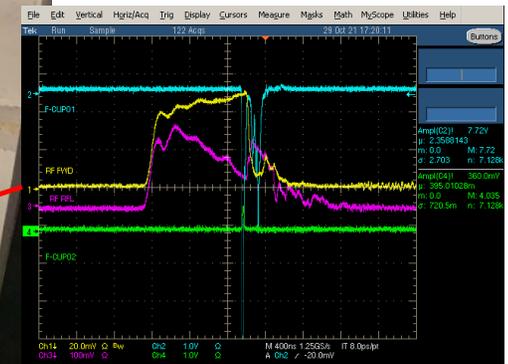
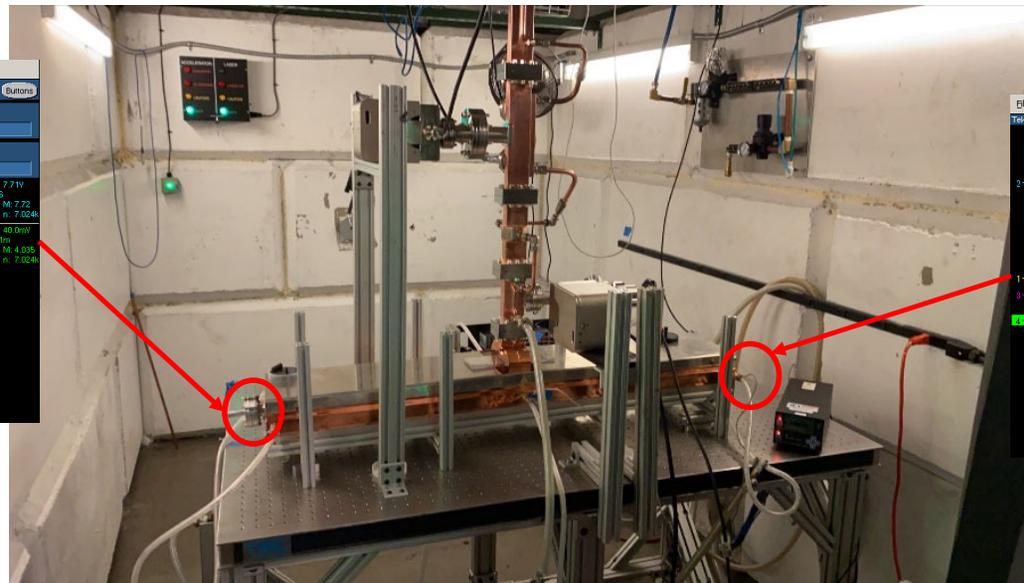
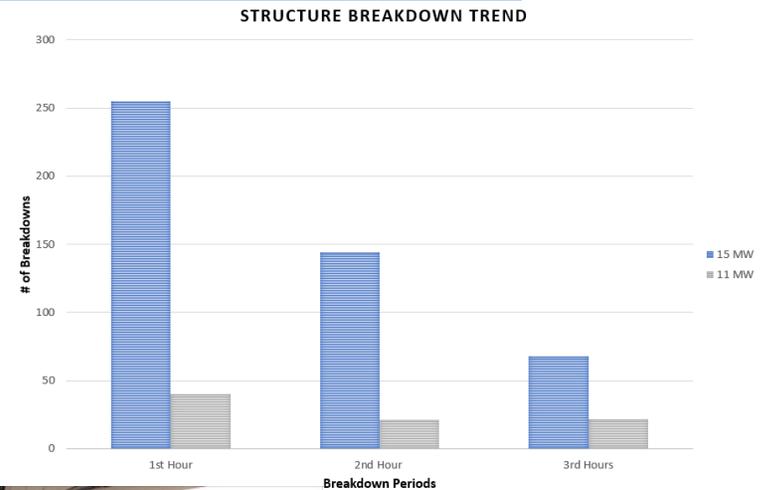


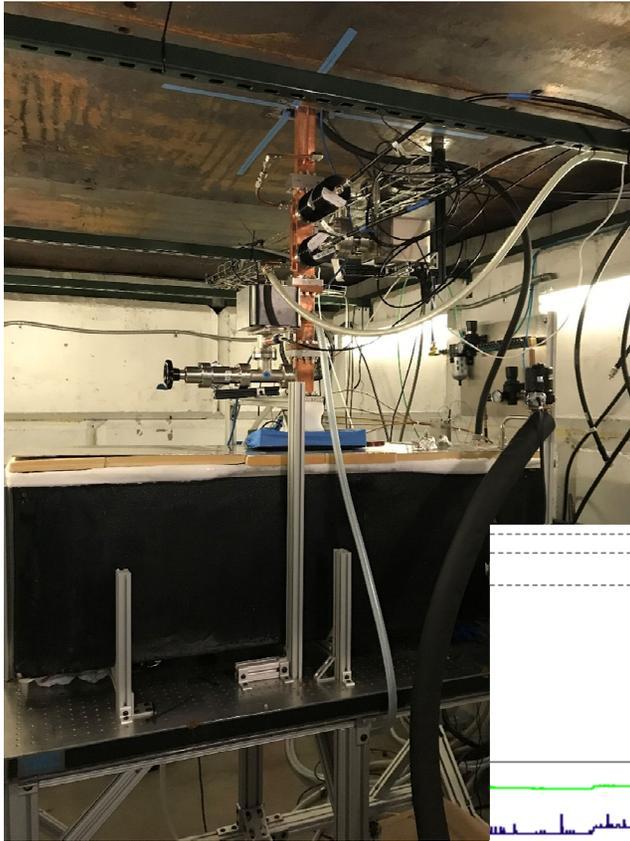
# Testing: Room Temperature C<sup>3</sup> Structure



- Utilized 25 MW C-band power station #1 in late October 2021
  - Commissioned LLRF system and klystron tangentially with this project
  - SLAC C<sup>3</sup> Structure (de)tuned to be at 5716.8 MHz @  $\approx 50^{\circ}\text{C}$
- Conditioned the structure while monitoring breakdown rate and vacuum
  - Conditioned up to 15 MW, 100 Hz, 1  $\mu\text{s}$  pulse width
- Saw expected breakdown rate decline over conditioning period



# Testing: Cold C3 Structure



- Utilized 25 MW C-band power station #1 in late July of 2022
  - Baked structure prior to testing
- Initial cooldown structure resonance:
  - @26 °C = 5694.1 MHz
  - @-195 °C = 5712.4 MHz
- Conditioned the structure while monitoring breakdown rate and vacuum
  - Conditioned up to 10 MW, 100 Hz, 1  $\mu$ s pulse width
  - Suspected ion pump failure halted progress
- There was not significant structure breakdown
  - Saw some breakdown in waveguide close to structure
- LN2 burn rate was 230 liters per day
  - Did not try to optimize setup

