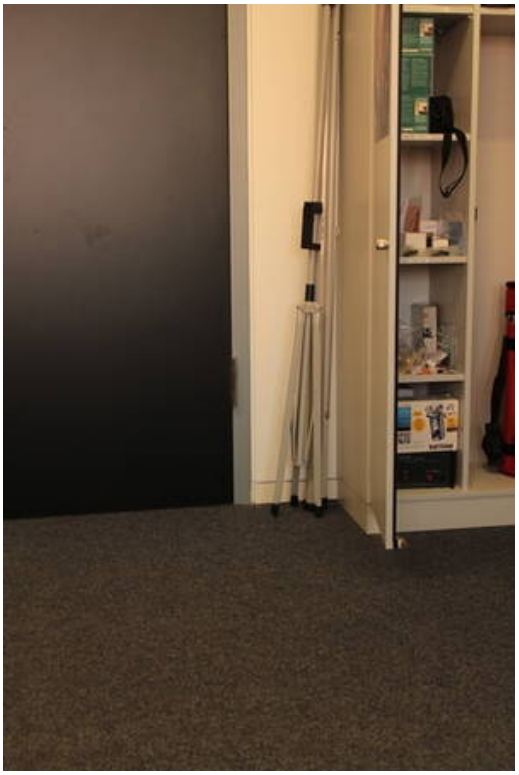
Celestron Advanced GT

The Celestron Advanced GT mount is our entry-level mount, primarily used with the C8 and OSST (Coronado Hα Solar Telescope). With a payload capacity of up to 12kg, it can also carry a number of other telescopes and cameras. However, it is only equipped with a mount for the Vixen prism rails. In terms of type, it is a computer-controlled equatorial system suitable for both visual observations and astrophotography. Thanks to its compact design, it can be easily set up by a single person.

Assembly

In the following the setup of this telescope and the mount will be explained step by step:

	Description	Used parts	Telescope after the corresponding step
1	One needs to carefully choose the place where the telescope should be placed. For example, the relevant part of the sky needs to be visible (the dome covers a certain part of the sky when the telescope is setup on the roof) and the cables of the power supply or the cameras should not become tripping hazards. The example setup was performed in the laboratory-course room directly behind the door → directly in the way, hidden, and no sky → **Bad choice!**		

2	The tripod is the backbone of the telescope.		
3	This disk is used to stabilize the legs of the tripod from the inside. The rod that punctures this disk will be screwed (with the side showing the thread) from below into the basis of the tripod. This needs to be done until the thread is completely visible on the other side. The rod should now be vertically slidable.		

4	Now the mount can be put on the tripod basis. One has to take care that little chromed pin from the basis of the tripod needs to be placed in the corresponding housing of the mount.		
5	In the next step the counterweight bar and the counterweights needs to attached to the back-end of the mount. First the counterweight bar needs to thread into the opening of the declination axis. Afterwards the screw at the end of the counterweight bar can be removed and the counterweight can be place and fixated on the counterweight bar. Subsequently, the screw can be reattached to the end of the counterweight bar.		

6	In the next step the tube needs to be attached to the mount. The tube is equipped with a so-called dove tail (the orange thing) that allows a quick and easy attachment of the tube to the mount. Simply, insert the dovetail into the clamp of the mount and tighten the screw of the clamp.	  	

7	Afterwards the hand terminal and the power supply can be connected to the telescope. Both can be simply plugged into the labeled ports of the mount. For the hand terminal the corresponding holder should be attached to the tripod first, so that it can be safely stored.		
8	Subsequently, the cover can be removed from the tube.		

9	If needed, the sun filter can be attached to the tube. Thread the screws on the side of the sun filter, so that it cannot fall off when the telescope is moving.		
10	Before using the telescope you have to tare the rotation axes. First lose the clutch knobs fixing the right-ascension axis, until you can freely move the telescope around this axis. Now adjust the position of the counterweight such that there is no movement along this axis anymore. Tighten the clutch knobs again and repeat this procedure for the declination axis. As there are no counterweights for this axis, one has to shift the tube along the clamp to tare the declination axis.		

11	Afterwards the axes need to be justified. To do this, they need to be move to the index positions as illustrated in the image.	 	
12	Now the alignment can be performed. This procedure is very similar to the one of our CGE-PRO with the exception that the mount will not automatically move to the index positions but fortunately you already did this in the step before.		

13	Finished!		

Functions such as Hibernation

The operation of the Advanced GT as well as features like hibernation do not differ from the CGE-Pro.

Troubleshooting

Known error sources and their solutions can be found here.

Additional documentation

More details on the Celestron Advanced GT can be found in the corresponding manuals in the lab course room.