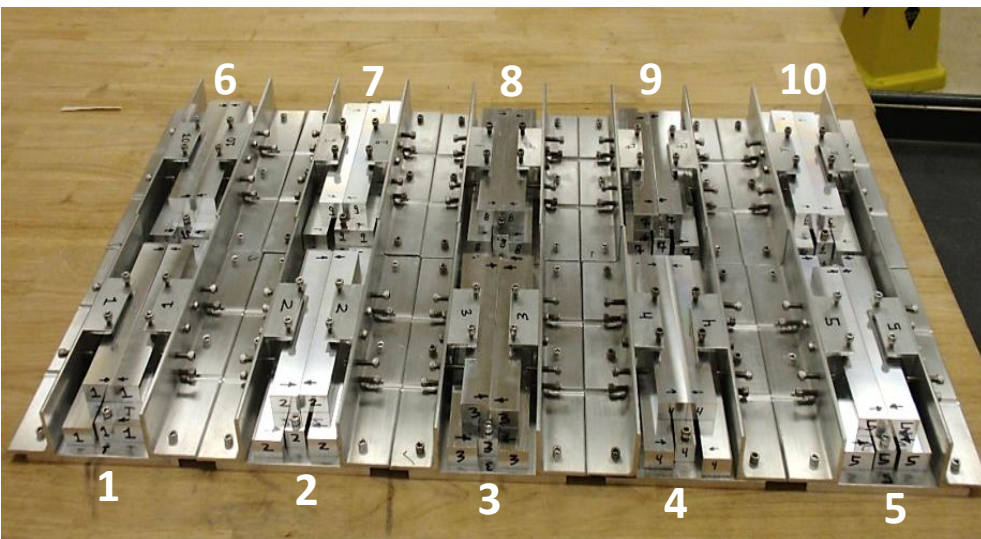# DSG-NPS Collaborators' Meeting Update

## Aaron Brown and the
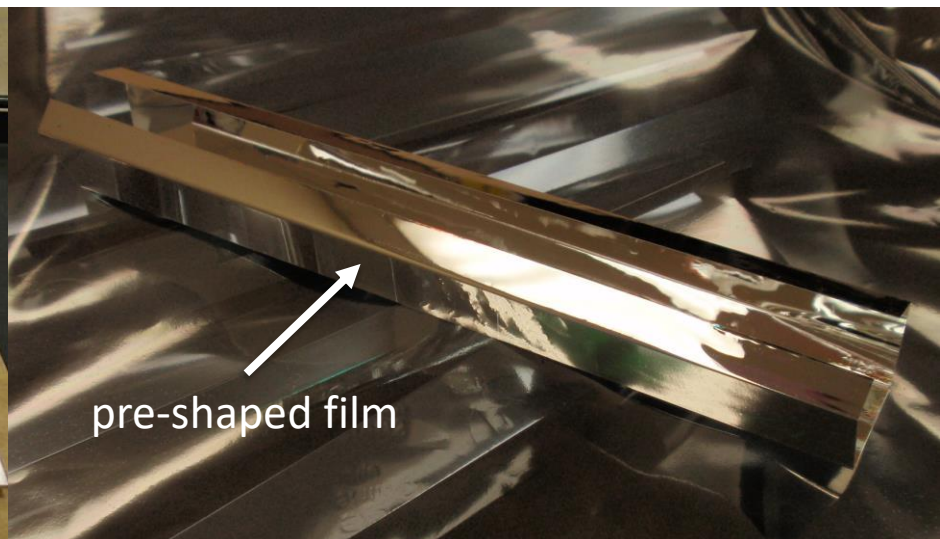## Detector Support Group
## 12/02/2021

# Contents

- ESR Film Pre-shaping

- CSS Phoebus Screen Development

- Ansys Thermal Analysis

- Conclusion

# ESR Film Pre-shaping



Ten jigs available

Finished product

pre-shaped film

- Mindy Leffel and George Jacobs have completed 340 of 600 films
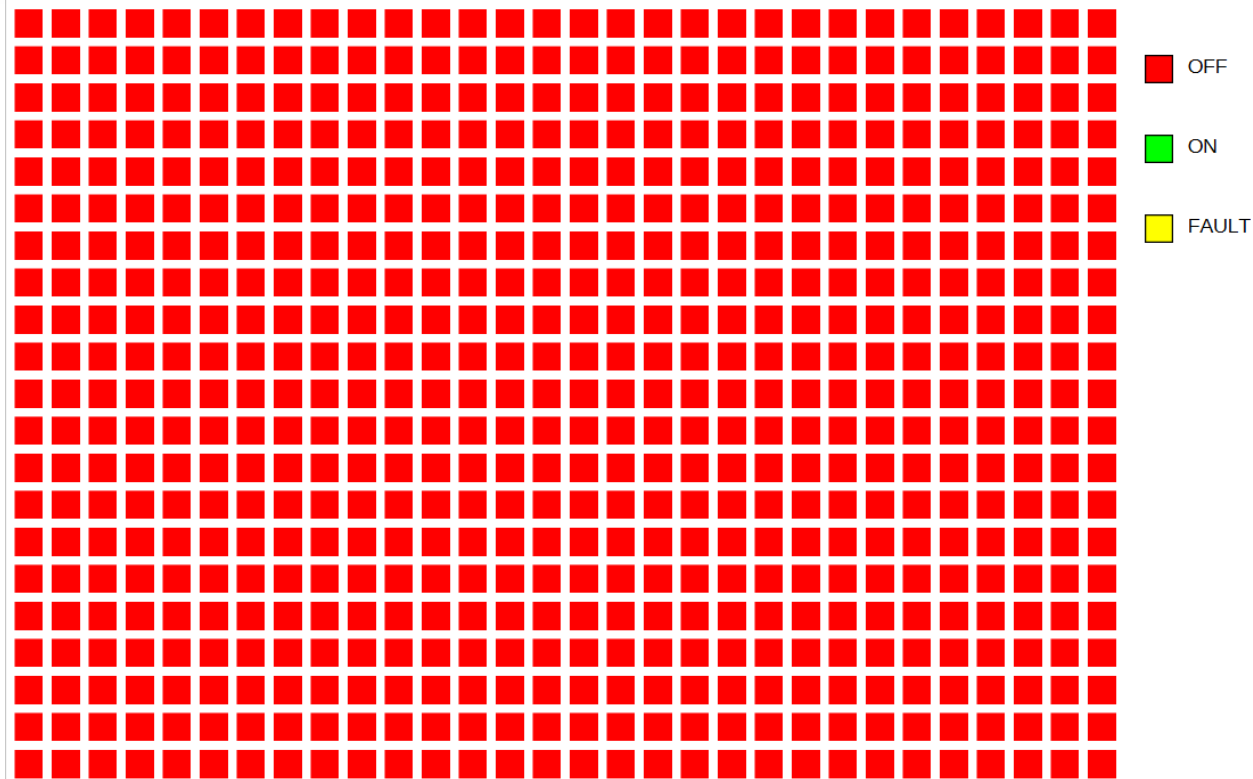
# CSS Phoebus Screen Development



*monitor voltage, current, power status* Phoebus screen

- Converting EPICS CSS-BOY screens to CSS Phoebus screens
- Each block is an embedded display (copy of the same screen)
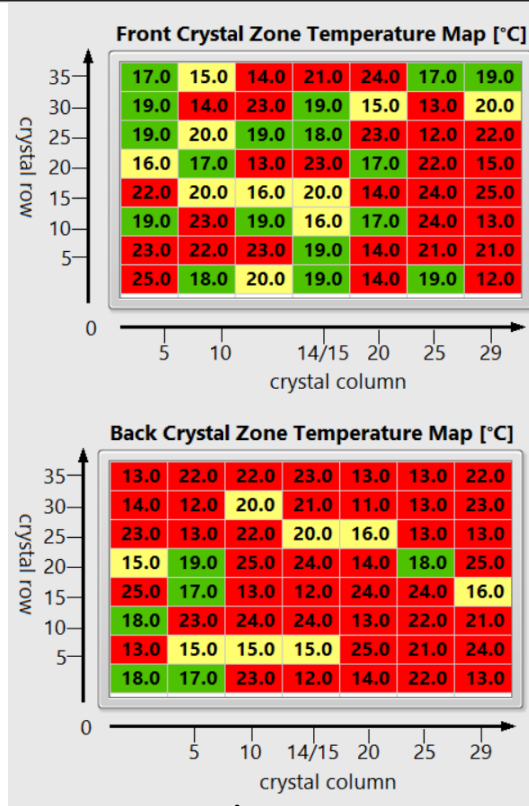  - Easier to make changes

# CSS Phoebus Screen Development



NPS Overview screen

- 1080 LEDs
  - LED color indicates power supply channel status

# CSS Phoebus Screen Development



LabVIEW

Phoebus

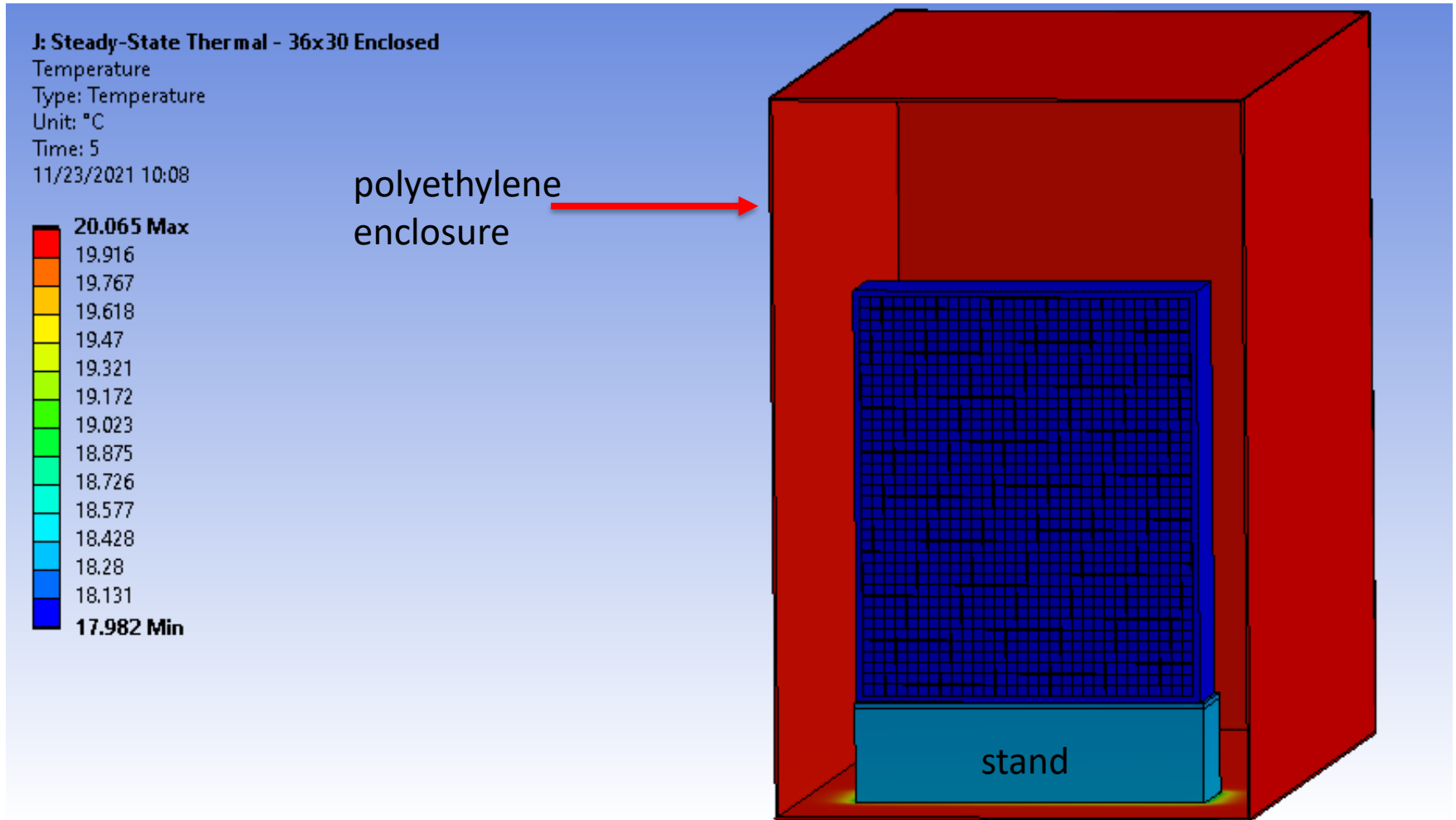- Temperature maps give an overall view of temperature sensors in the crystal array

- Enables visual detection of temperatures over threshold

- Randomly generated temperature values

# Ansys Thermal Analysis



J: Steady-State Thermal - 36x30 Enclosed
Temperature
Type: Temperature
Unit: °C
Time: 5
11/23/2021 10:08

20.065 Max
19.916
19.767
19.618
19.47
19.321
19.172
19.023
18.875
18.726
18.577
18.428
18.28
18.131
17.982 Min

polyethylene enclosure

stand

- Added stand and polyethylene enclosure to model

# Conclusion

- ESR film pre-shaping work in progress (~55% complete)

- EPICS screens in development
  - Converting previously made screens from CSS-BOY to CSS Phoebus
  - New screens will be made using CSS Phoebus
  - Started Phoebus-based alarm handler system

- Good progress

Jefferson Lab

# Thank You!
# Season's Greetings!