# DSG NPS Status Update

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Detector Support Group
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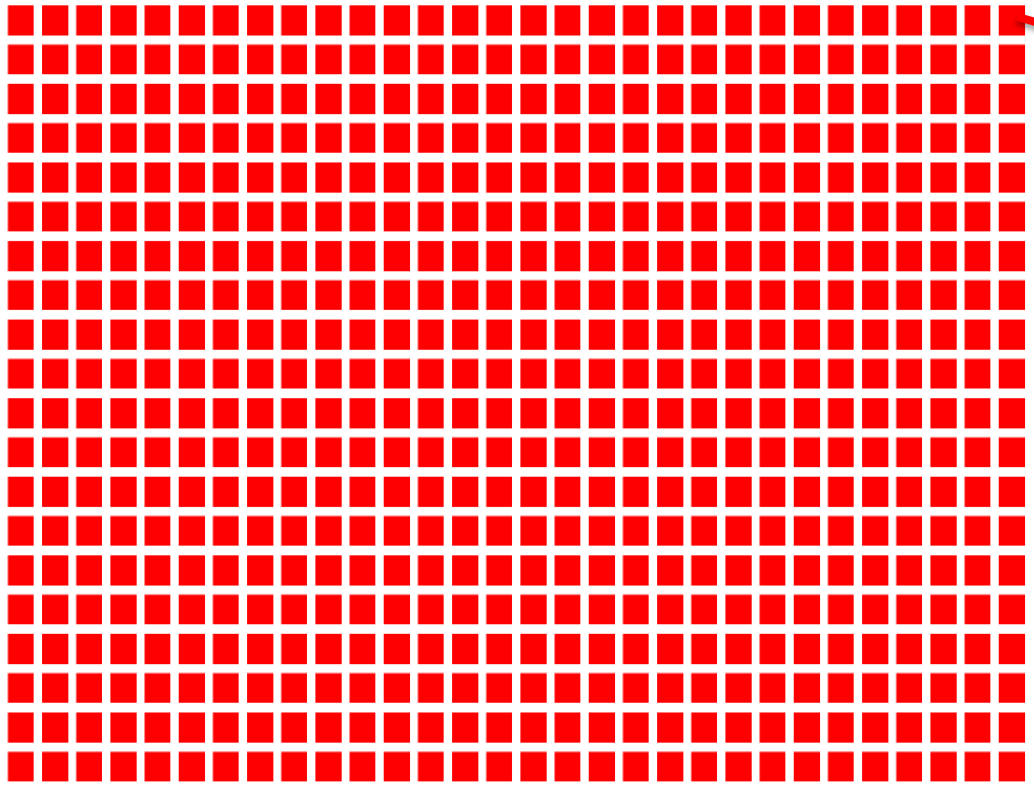
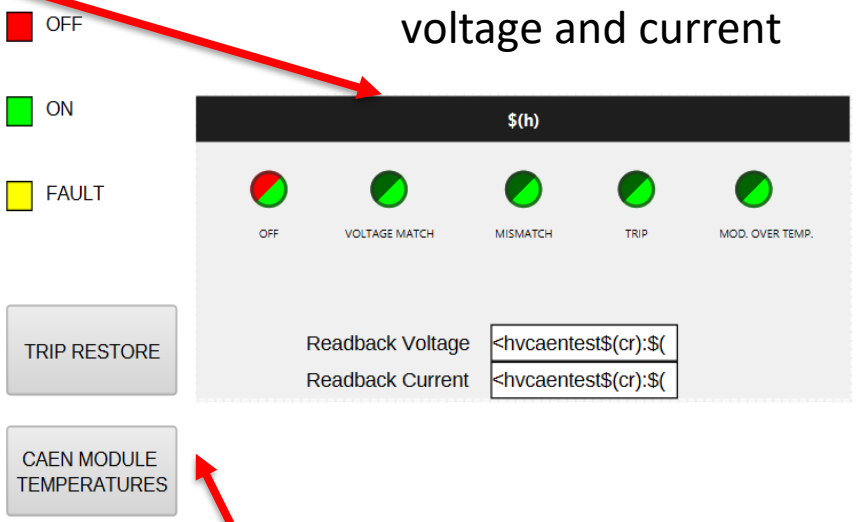
# EPICS Phoebus High Voltage Controls

## NPS Overview



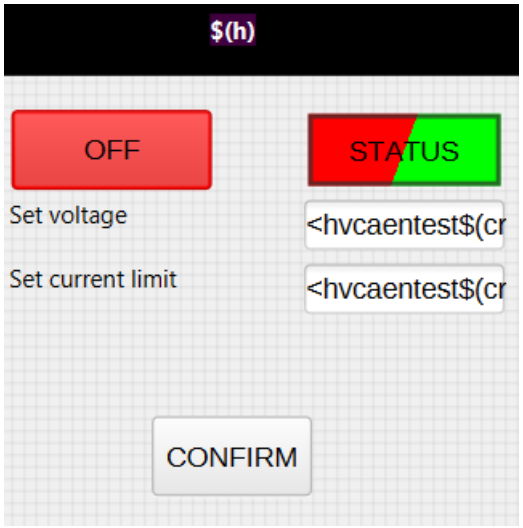



PMT status screen displays readback voltage and current

Buttons to open screens for trip restore and module temperature monitoring

- Each clickable block represents a high voltage channel
- Clicking a block opens a PMT status screen

# EPICS Phoebus High Voltage Controls

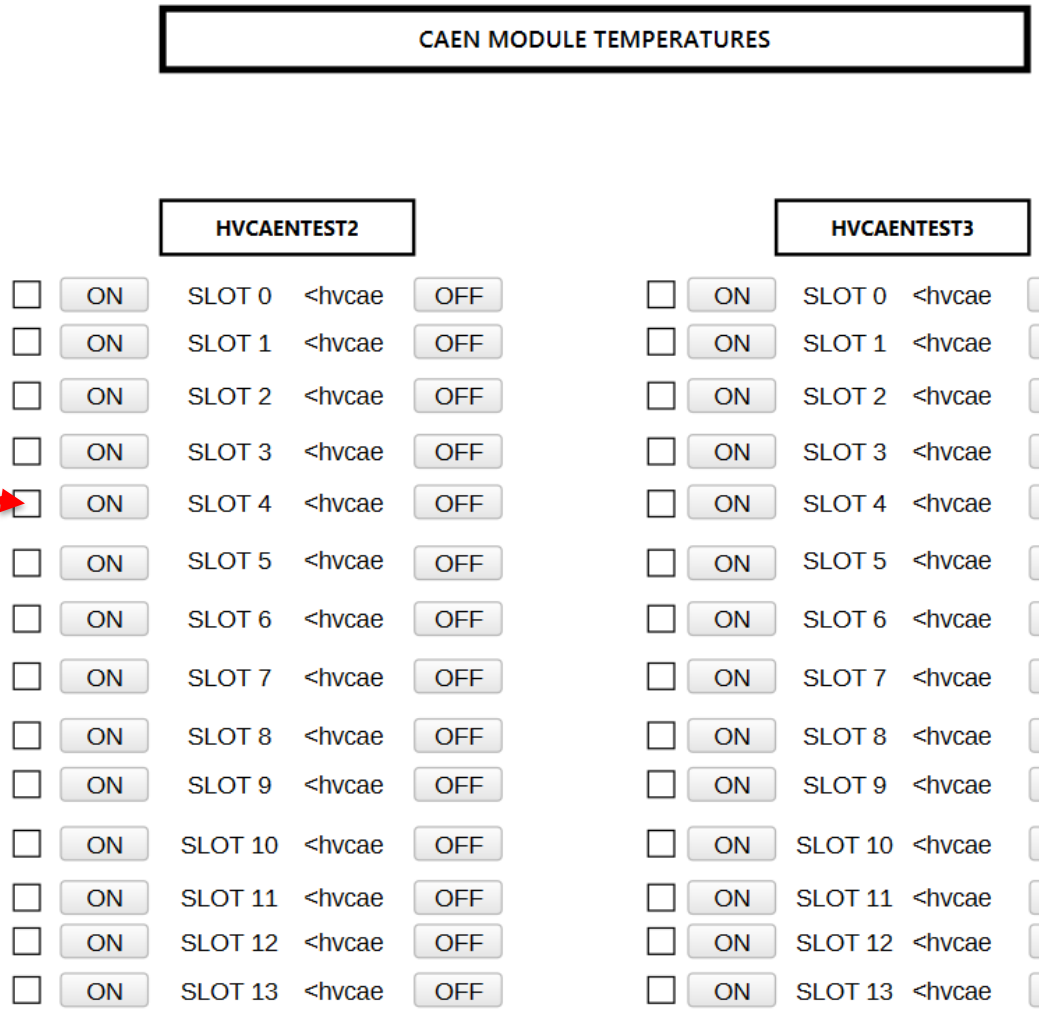




Clicking on rectangle, e.g. 00-35, opens above screen to set voltage level and current limit

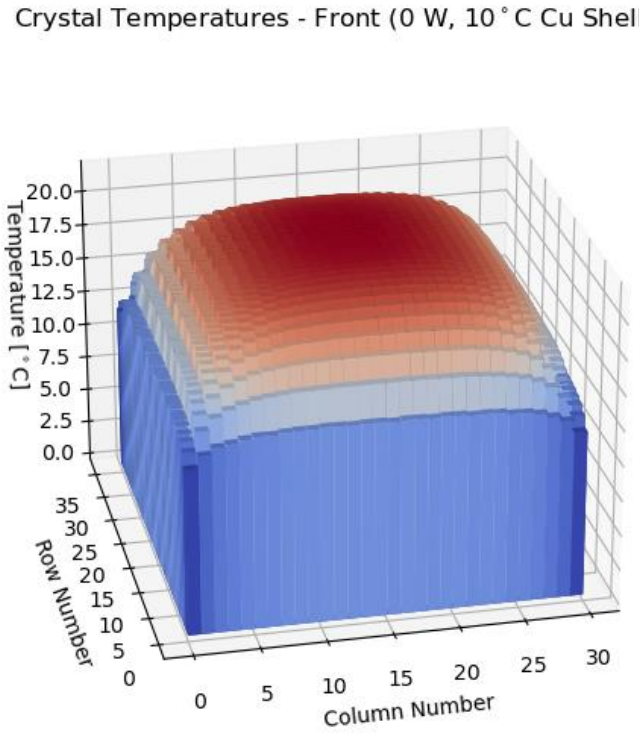
- A portion of readback voltage and current screen for all 1080 PMTs

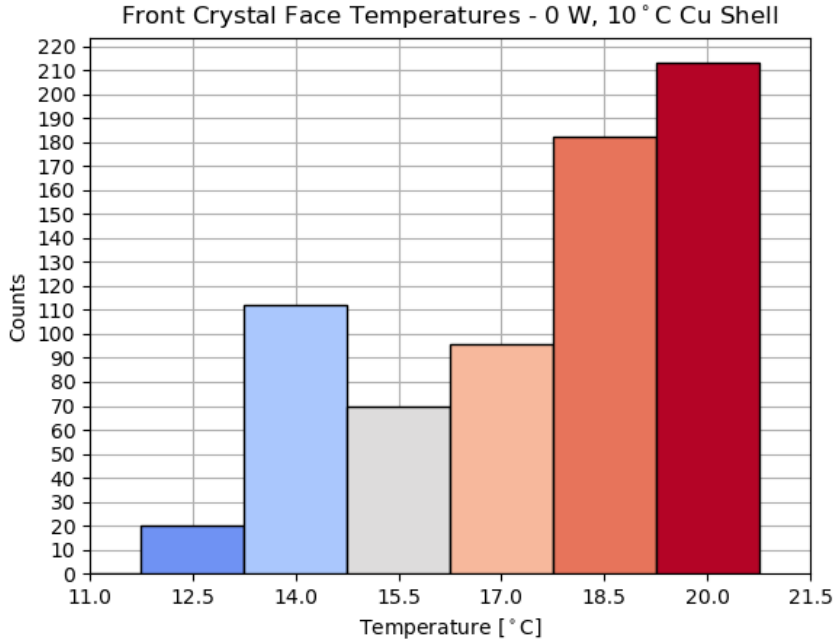
# EPICS Phoebus High Voltage Controls

- Monitors internal CAEN modules' temperatures
- LEDs indicate module power status
- Modules can be turned on and off manually by clicking the on/off buttons



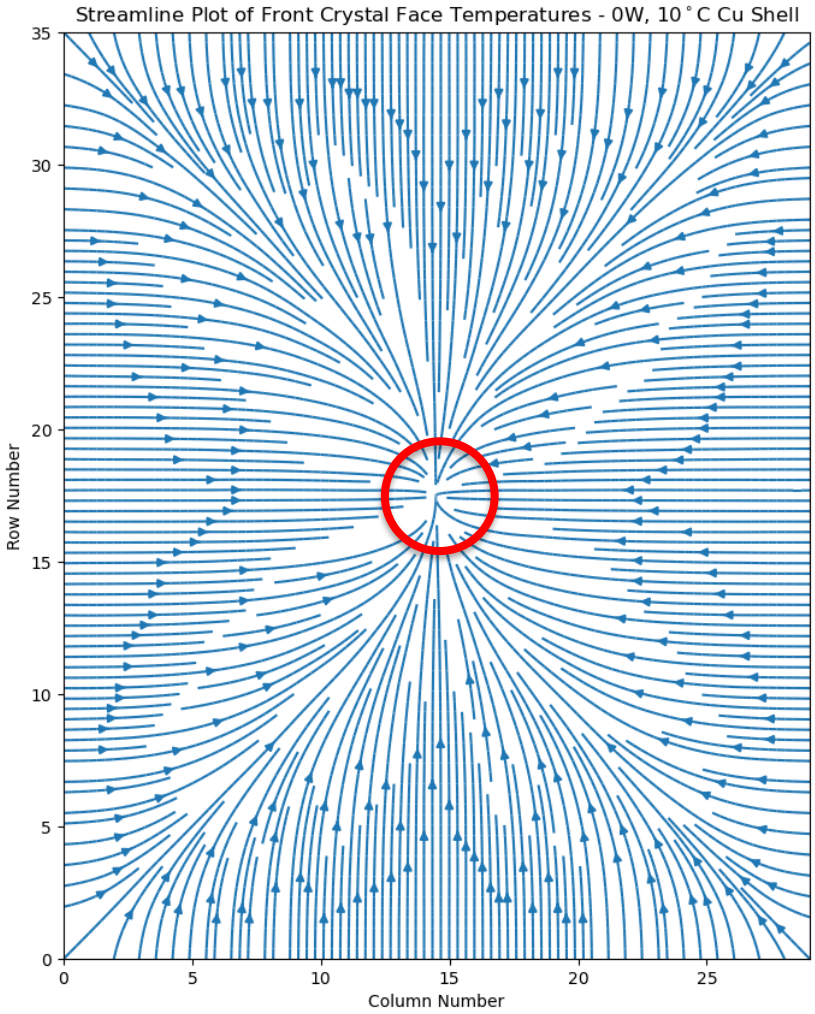
# Ansys Thermal Analysis




- About 210 crystals in the central zone between 19.0°C and 20.5°C
- Due to cooling, peripheral crystals are between 11.5°C and 13.0°C
- Ambient temperature is 22.0°C

# Ansys Thermal Analysis




- Streamline plot of the heat flow gradient
- Heat flow to the peripheral crystals is indicated in this plot
- Arrows are from low to high temperature

# Conclusion

- DSG is developing high voltage EPICS controls
  - Need to be tested
- Ansys thermal analysis of crystal array in progress

**Thank You!**