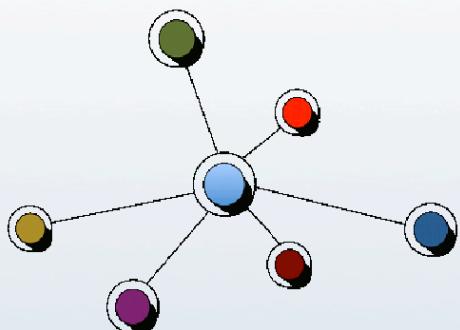
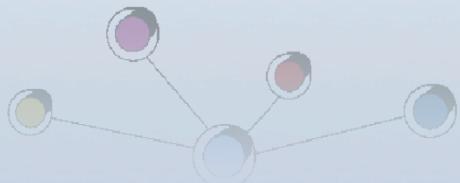


GEMC Tutorial



GEMC

GEWC



M. Ungaro

The GEMC Camera



1

Lesson 1: Using the Camera



In this lesson:

Camera Control:

- rotating, panning, zooming
- moving the camera, light
- perspectives, sides, edges

Pre-requisites:

g1.gcard, available at gemc.jlab.org
Under “Documentation”

The g1.gcard looks like this:

```
<gcard>

    <!-- Central Detectors: -->
        <sqltable name="LH2target"/>
        <sqltable name="CTOF"/>

    <!-- Forward Detectors (NEED SECTOR): -->
        <sqltable name="SECTOR"/>
        <sqltable name="DC12"/>

</gcard>
```

This is how to enable various detectors in gemc.

The gcard has various CLAS12 components: a target, the Central Detector and the Drift Chambers.

Starting GEMC

Let's start gemc with the g1.gcard.

For this lesson we do not need the magnetic field so we will use the additional option `-NO_FIELD=all`

```
gemc -gcard=g1.gcard -NO_FIELD=all
```

Two windows will pop up: the GUI interface and the screen with the geometry.



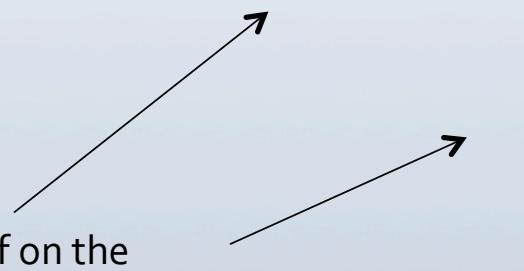
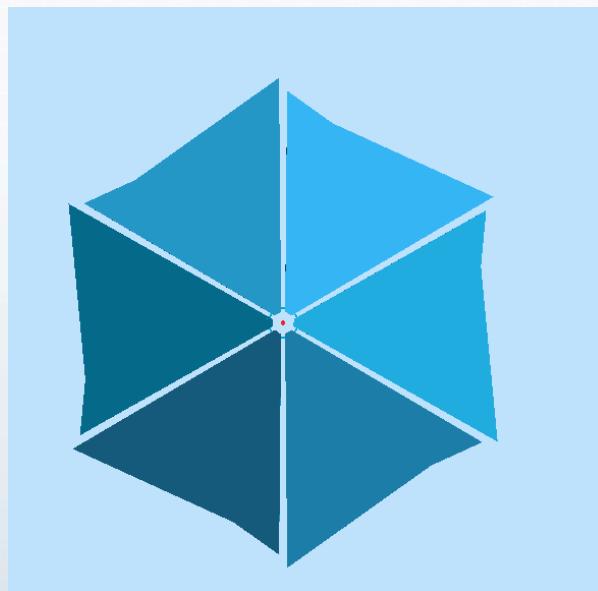
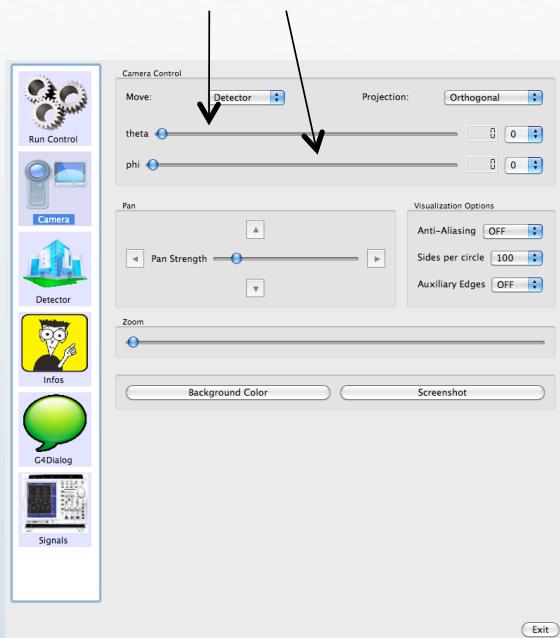
Notice: you need a good video-card to run GEMC in graphical mode, otherwise you might experience crashes. If that's the case, try adding the options:

`-USE_QT=2 or 3 or 4`

to put less load on the video-card (you'll pay in responsiveness and by not being able to navigate "Google map" style)

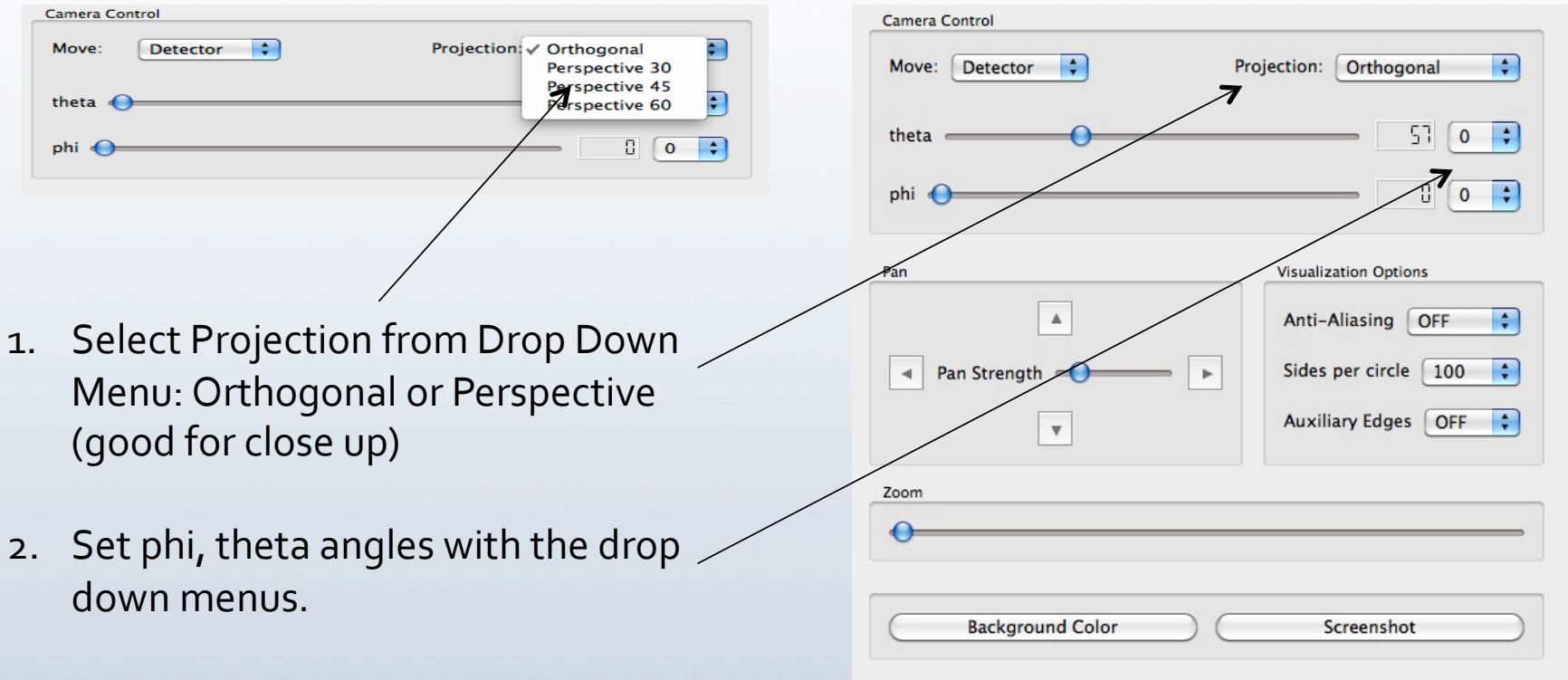
Starting GEMC

Click on the GUI button “Camera”
You can rotate the detector using these
sliders....



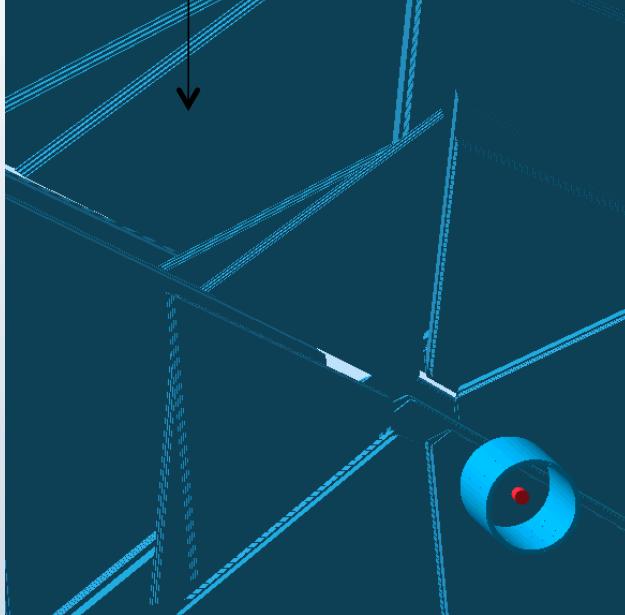
... or by “grabbing” the detector itself on the screen (a la google maps). This includes zooming in and out.

Camera Controls

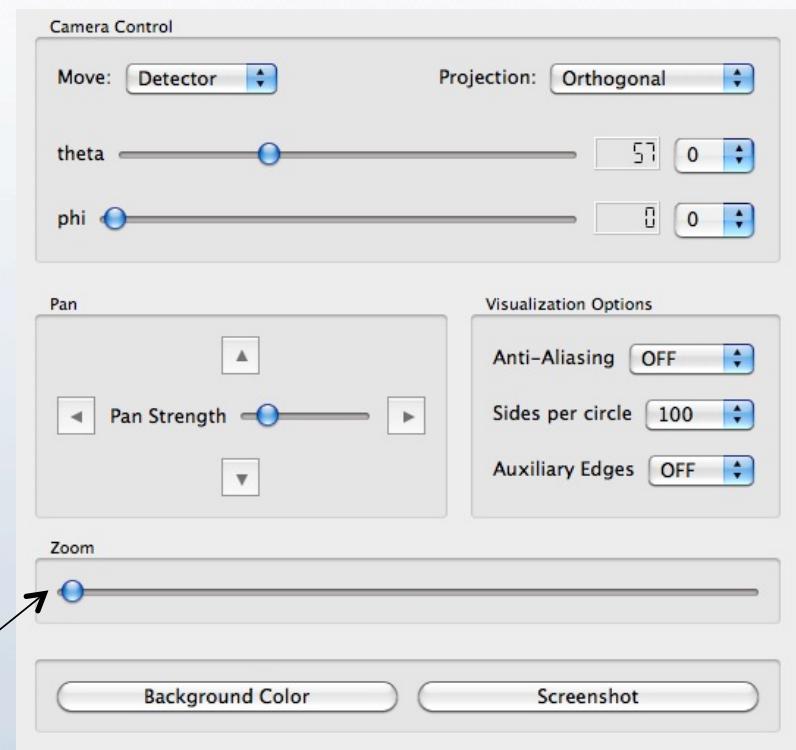


Camera Controls

Zoom in and out using the mouse middle button or touchpad on the Detector Screen...

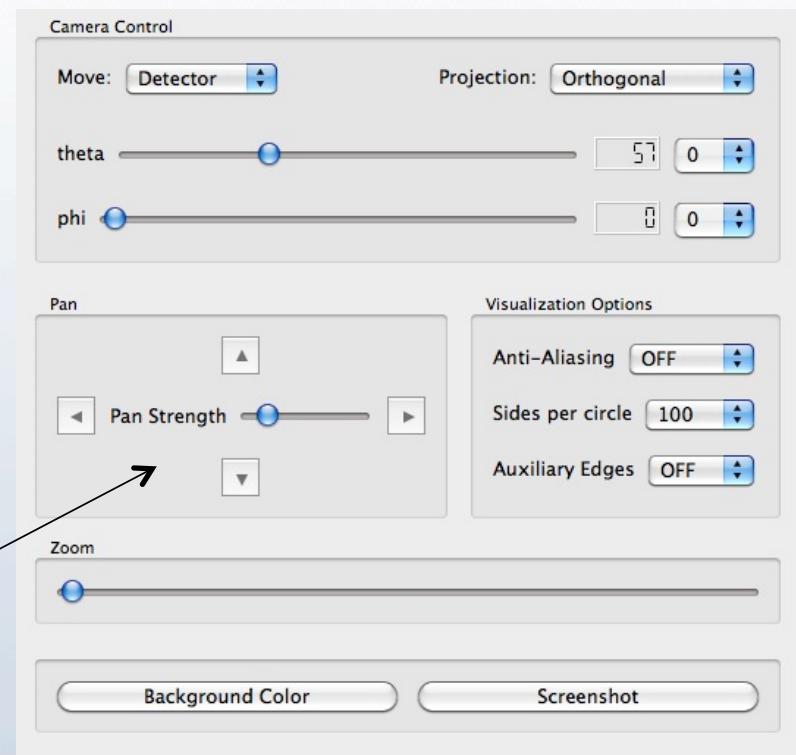
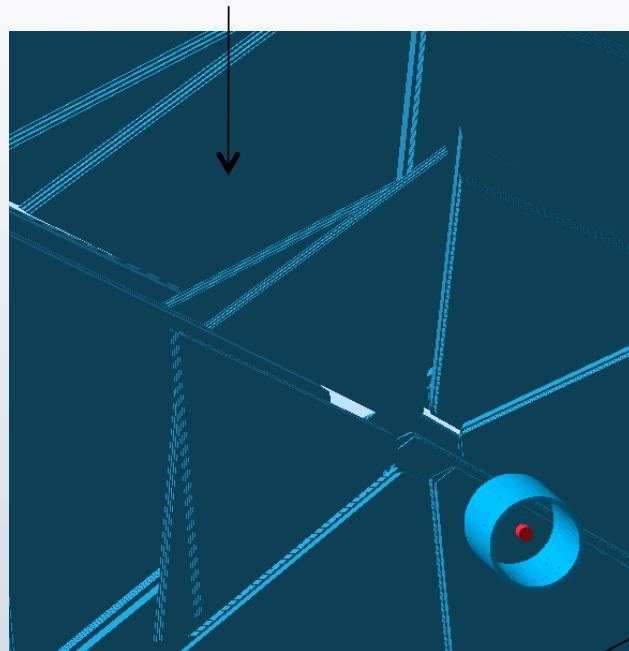


... or by using this slider.



Camera Controls

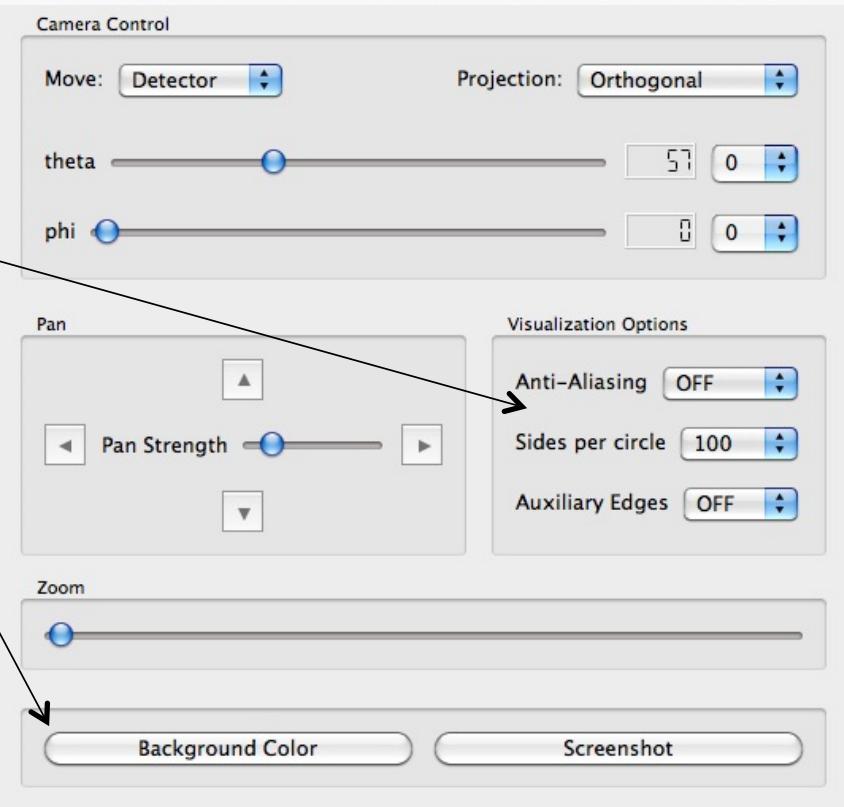
Pan using right-click > Move on the screen...



or by using these buttons
... or by using the keyboard arrows

More Camera Controls

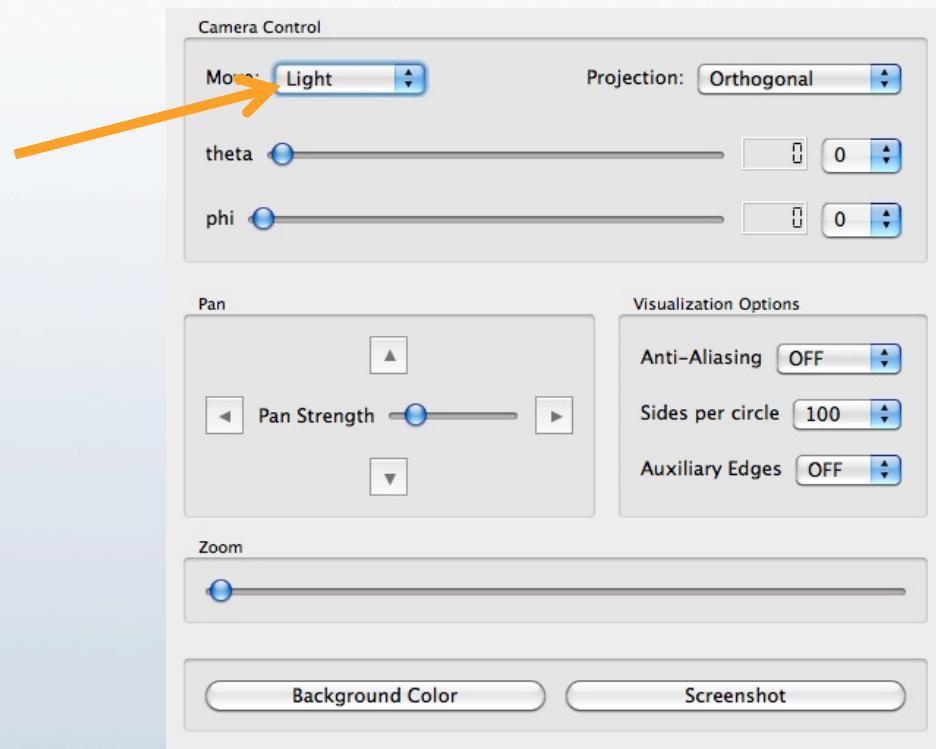
1. Turn ON Auxiliary Edges
2. Change Sides per circle
3. Switch Anti-Aliasing
4. Change Background Color



✓ With a good video-card these can improve visualization dramatically.

Camera Light Controls

1. Switch the Move drop down menu from "Detector" to "Light"
2. Use Slider to position Light



End of Lesson 1: Using the Camera

