10 MHz RFOFO Ring

The RFOFO ring used was identical to Don's version as shown at shelter Island, except:

RF Cavities

No attempt was made to design real cavities, but I used:

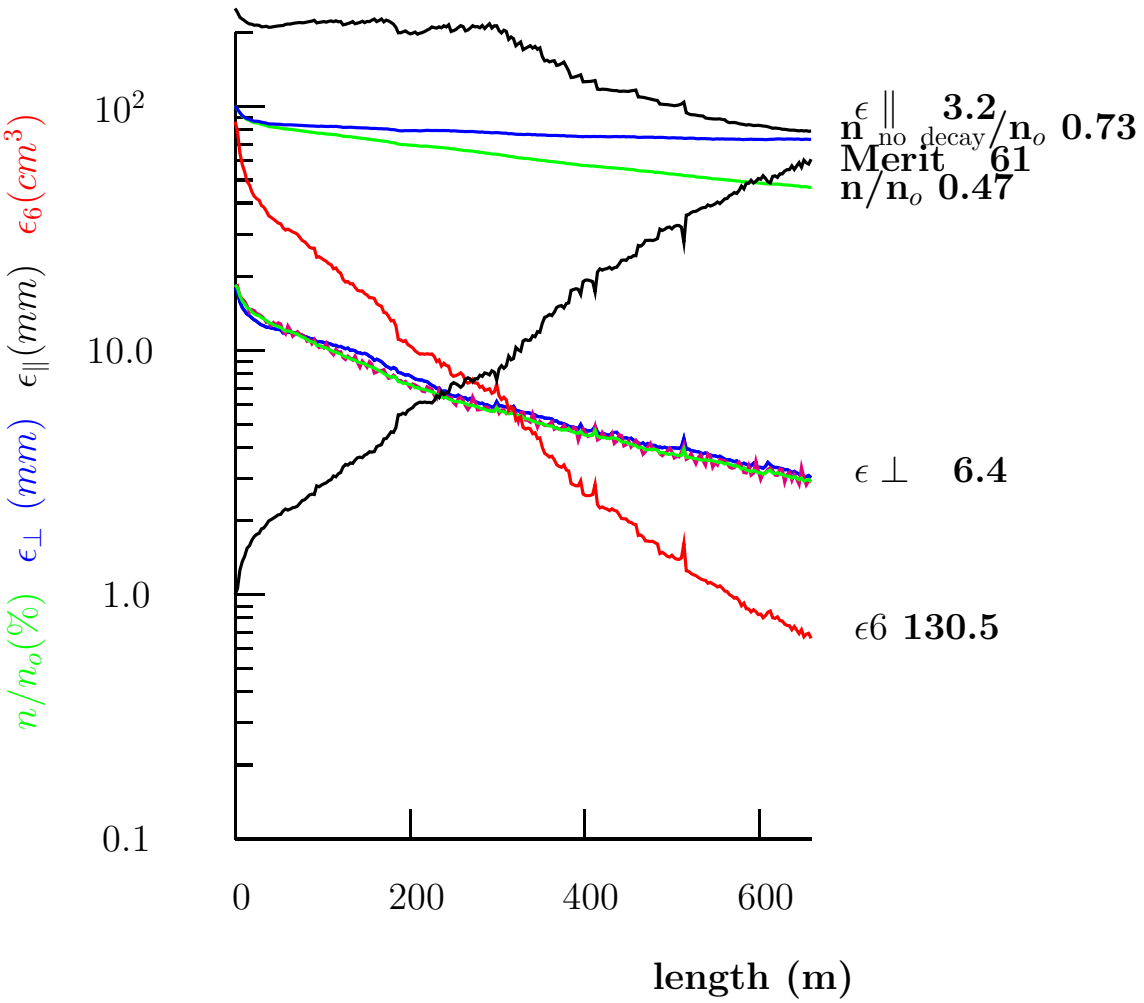
Frequency=10 MHz
Gradient=2 MV/m

Initial Beam

Transverse Emittance=18 mm
RMS Bunch Length=1.6 m
RMS dp/p=8 %
Longitudinal Emmittance=250 mm

	len m	trans %	$\epsilon_\perp$ mm	$\epsilon_\parallel$ mm	ϵ_6 cm^3	max Q	merit
final	660	47	2.9	79.1	0.663	10	**61**
initial			18.6	251.2	86.531		
ratio			6.4	3.2	130.5		

10 MHz nogap acc2 tilts 33m RFOFO 51deg s&s (2.41 ng4g)



c.f. 200 MHz

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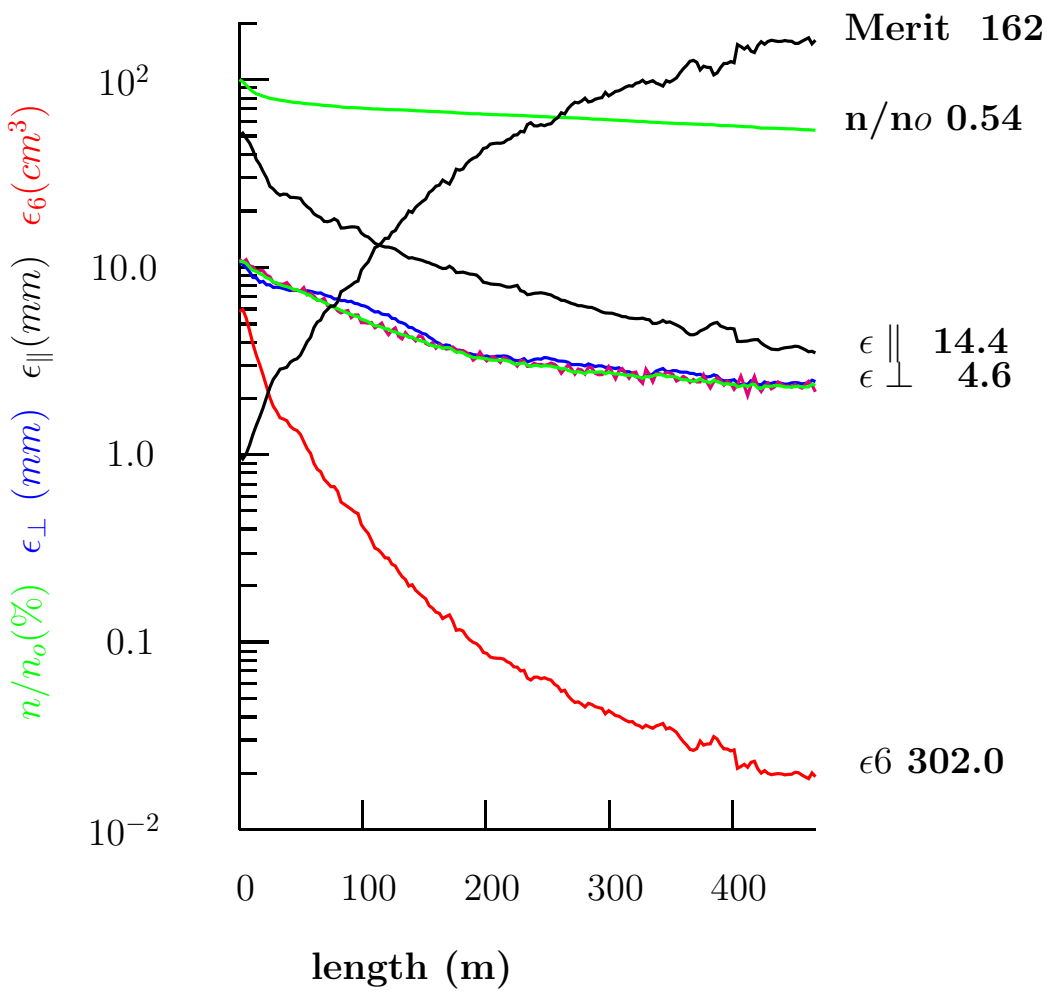
	len m	trans %	$\epsilon_\perp$ mm	$\epsilon_\parallel$ mm	ϵ_6 cm^3	max Q	merit
final	468	54	2.3	3.5	0.019	24	**162**
initial			10.7	50.1	5.787		
ratio			4.6	14.4	302.0		

60deg wedge nogap acc11 tilts fs2 33m RFOFO 100deg s&s (2.38 ng3a)



Conclusion

- **Slower Cooling because low Grad**
- **Merit less**
- **Posible Cooling for FFAG ?**
- **Needs more Dispersion if Pre-Cooler for 200 MHz**