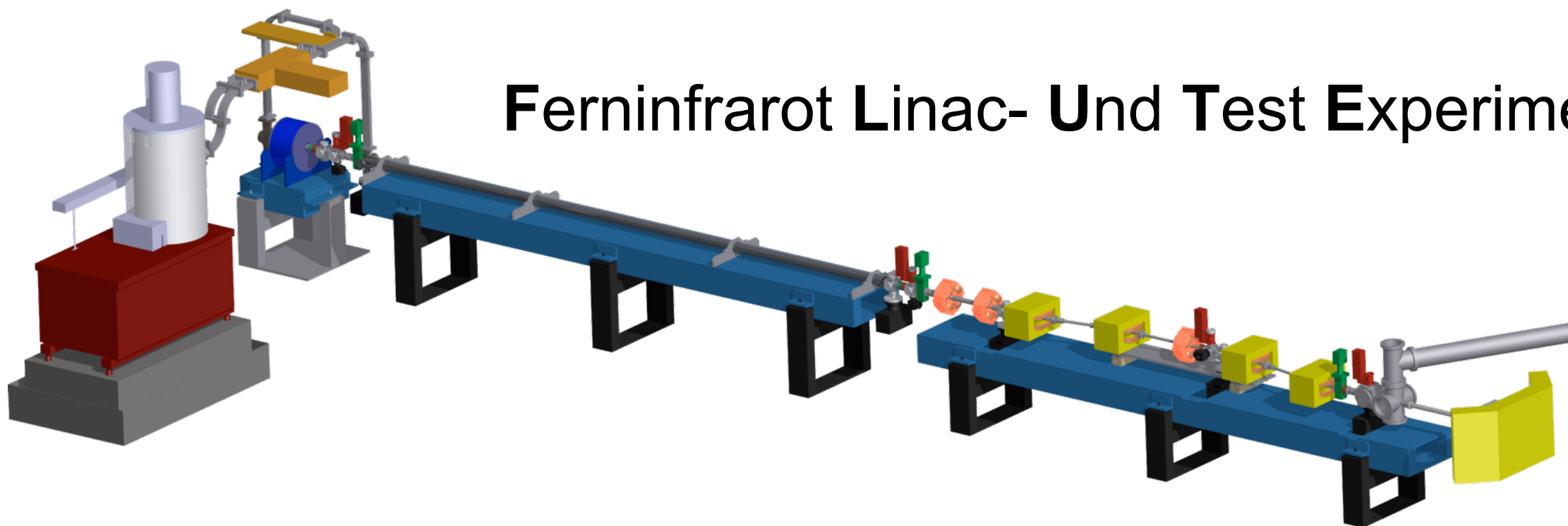


Beam Parameters for FLUTE

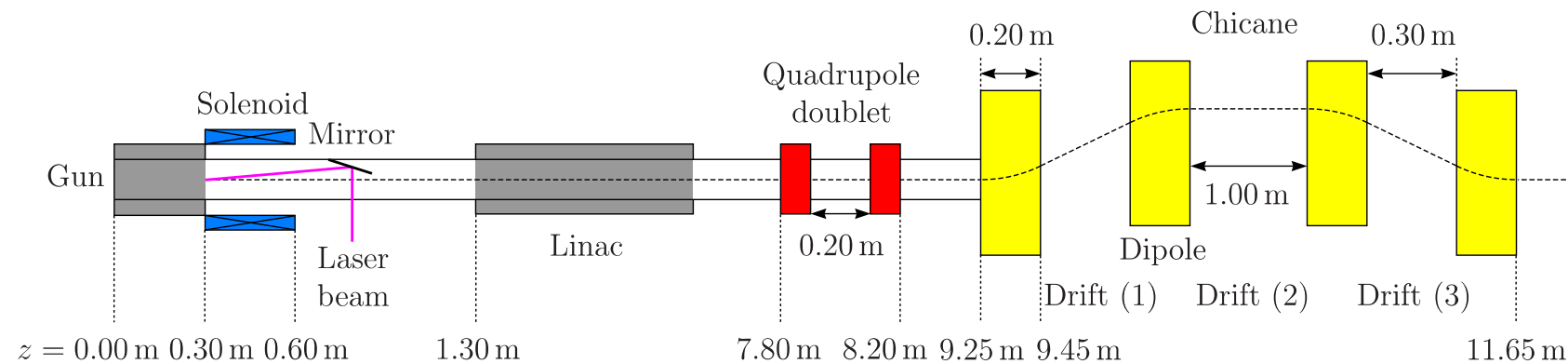
Markus Schwarz for the FLUTE Team

KIT DESY PSI

Ferninfrarot Linac- Und Test Experiment



Machine Layout



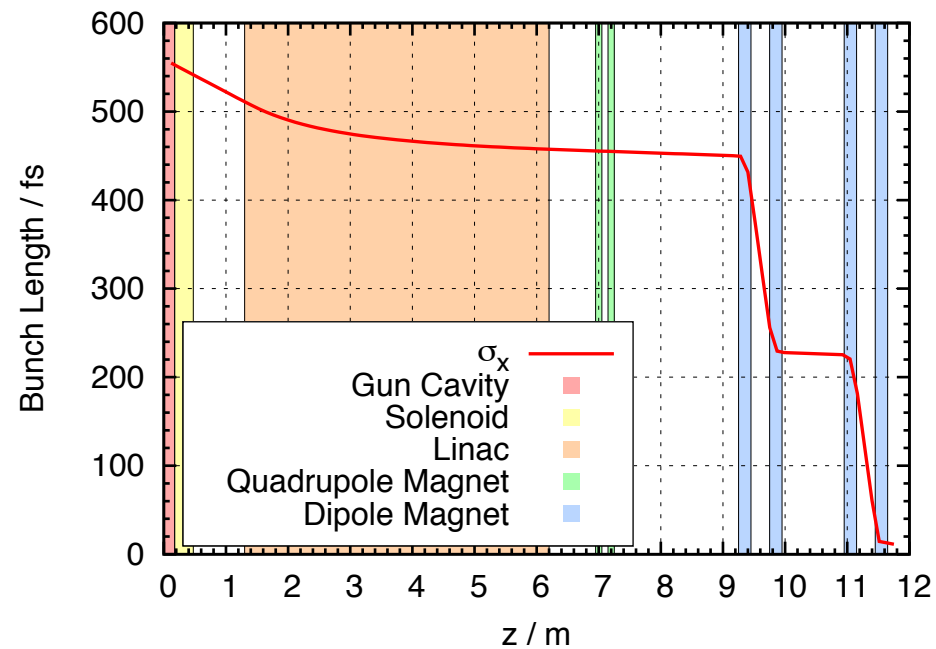
Parameters	Unit	Value
Bunch charge	nC	10^{-3} –3
Bunch length	fs	1–270
Peak electric field	MV/m	~500
Spectral range	THz	0.5–8
Electron Energy	MeV	~42
Pulse repetition Rate	Hz	10

Charge	Bunch Length (rms) [fs]	Energy/Pulse
3 nC	270 fs	~1 mJ
100 pC	67 fs	~5 μ J
1 pC	~10 fs	~4 nJ

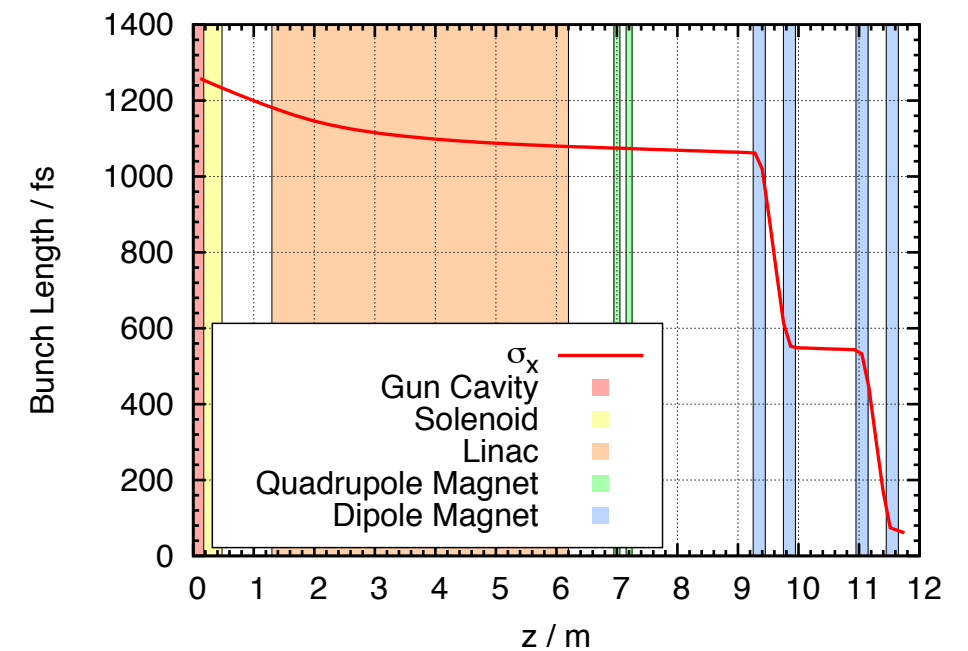
Simulated

Simulated Bunch Lengths

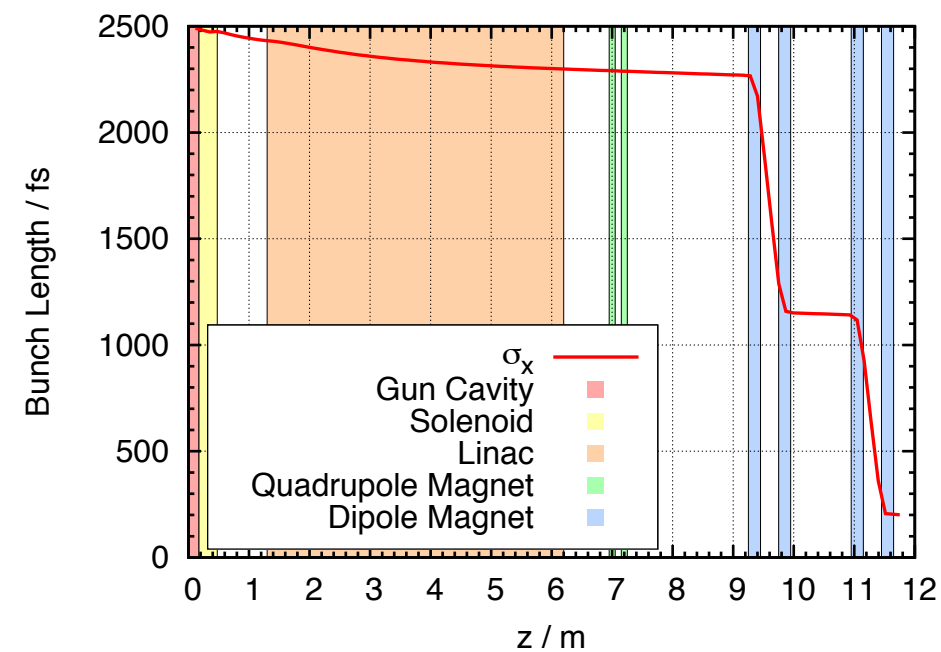
1 pC



100 pC

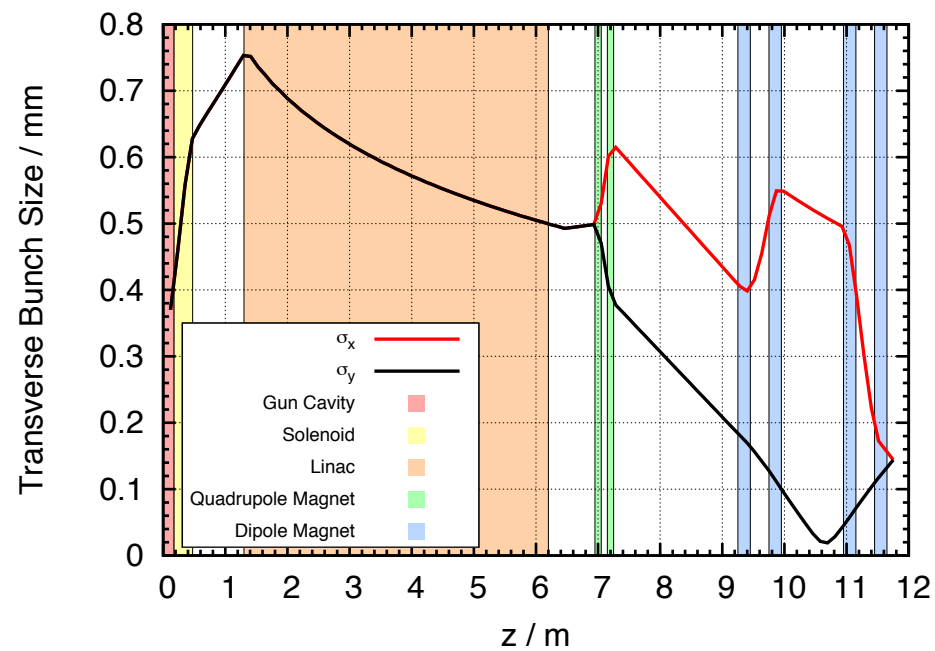


3 nC

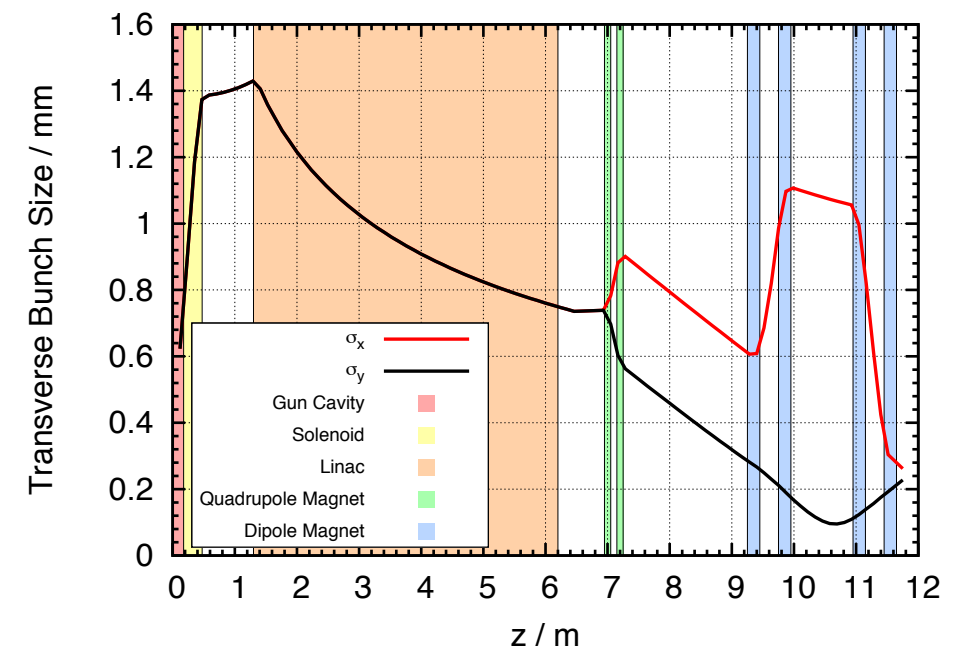


Simulated Transverse Beam Size

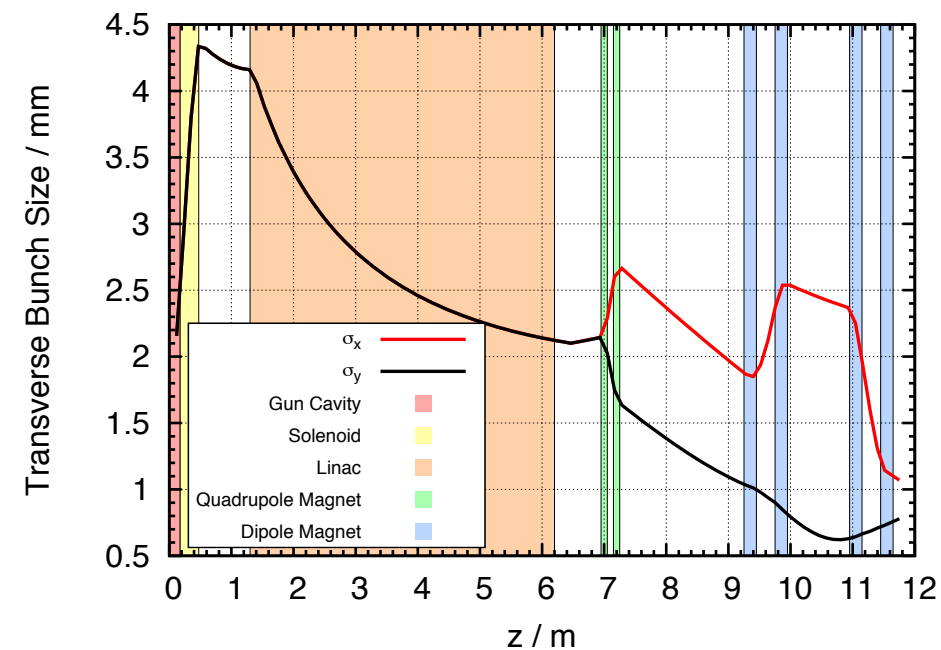
1 pC



100 pC

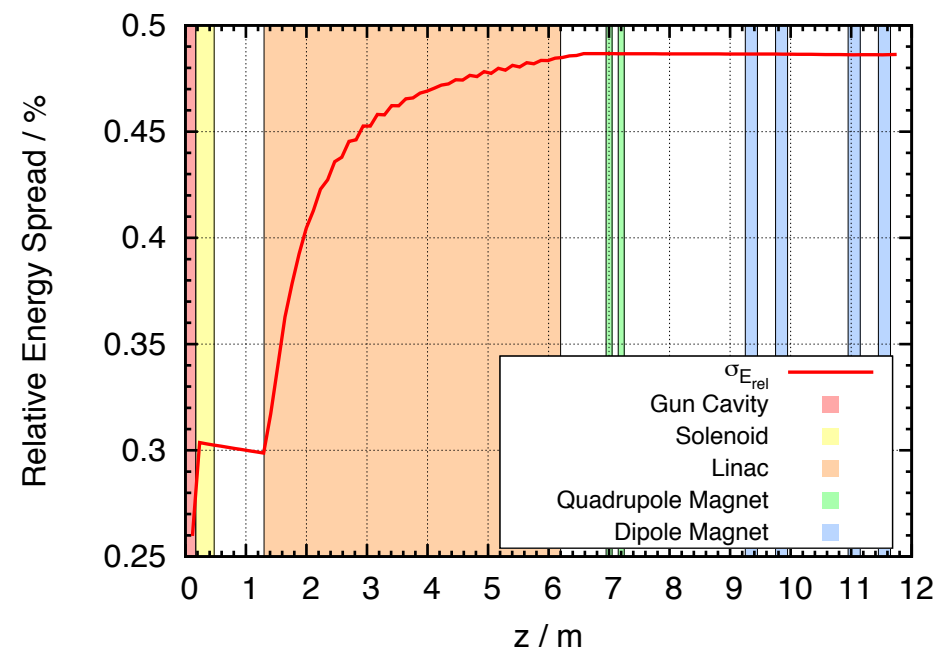


3 nC

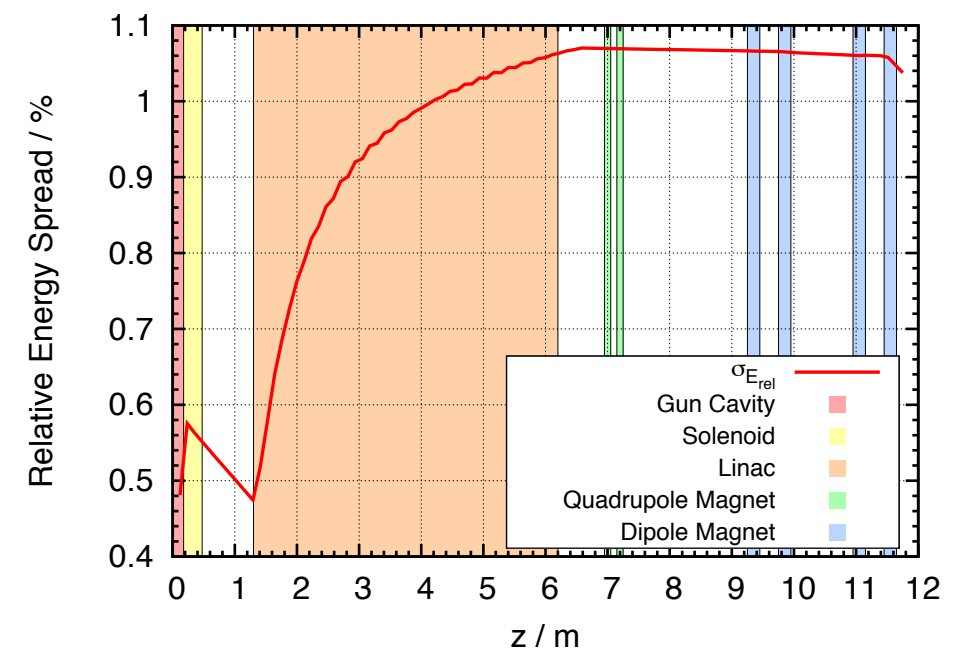


Simulated Longitudinal Energy Spread

1 pC



100 pC



3 nC

