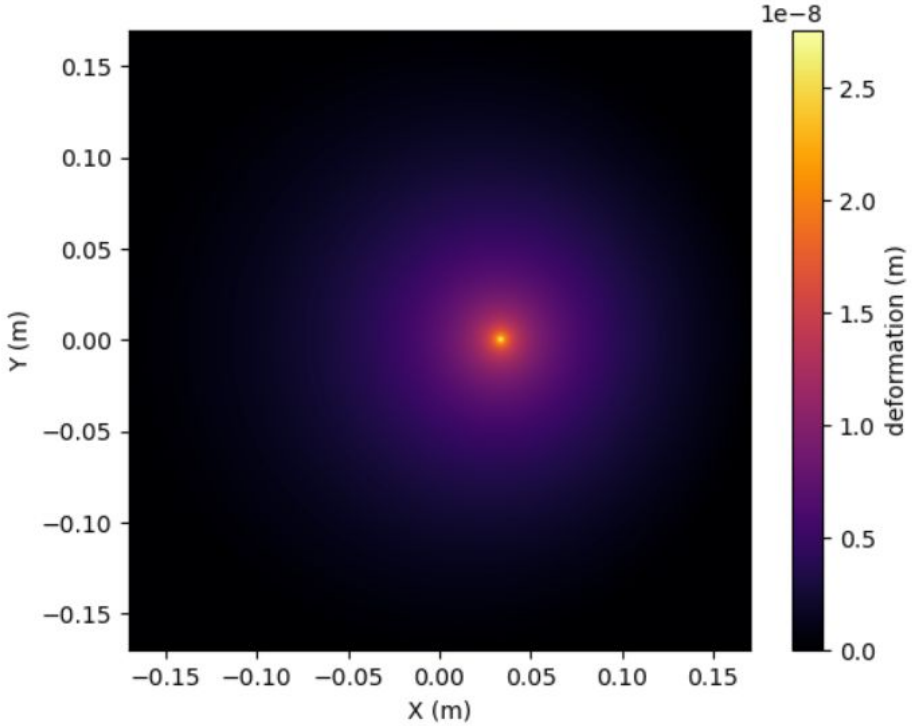
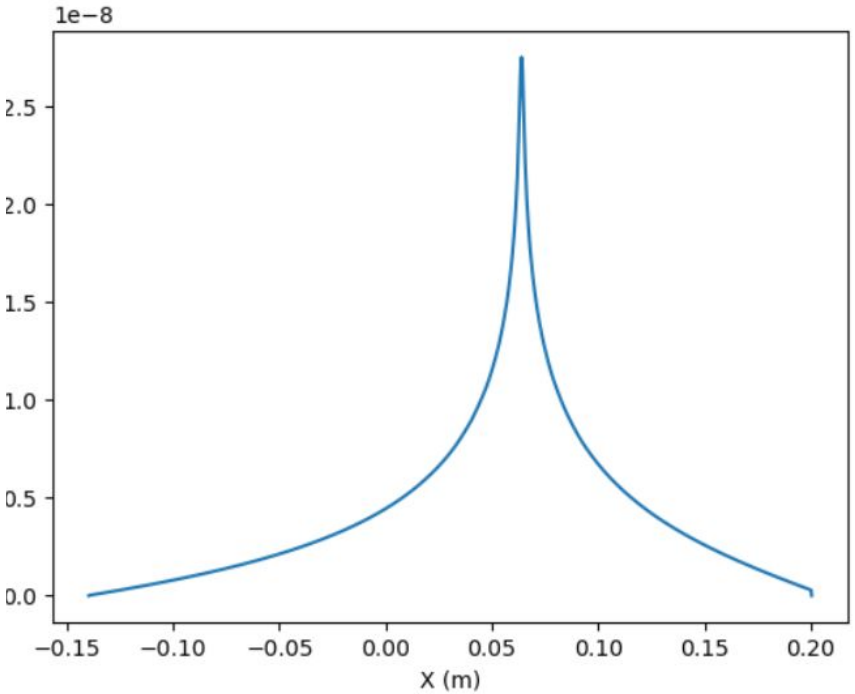
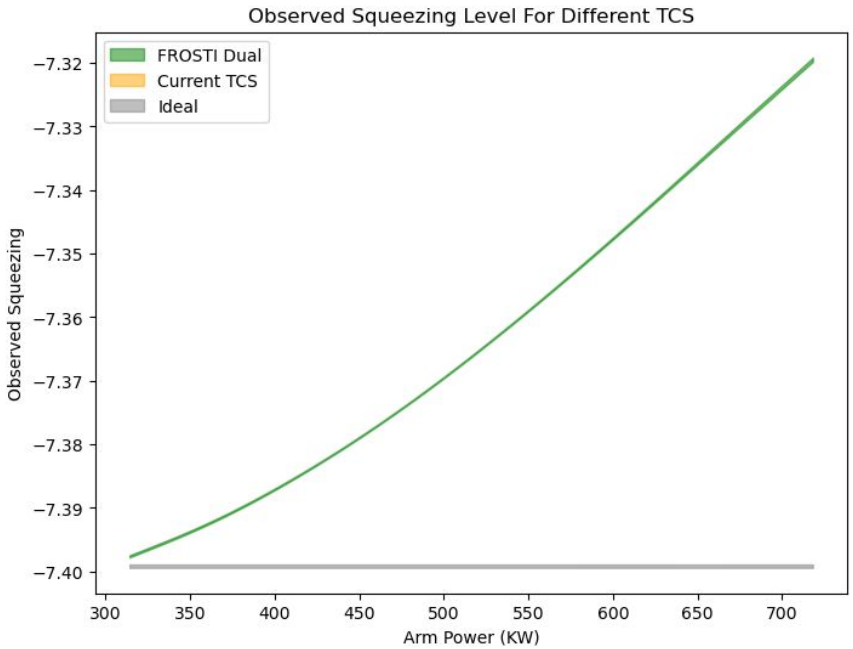
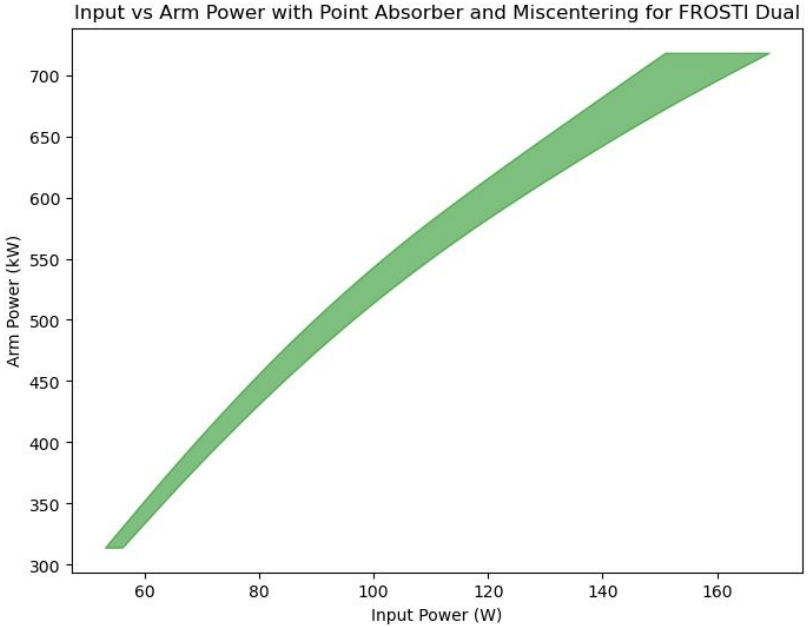
Fixed The Point Absorber Map, located at 3cm away from center, with 3cm miscentering. 40mW of absorption



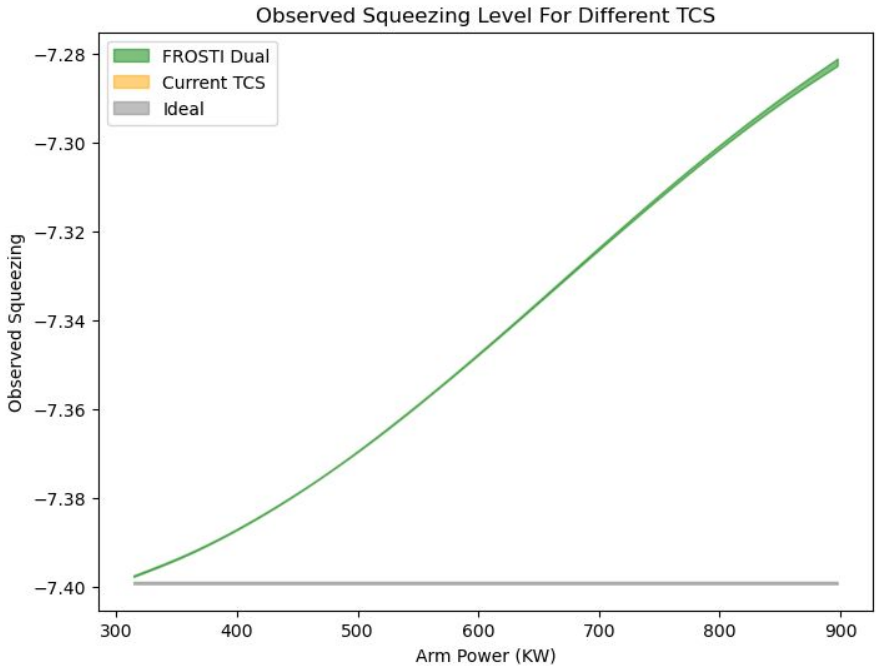


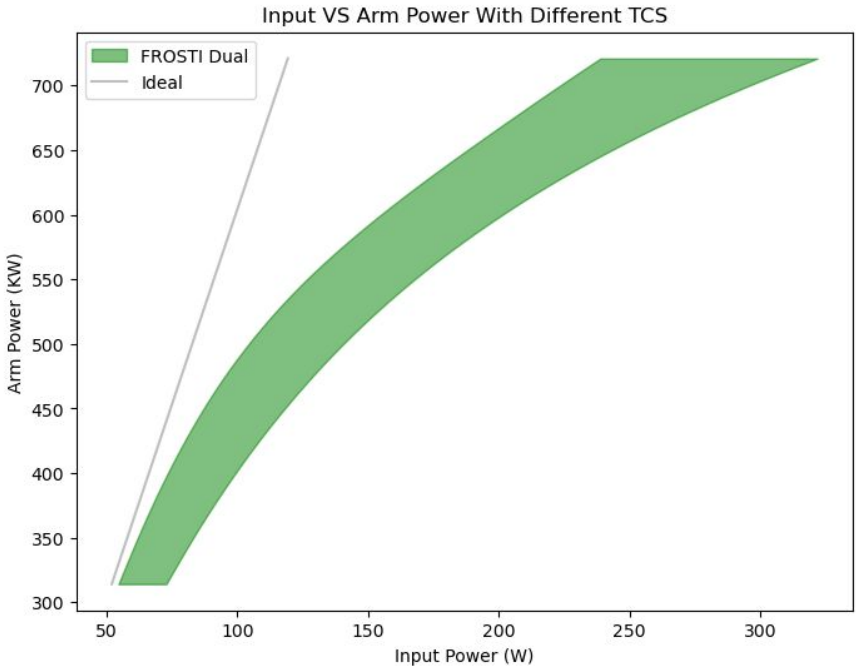
New Result After Removing Tilt of Thermal Maps+Point Absorber Map For FROSTI Dual





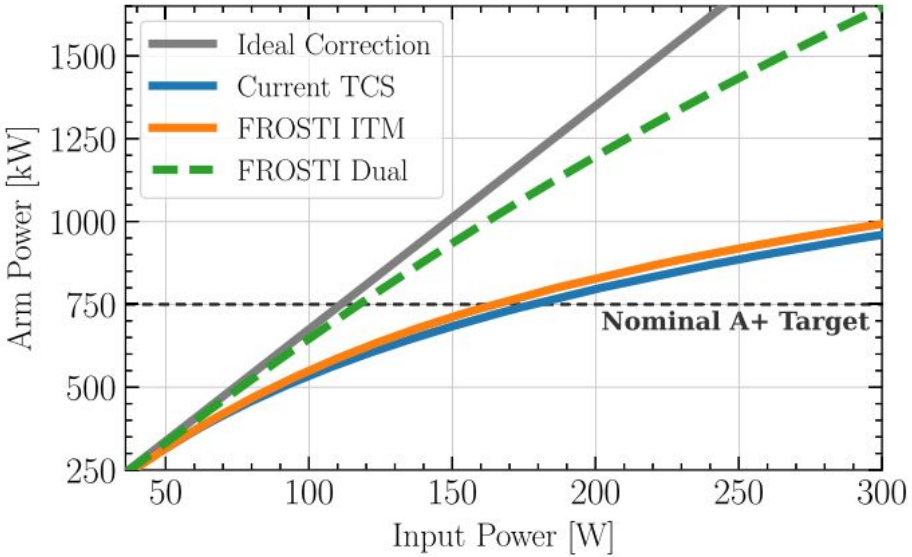
Comparison to the case without miscentering

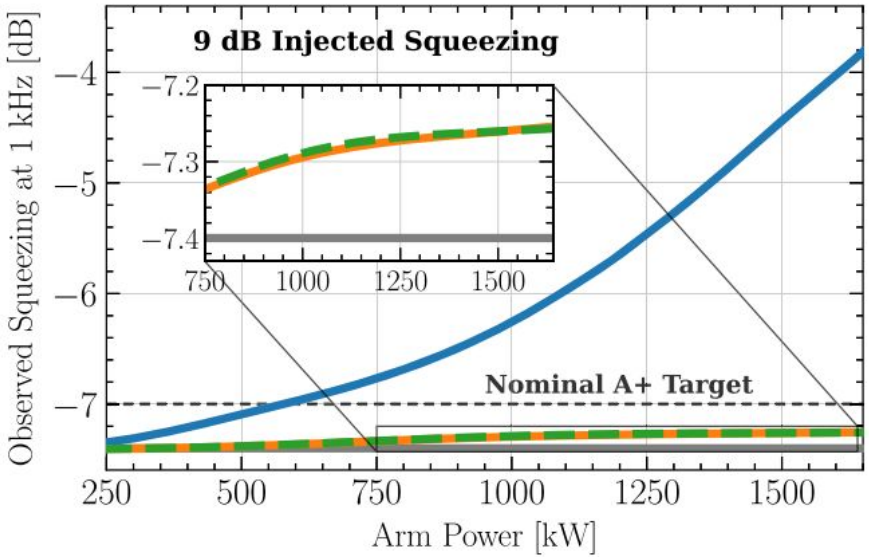




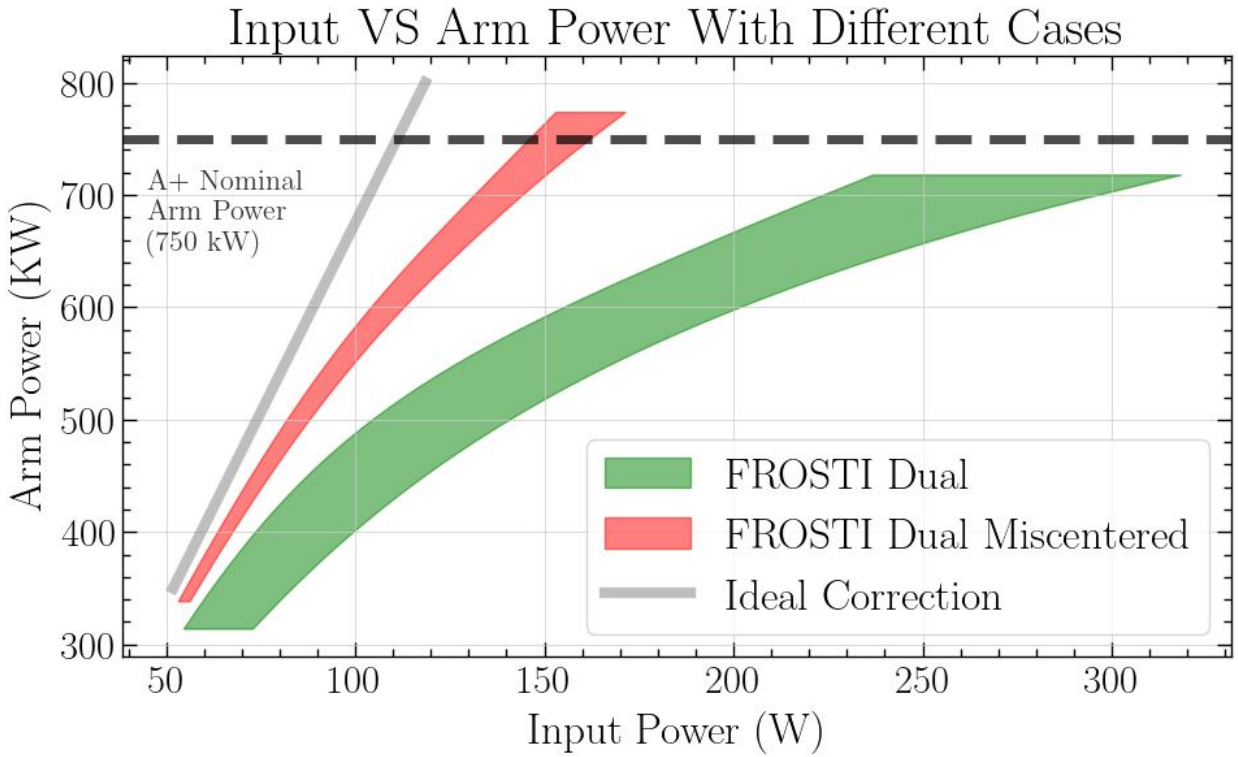
Comparison to the PRL Result

- The achieved arm power significantly decreased
- Changes to observed squeezing not as noticeable





Direct comparison: with/ without miscentering



Other Current Work

- Plotting the 2 plots but include Current TCS and Cold State
- Try calculating the power absorbed by point absorber with “ccd” in Finesse
  - Also keep PHR and therefore arm power fixed/independent variable, but assuming that the changes point absorbers made for these values are small (to avoid the long expression of math in my old method)
  - First calculate the power absorbed assuming a nominal arm power of 1.5 kW
  - Use readings from a ccd detector from Finesse placed at the mirror the point absorber is at to infer the power absorbed by the point absorber at some other arm power
  - generate/rescale maps to find the map of point absorbers at the current power absorbed
  - Add it as well as thermal maps to the model
  - Rerun the code but now finding the required input power for the arm power we independently vary