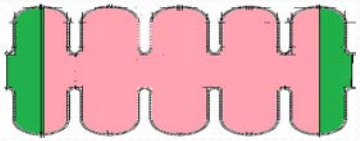
Simulation differences between FNAL and VECC

Previous differences between the results

	RF parameters By Fermilab	Sfish simulation of Flab design By VECC
Frequency	650 MHz	650.72MHz
Ep/Ea	2.26	2.84
Bp/Ea	4.21	5.37
G	191	239.9
R/Q	378	335.25

Main reasons of the discrepancies

Wrong end cell



Right end cell

half cell length 71.385mm

half cell length 70.34mm

•In previous presentation from Fermilab, inner cell and end cell angle(α and α_end) were rounded to 2º and 2.7º respectively. Actual values are 1.8567º and 2.657569º.

• According to the Fermilab presentation ,Half cell length for inner cells and outer end cells are 70.34 mm and 71.385mm respectively and it was assumed that both the half cells of an end cell having length of 71.385mm. But from the autofish input file from Mr.Saini,it was found that only outer half cell of an end cell is having length 71.385mm,other half cell length is 70.335mm.

Simulation differences between FNAL and VECC

Comparison of results after considering exact values of wall angle and end cell length

	SLans simulation By Fermilab	Sfish simulation By Fermilab	Sfish simulation By VECC
Frequency	650MHz	650.055MHz	650.012MHz
Emax/E0		1.6977	1.6837
Bmax/Emax		1.842	1.9136
Transit time factor		.7123	.713
Ep/Ea	2.26	2.383	2.361
Bp/Ea	4.21	4.39	4.52
G	191	196.1	197.88
R/Q	378	350.3	350.7

THANK YOU