microMott

24R156-2-1 is in great shape, chamber bake completed today and is ready for Adam to begin on Wednesday

24R149-1-1 and 24R149-1-2 broke far more easily than they should... why?

Continuing to track pressure during heat to quantify gain from NEXTorr

UITF

Many jobs in progress to get ODU samples in UITF

- ~~Pucks degassed~~
- ~~Pucks UHV cleaned~~
- Suitcase built (80 %)
    - NEXTorr Z 300 should arive in ~1 week
    - ~~Manipulator needs adjustment to prevent puck rotation~~
- Laser is moving into the cave (this week?)
- ~~ODU sample 22R177-1-3 is getting cleaned for the maiden voyage~~
- ~~2'6" table is cleared~~

COMSOL

COMSOL calculates doping dependent absorption using an outdated Δk notation

$$\alpha = \frac{4\pi \Delta k}{\lambda}$$

The notation we are more familiar with is *susceptibility*

$$\Delta k = \frac{\chi''}{2n_b}$$

Susceptibility (χ) has the familiar definition

$$\chi'' = \frac{\omega_p^2 \gamma \omega}{(\omega_0^2 - \omega^2) + (\gamma \omega)^2}$$

Plasma frequency, ω_p^2, is a function of the doping profile (see my note)