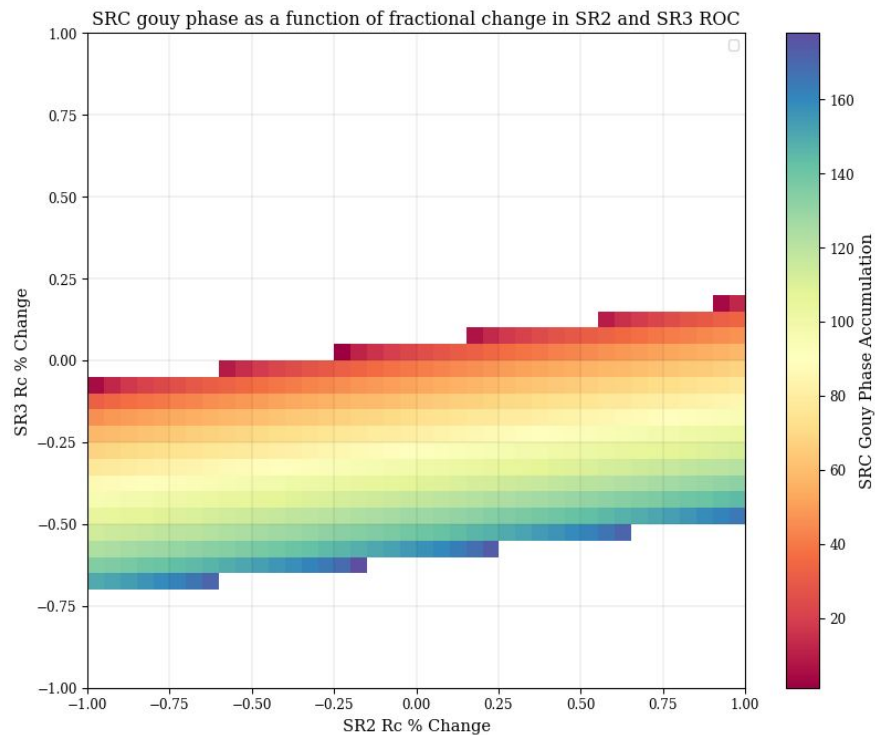
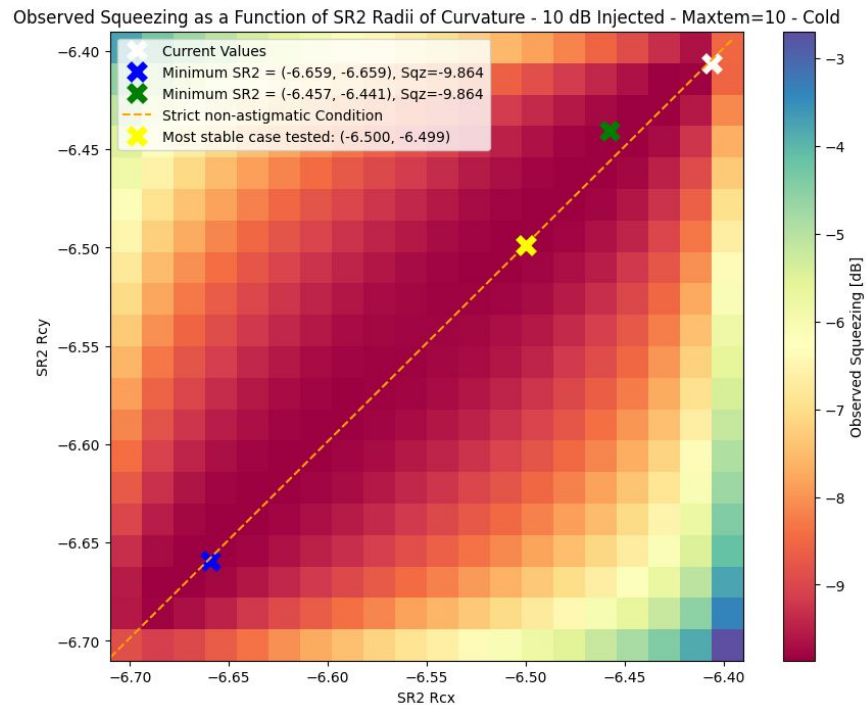


Update

10/23/25

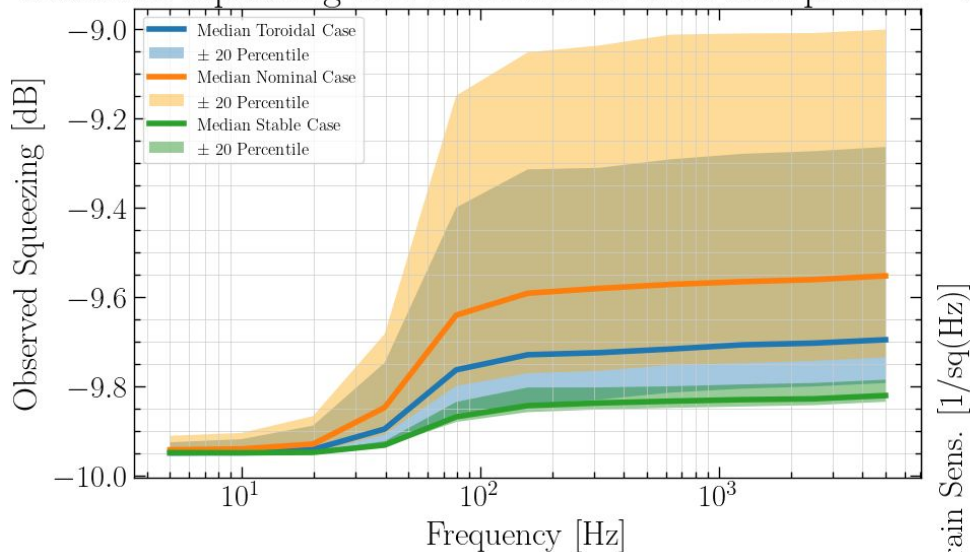


This plot is confirmation that the SR3 mirror is most sensitive to small errors. For this reason we will currently be exploring just the parameter space of the SR2 mirror



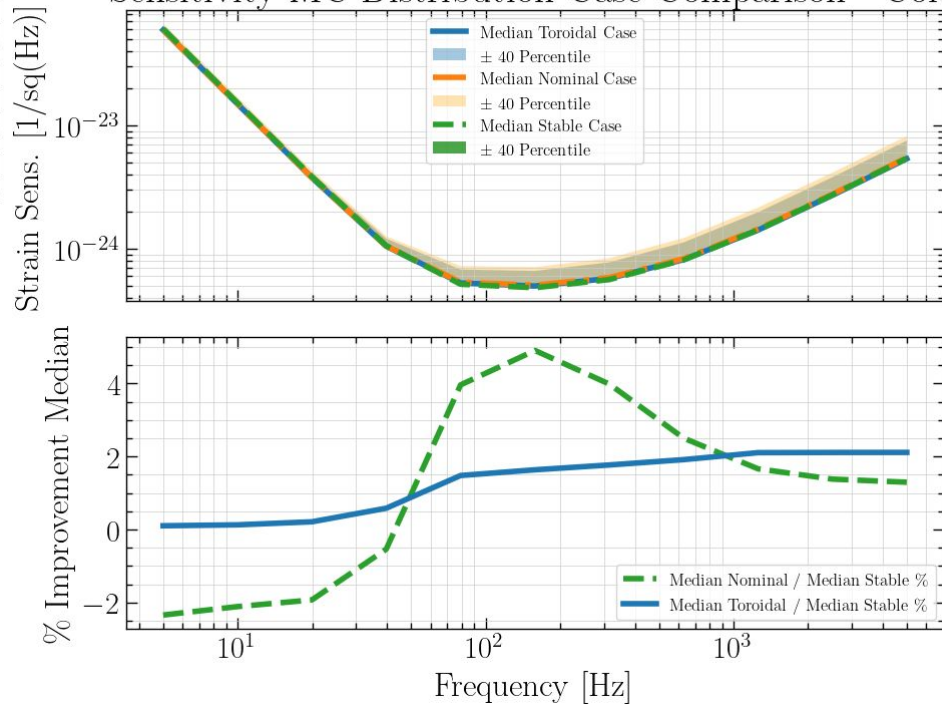
Two minima from this search are highlighted (green,blue), however from a coarse sampling of this space the yellow point is the most stable case tested. This is the point explored in the following slides, called “stable case”

Observed Squeezing MC Distribution Case Comparison - Cold

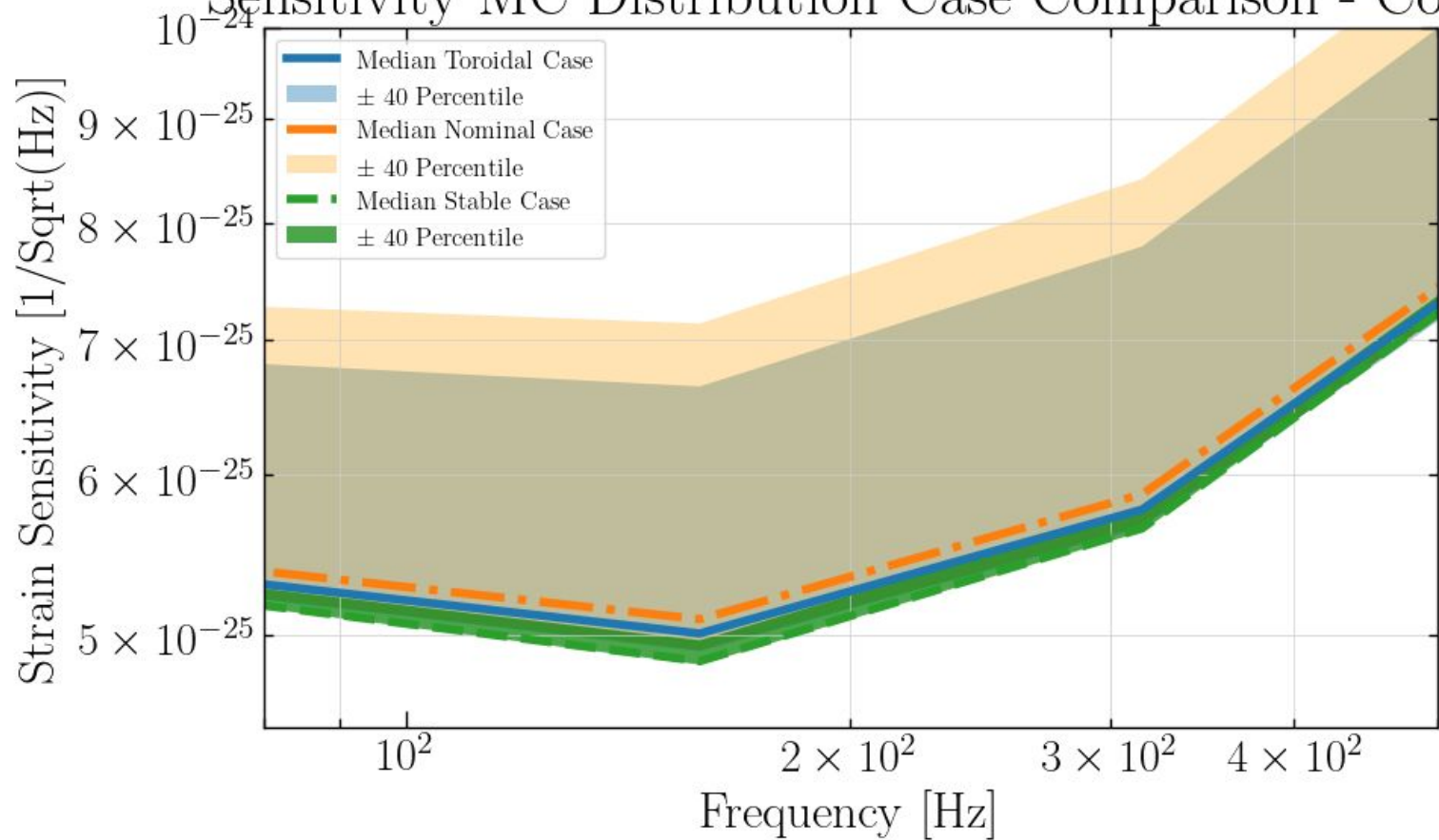


Small MC simulations (120 trials) for a cold interferometer. “Stable case” performs better and has significantly less variance than previously explored toroidal mirror case.

Sensitivity MC Distribution Case Comparison - Cold

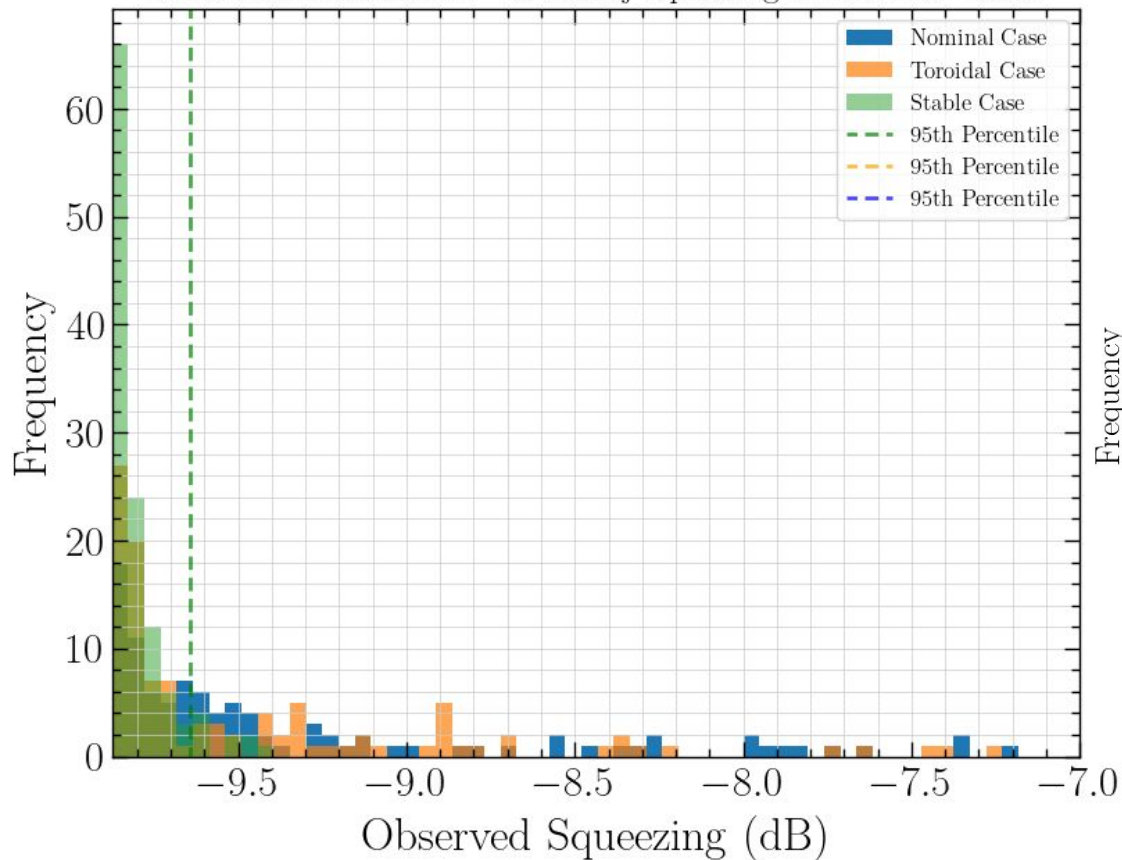


Sensitivity MC Distribution Case Comparison - Cold



Zoomed in image of previous sensitivity plot

Statistical Distribution - 10 dB Inj Squeezing at 1.26kHz - Cold



Statistical Distribution - 10 dB Inj Squeezing at 1.26kHz - Cold

