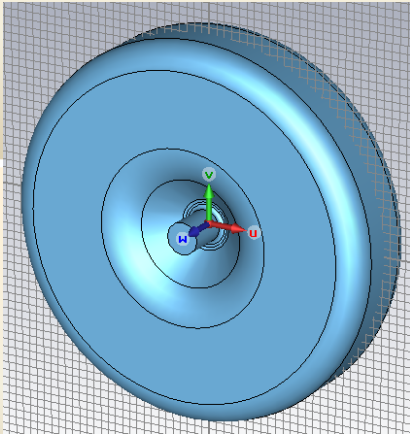


CST MICROWAVE STUDIO SIMULATIONS FOR BUNCHER CAVITY B40

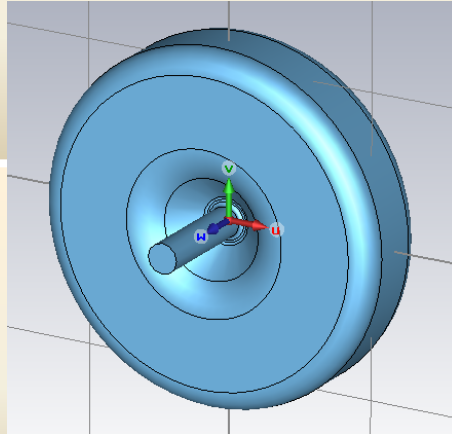
**Shakir Ullah
Frank Gerigk**

NO PORTS FOR TUNER/PICK UPS / VACUUM ETC.



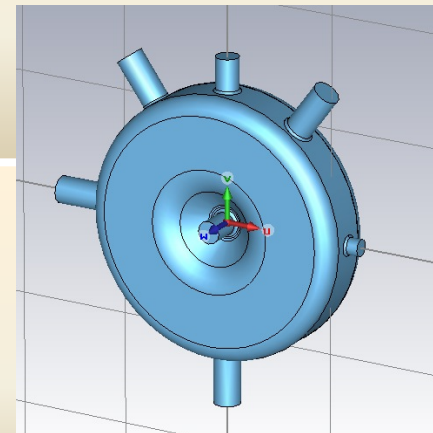
**Frequency = 350.918MHz,
mesh cells = 55935**

**NO PORTS FOR TUNER/ PICK UPS/
VACUUM ETC. BUT BEAM PORTS
EXTENDED BY 10cm**



**Frequency = 350.962MHz,
mesh cells = 73744**

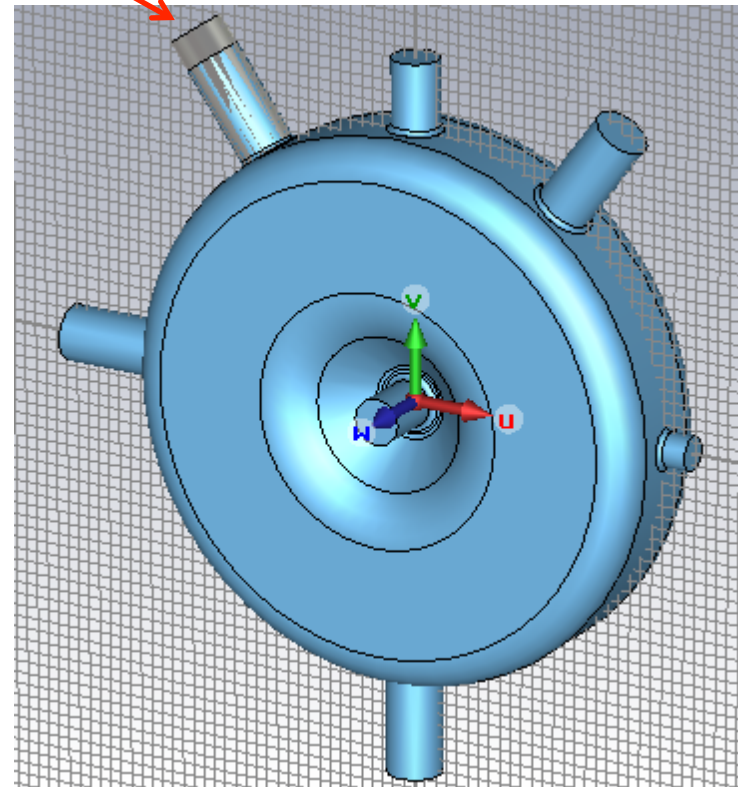
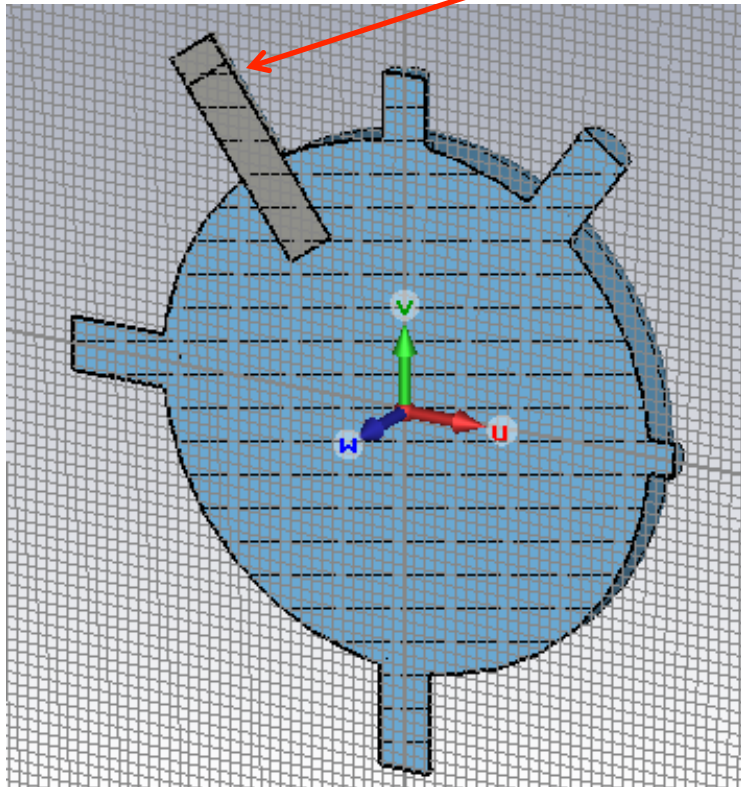
**NO PORTS FOR TUNER/PICK UPS/
VACUUM ETC. BEAM PORTS
NORMAL, ALL THE PORTS PRESENT**



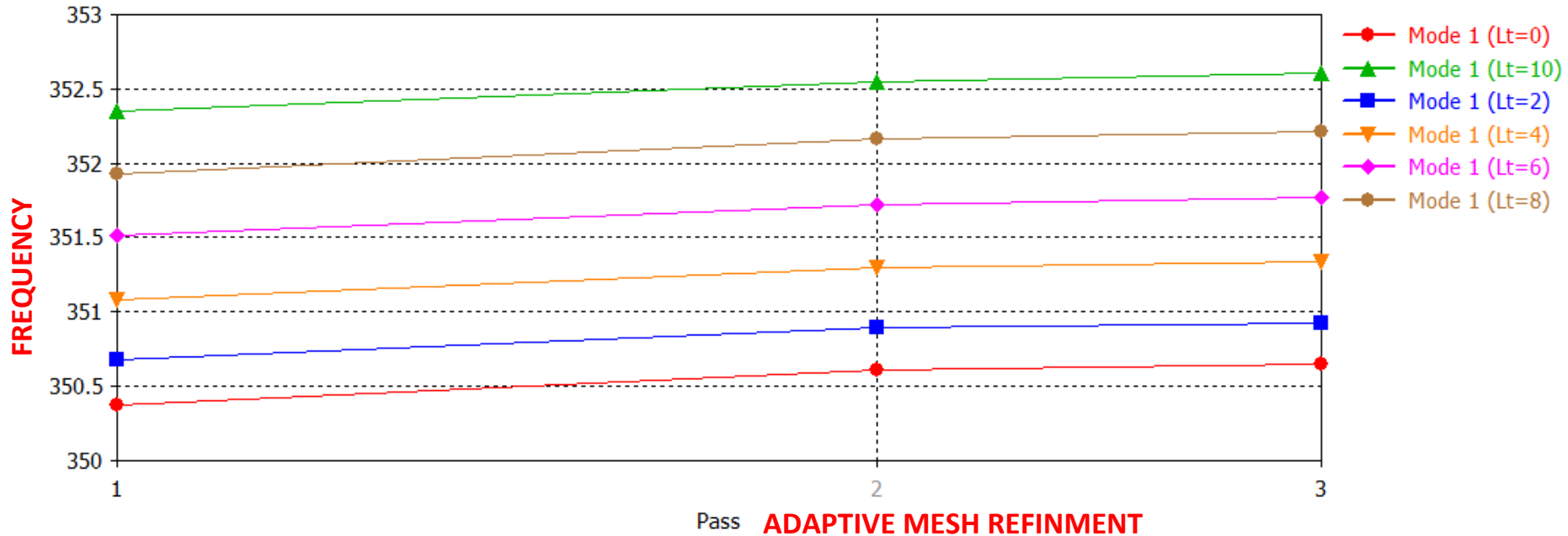
**Frequency = 350.566MHz,
mesh cells = 99225**

**SIMULATION'S RESULTS FOR BUNCHER CAVITY B40 WITH
ONE TUNER (PEC, CYL-ROD, DIA=47mm)
TUNER LENGTH (Lt) INSIDE THE CAVITY VARIES FROM 0cm TO 10cm**

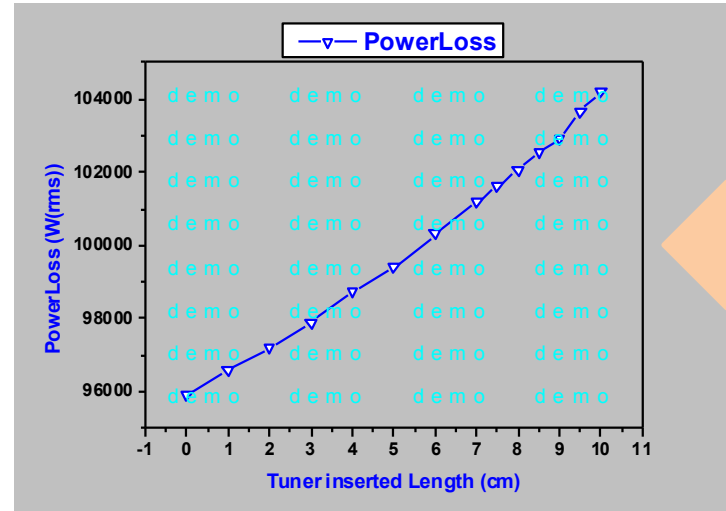
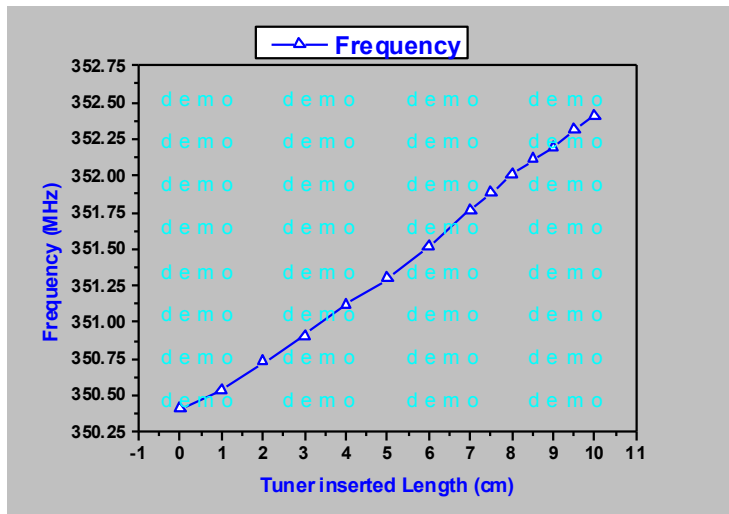
TUNER



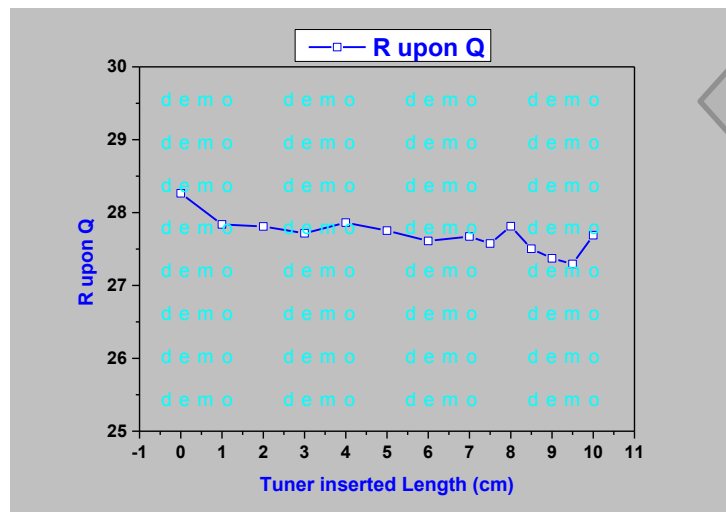
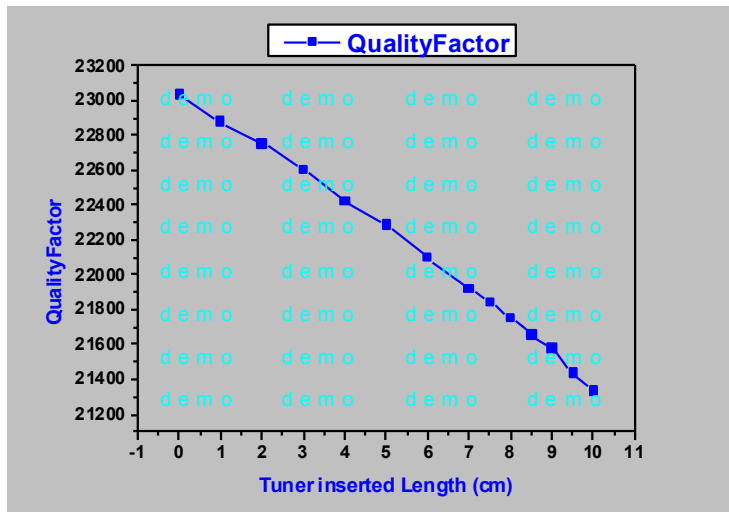
FOR TUNER LENGTH=8cm INSIDE THE CAVITY THE
FREQUENCY OF EIGEN MODE1 IS 352.21MHz



**SIMULATION'S RESULTS FOR BUNCHER CAVITY B40 WITH ONE TUNER (PEC, CYL-ROD, DIA=47mm)
TUNER LENGTH (Lt) INSIDE THE CAVITY VARIES FROM 0cm TO 10cm**



Power loss is too high is it correct? If yes then what is the reason?



Are the R/Q values correct? There is almost no variation (or slight random variation) with the tuner position and frequency variation

Q and power loss are calculated taking conductivity($\sigma=5.8 \times 10^7 \text{S/m}$) and $\mu_r=1$

R/Q is calculated along z-axis (for $x=0, y=0$) and for 3MeV H^- (i.e $\beta=0.0797$)