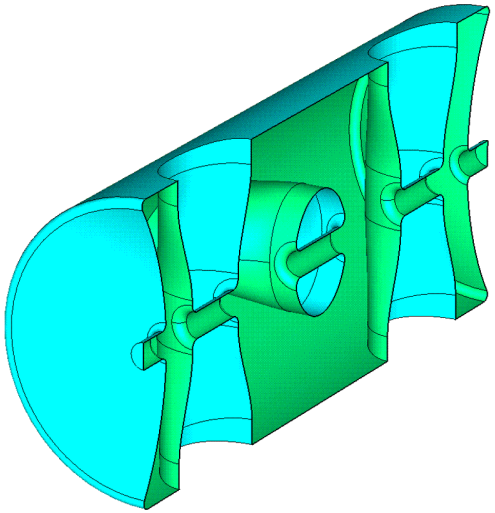
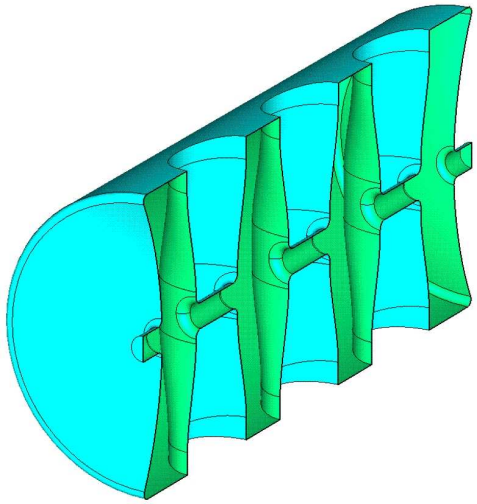
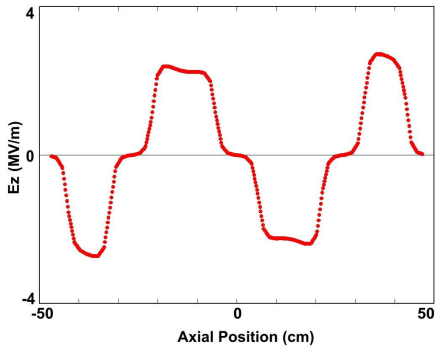
Crossed–spokes give better mode-splitting

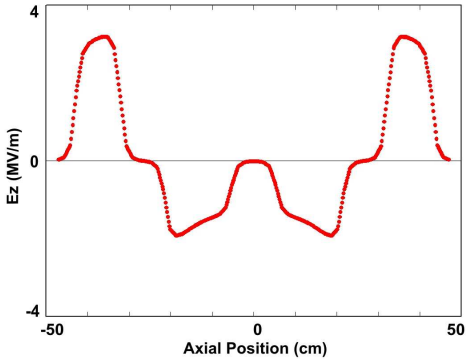




Eigenfrequency (MHz)		
Mode	**Crossed**	**Parallel**
1	345.2	345.2
2	362.3	347.4
3	397.8	364.8
4	442.1	412.1
5	476.1	438.3

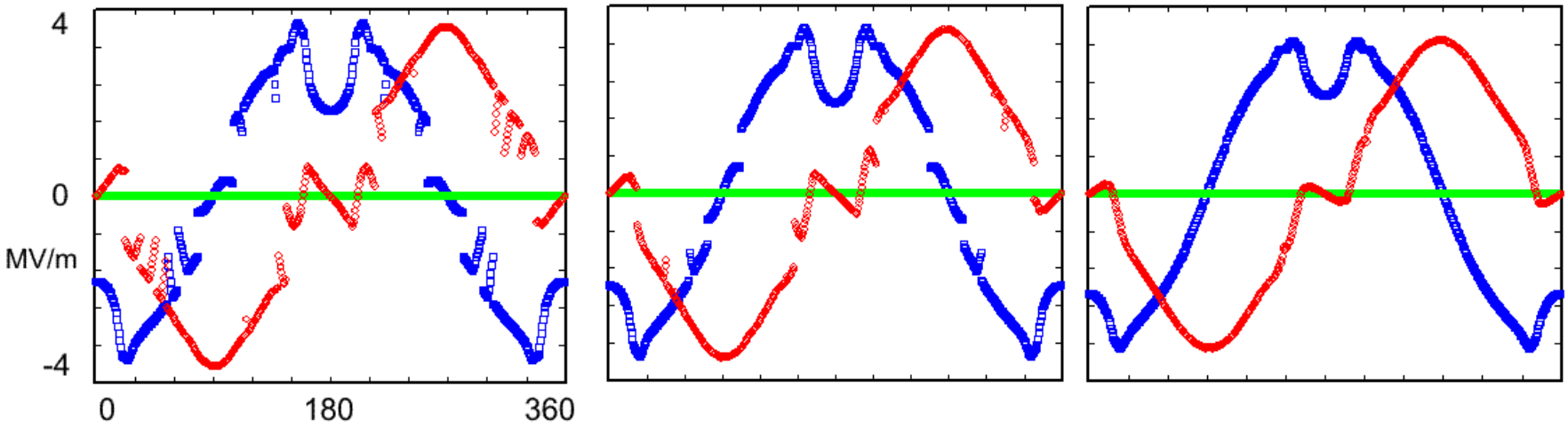
First Mode

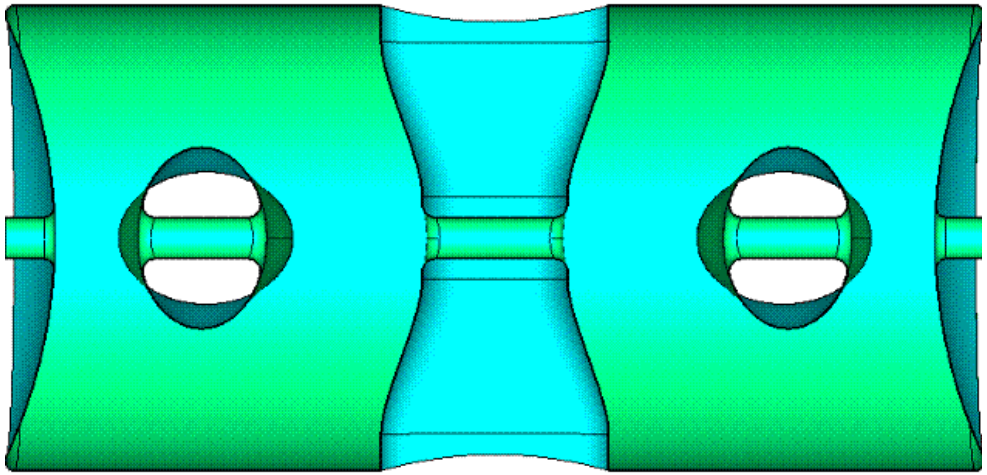




Second Mode

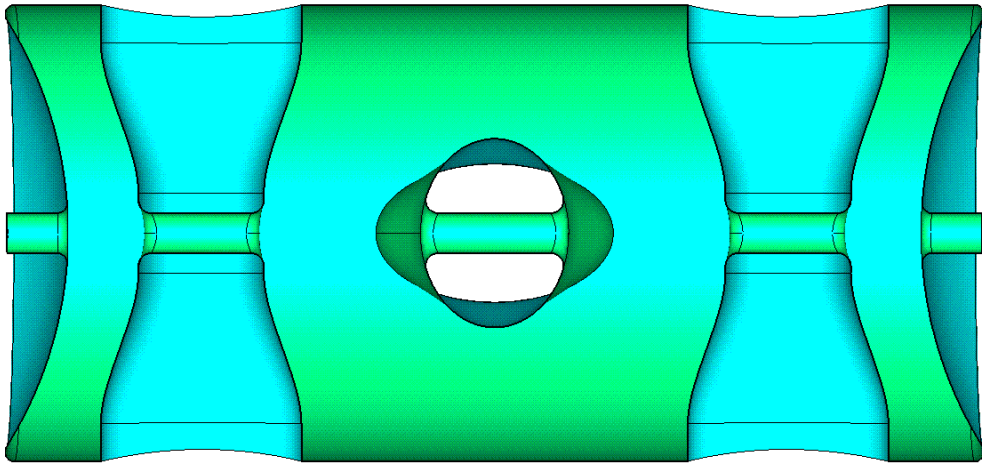
0 mm from surface | 2 mm from surface | 5 mm from surface

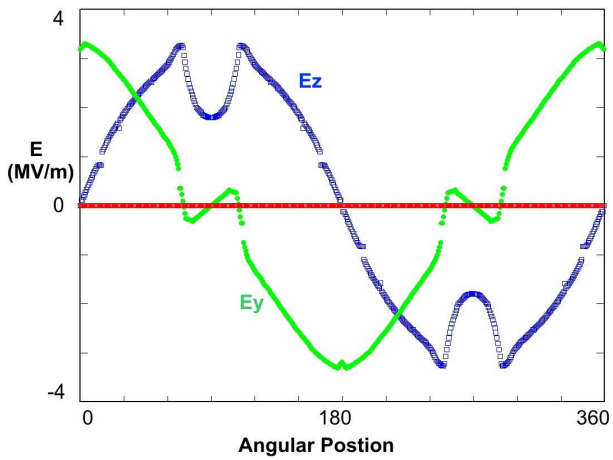




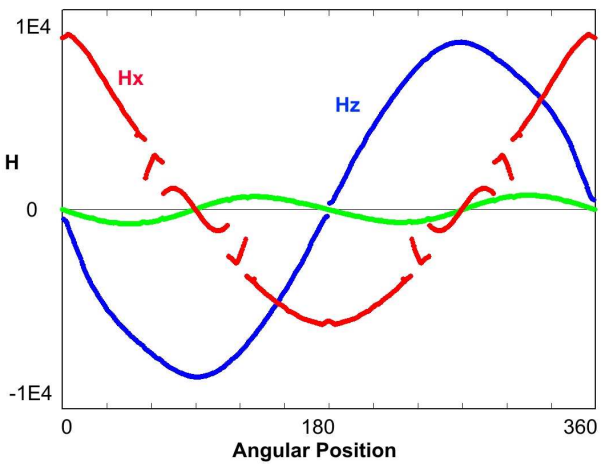
MWS results with a cell size of ~ 5 mm

4 cm beam aperture at 345 MHz is non-trivial, but feasible

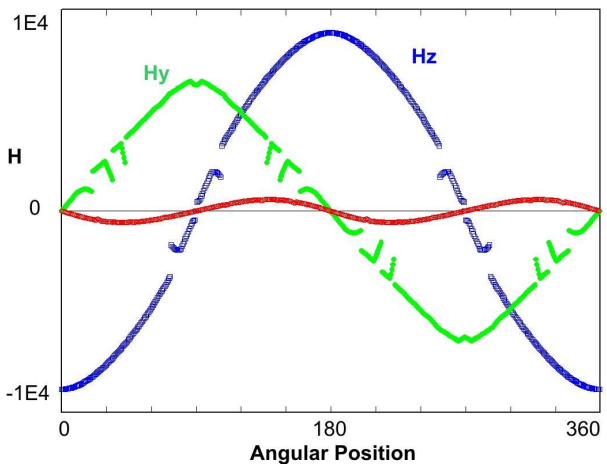




Center Spoke



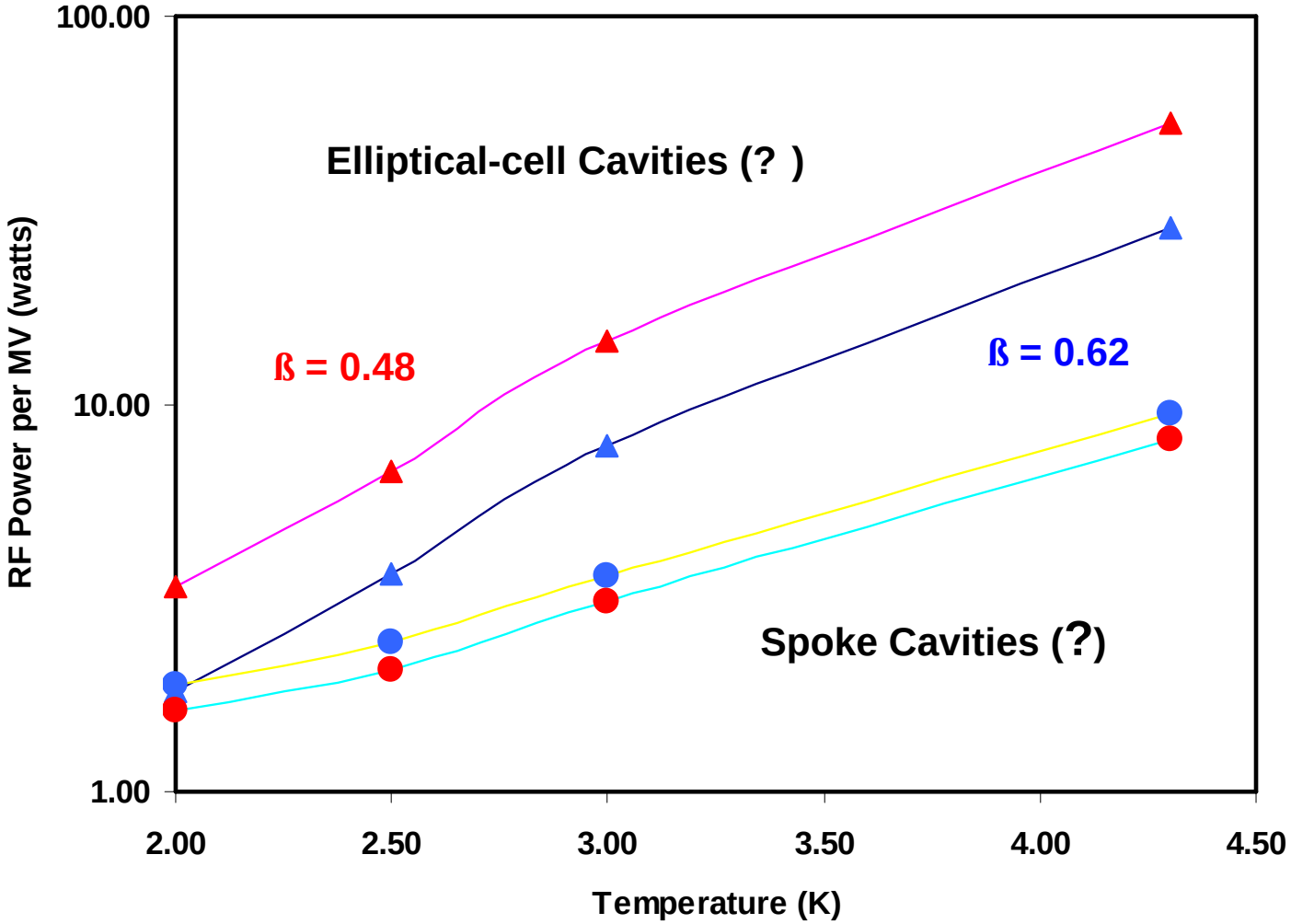
End spoke (base)



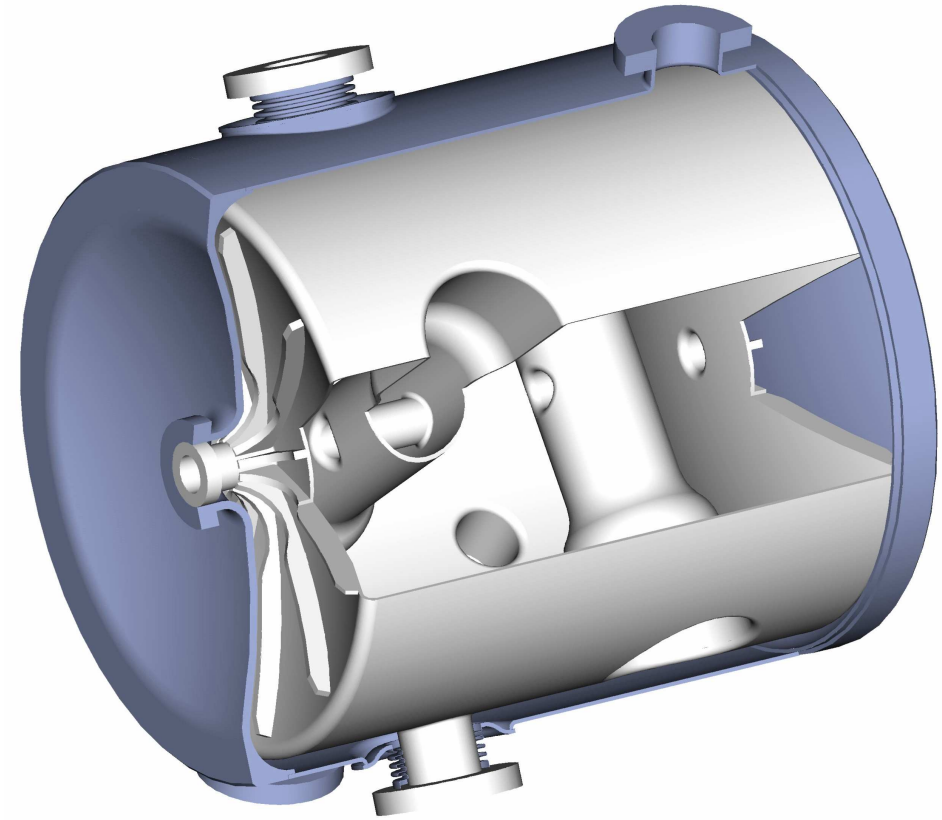
EM Parameters for a ß=0.62 triple-spoke cavity

	Present	Preliminary
Aperture	4 cm	3 cm
$ß_{GEOM}$	0.63	0.62
$L_{EFFECTIVE}$	85 cm	85 cm
Frequency	345 MHz	345 MHz
QR_S	106	103
€		
at 1 MV/m		
E_{PEAK}	2.73	3.1
B_{PEAK}	92	88
RF Energy	642 mJ	582 mJ

RF Loss into helium bath (assuming 10 nano-ohm residual resistivity)



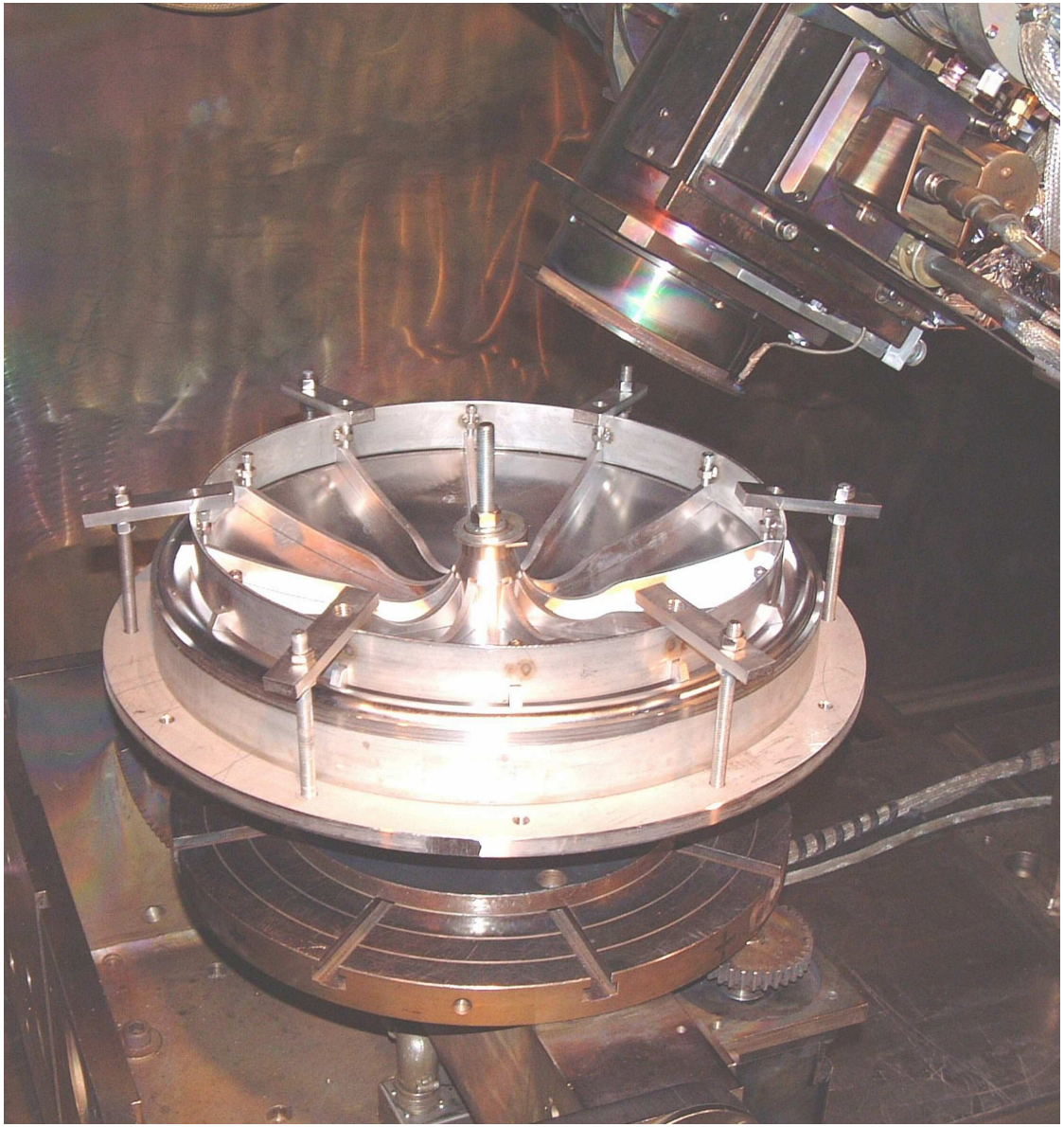
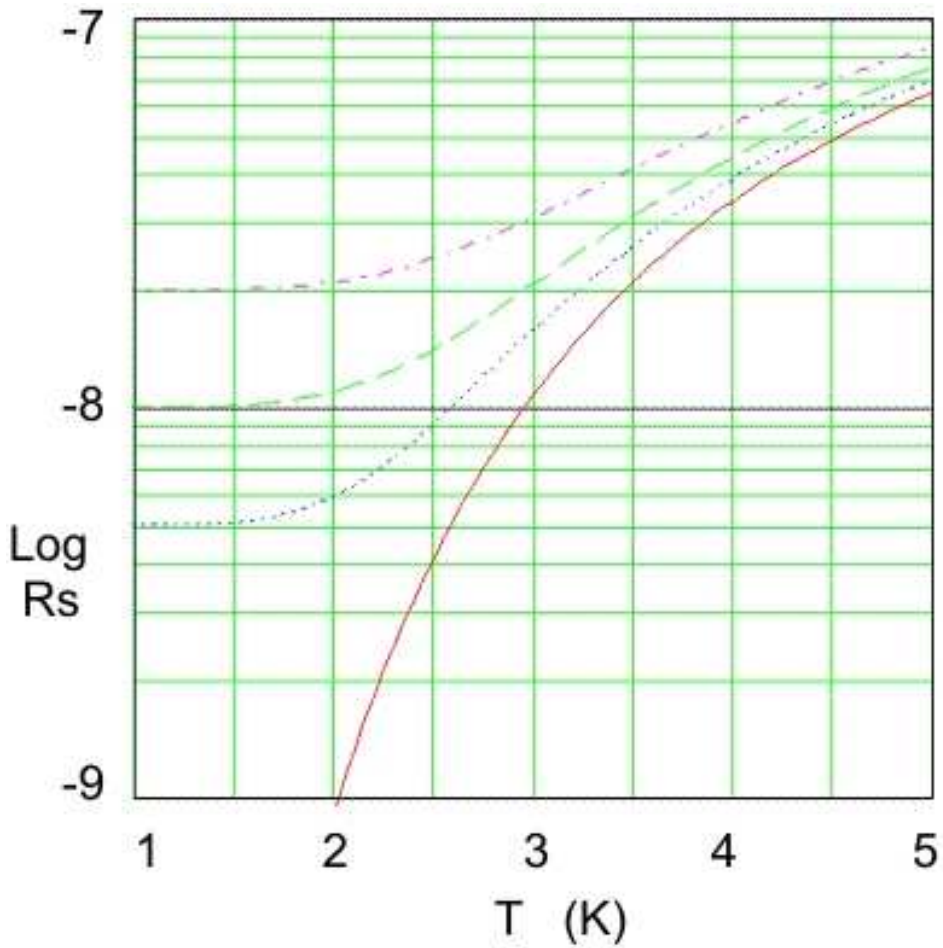
Stainless-steel helium jacket



Major sub-assemblies of the double-spoke cavity

Pieces of the Double spoke prototype

Welding on 12 Support Gussets



R_s vs. Temperature at 345 MHz for 0, 5, 10, 20 nano-ohm residual resistivity