RF check and preliminary thermal calculation of the CC cavities and RF rotator

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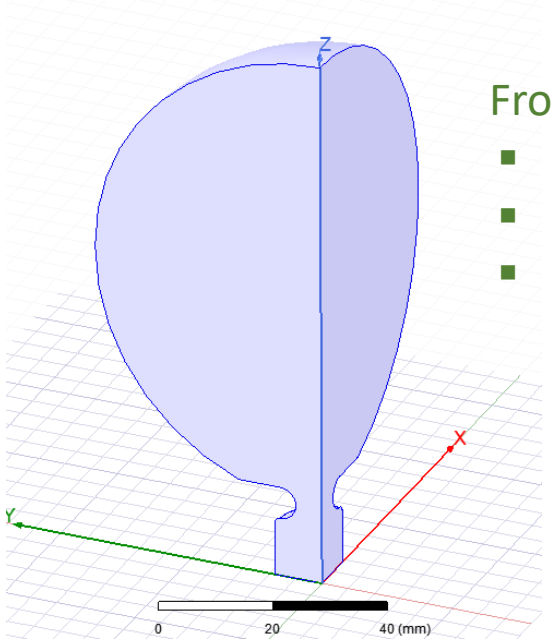
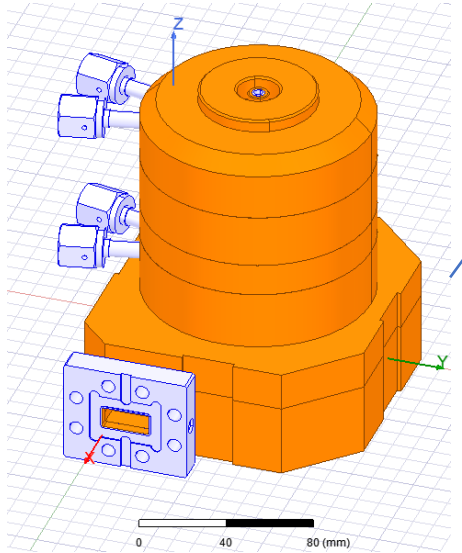
RF check of the spherical CC

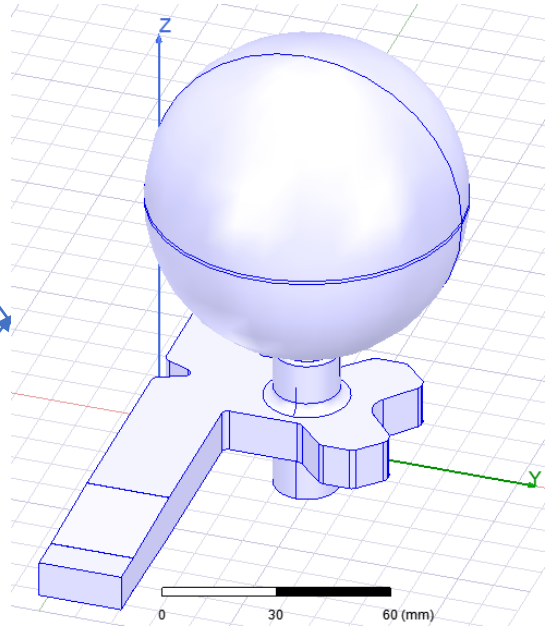


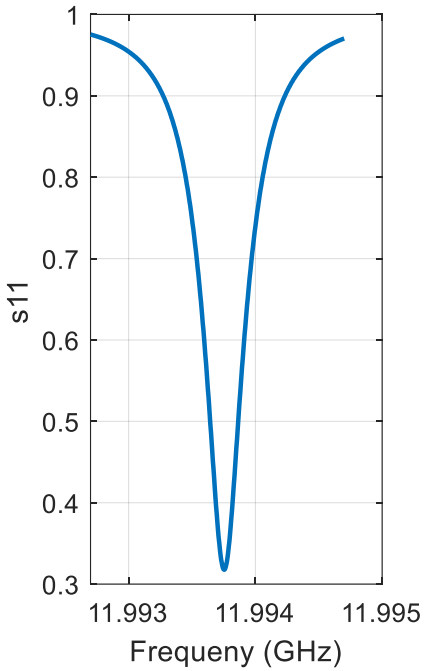
From RF model

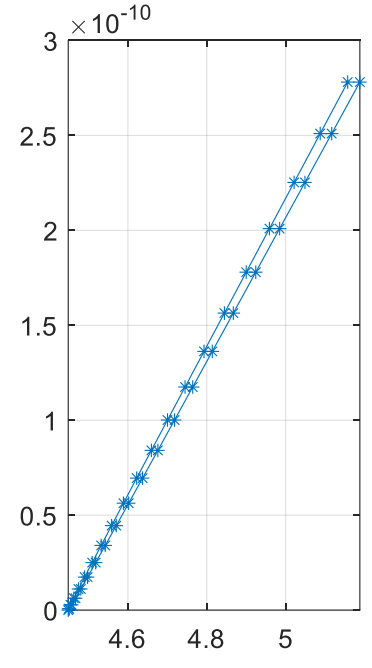
- f0 = 11.9937 GHz
- Beta=1.95
- Q_0=70936

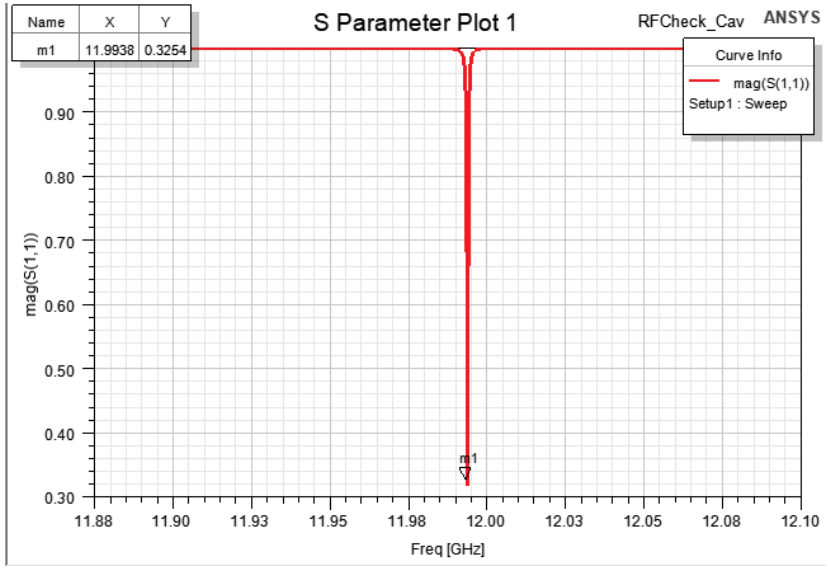
f0 =11.9938 GHz
Beta=1.9304
Q0 =70944.6





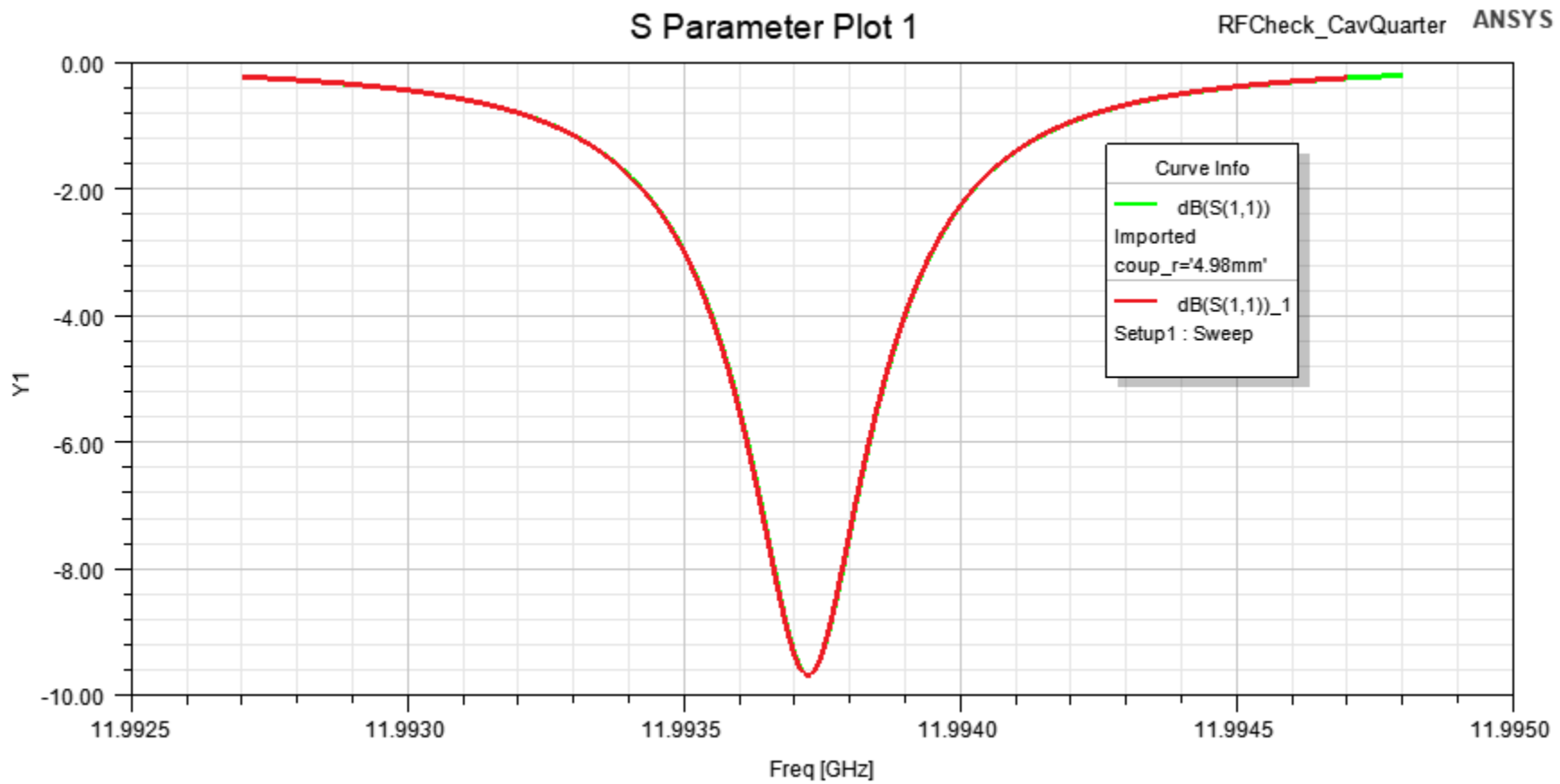




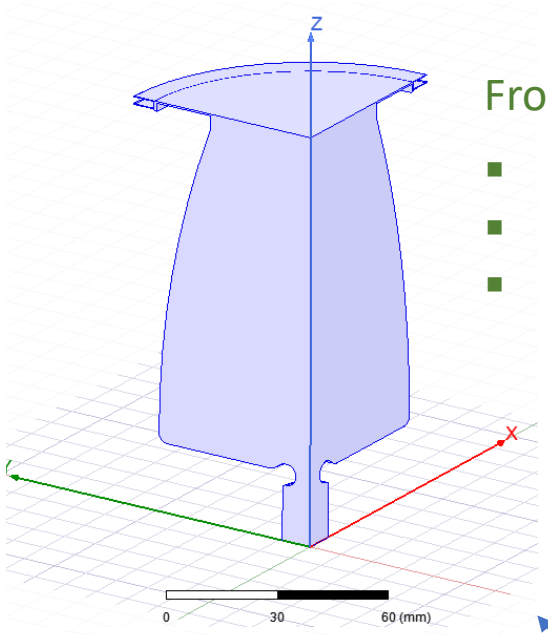


RF check of the spherical CC

The s11 of RF model and the s11 from mechanical are identical.



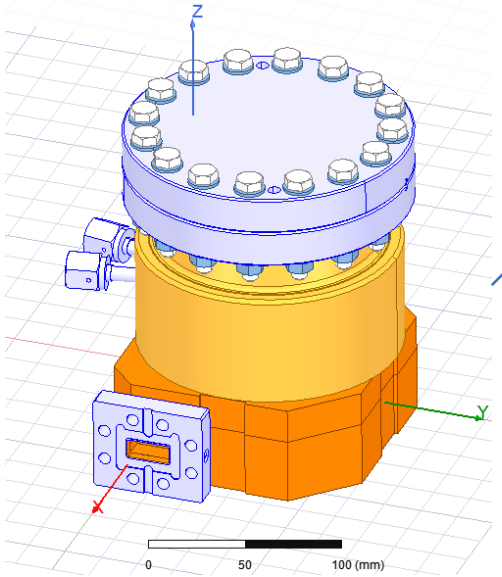
RF check of the bowl CC

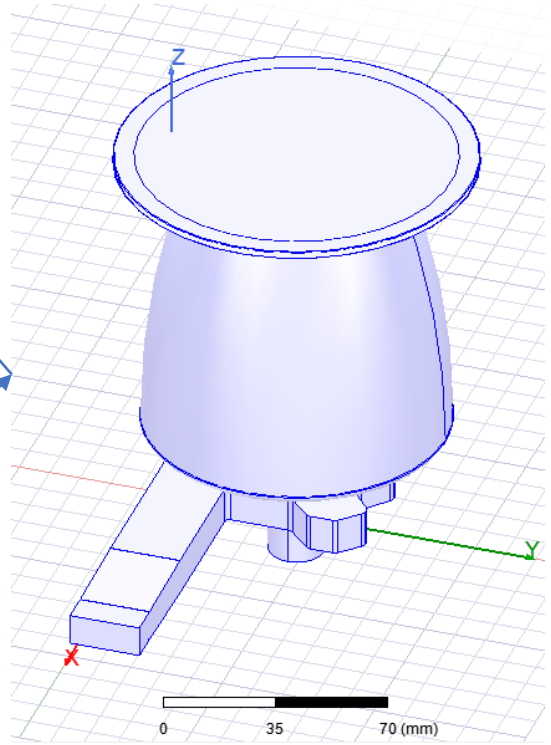


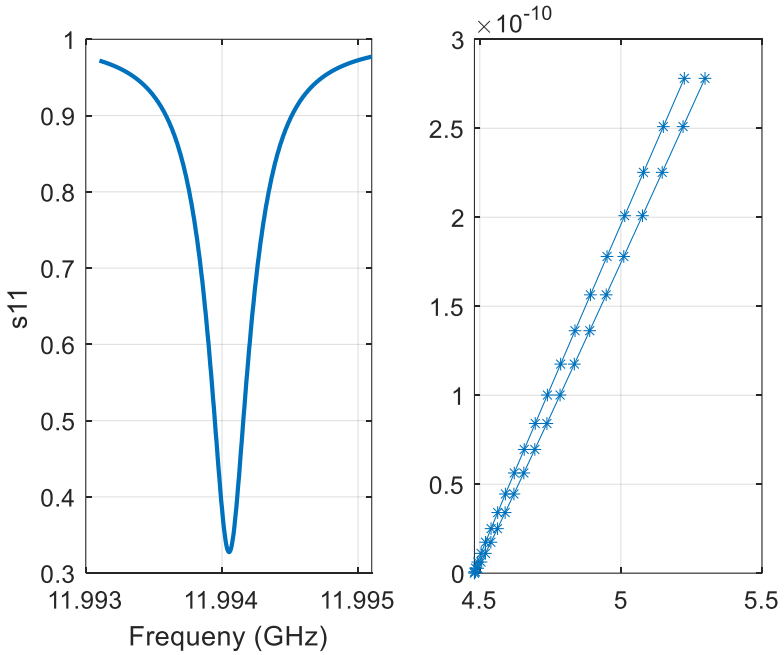
From RF model

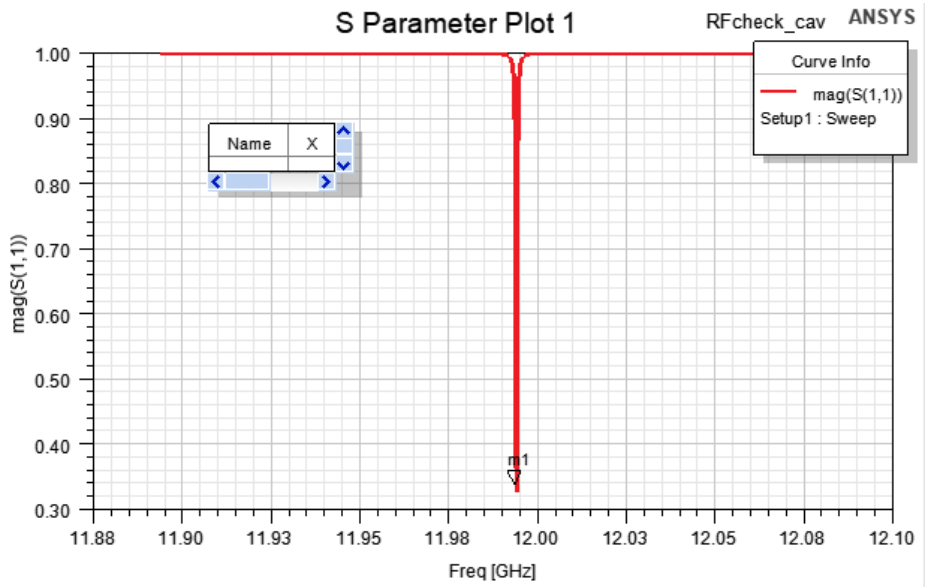
- f0 = 11.9941 GHz
- Beta=1.97
- Q0=74700

f0 =11.9941 GHz
Beta=1.9717
Q0 =74694.5

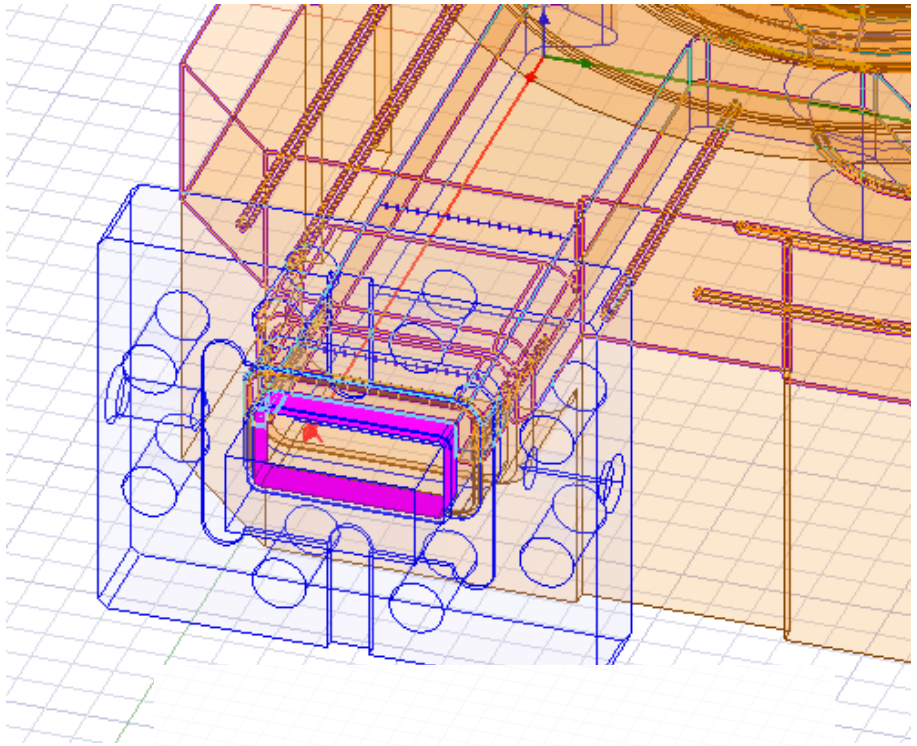


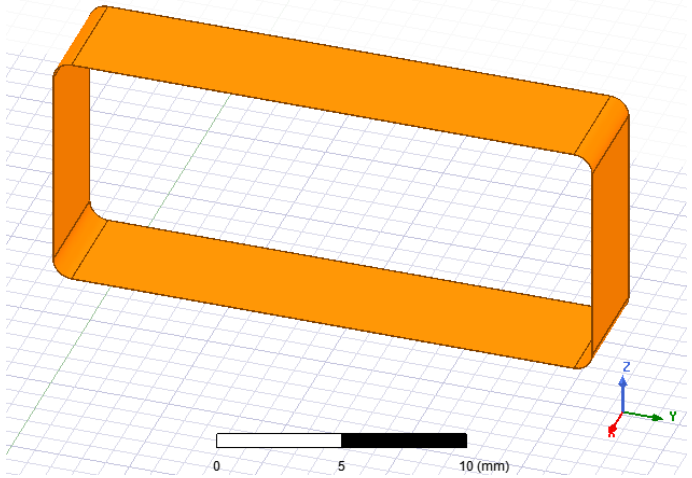


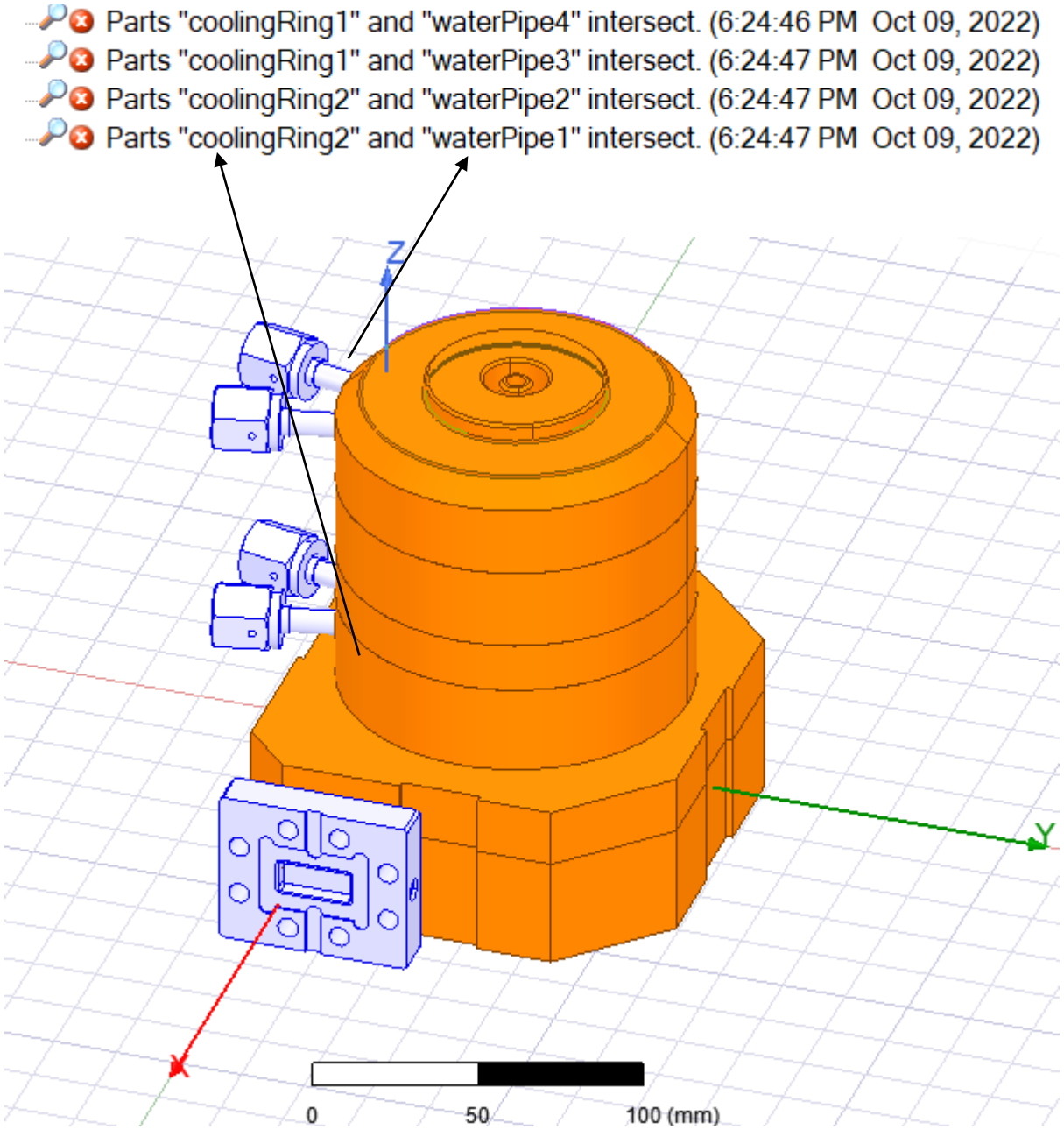




Deleted parts in the mechanical model before the thermal calculation







Preliminary thermal calculation of the spherical cavity

Parameters of the klystron	
Peak power [MW]	50
Pulse length [μs]	2.0
Repetition rate [Hz]	50
Average power [kW]	5.0