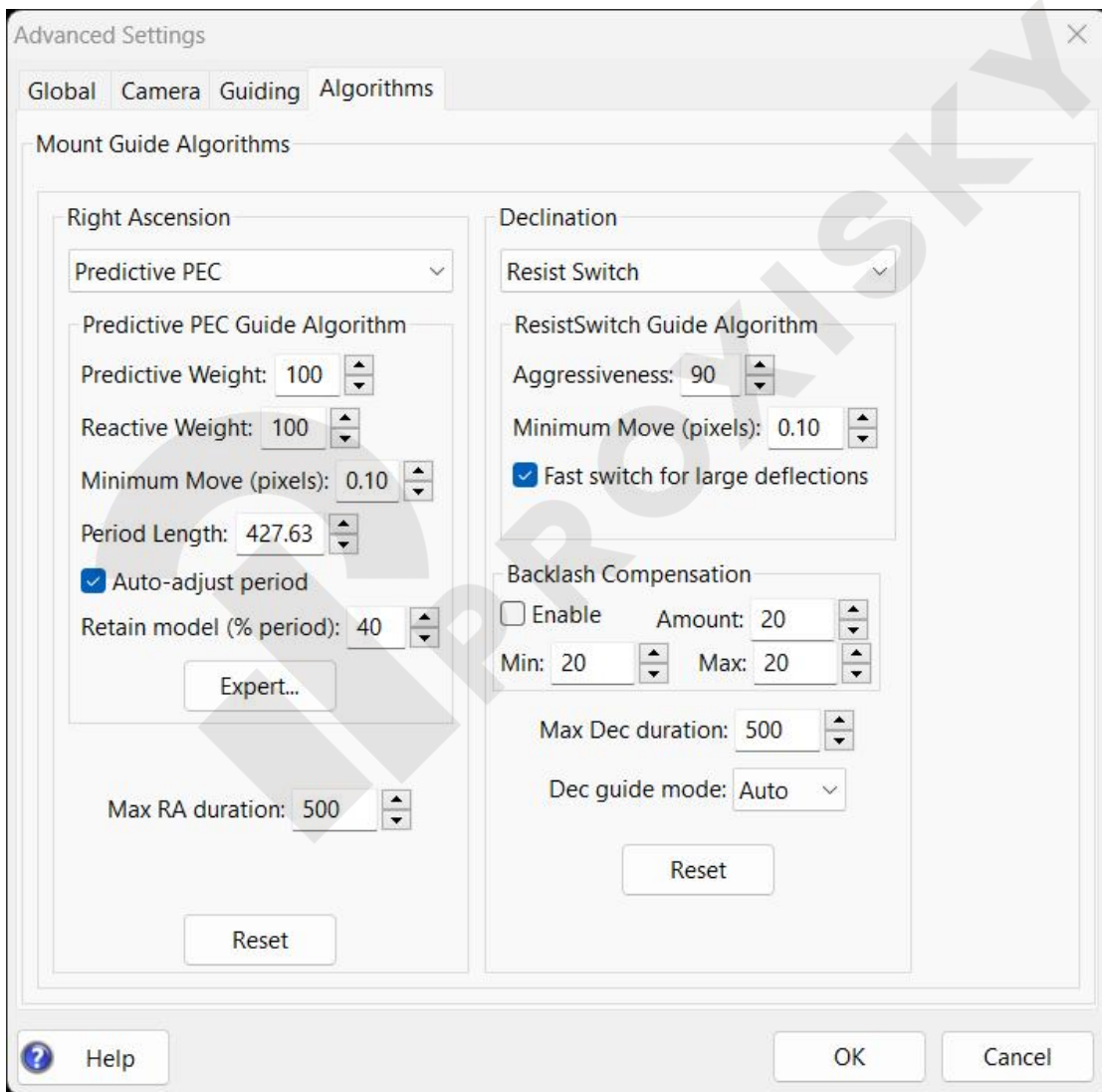
3. The Calibration Assistant will automatically take you near the intersecting point of meridian and celestial equator. Now close the assistant. Hit the loop button to start

refreshing guiding feed, hit auto star selection, then shift-click the green “start guiding” button and it will force calibration. Then you’re all set!



It is recommended to repeat these steps every time before each session. *However*, if your imaging locations are somewhat close, or if you are either imaging at a fixed location in your backyard or in a remote observatory, you only have to do this once.

My current settings:



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