ILC BDS Meeting, March 15, 2005

Geant Simulations of 2 mrad Extraction

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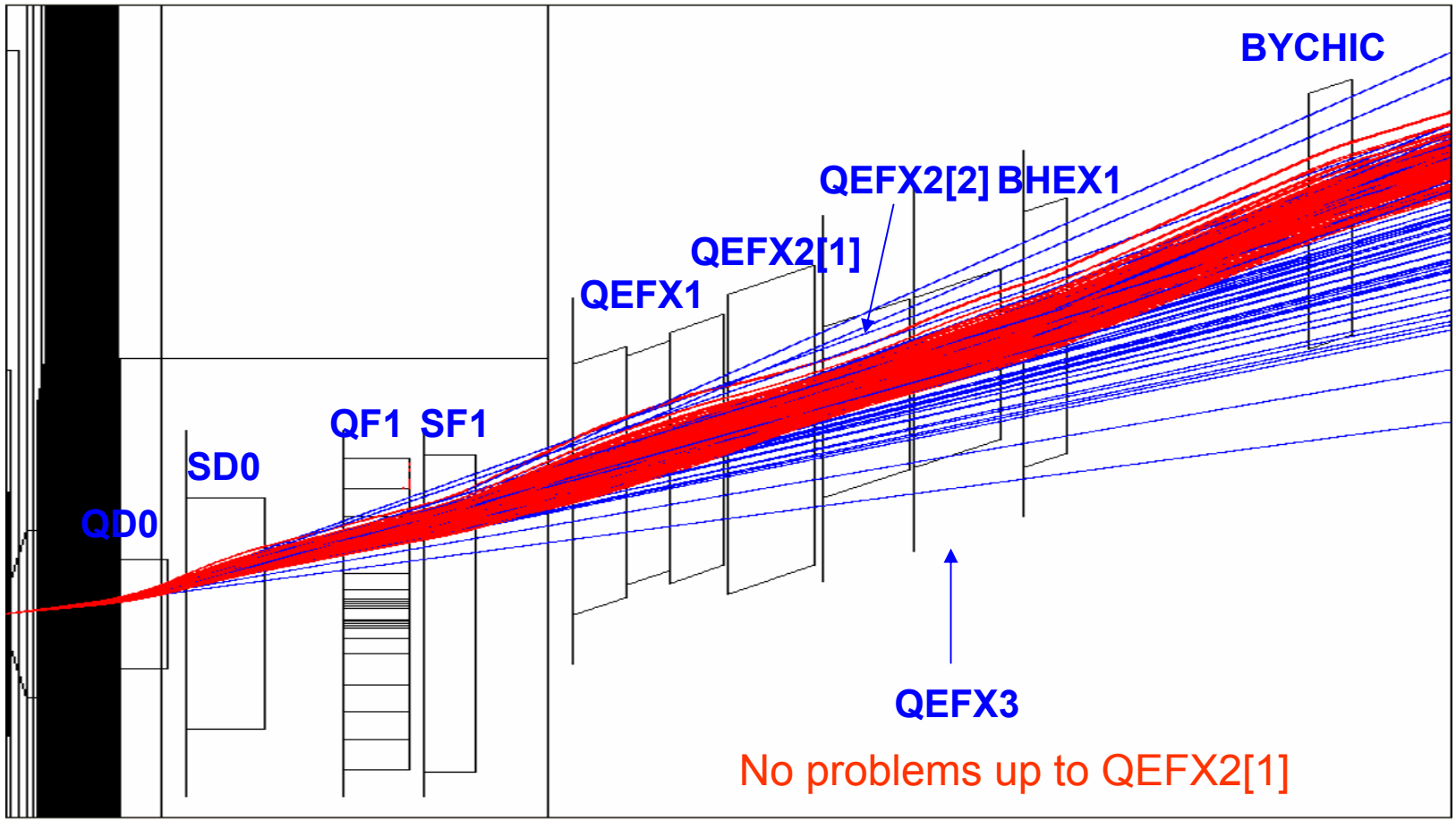
Geant geometry of 2 mrad extraction

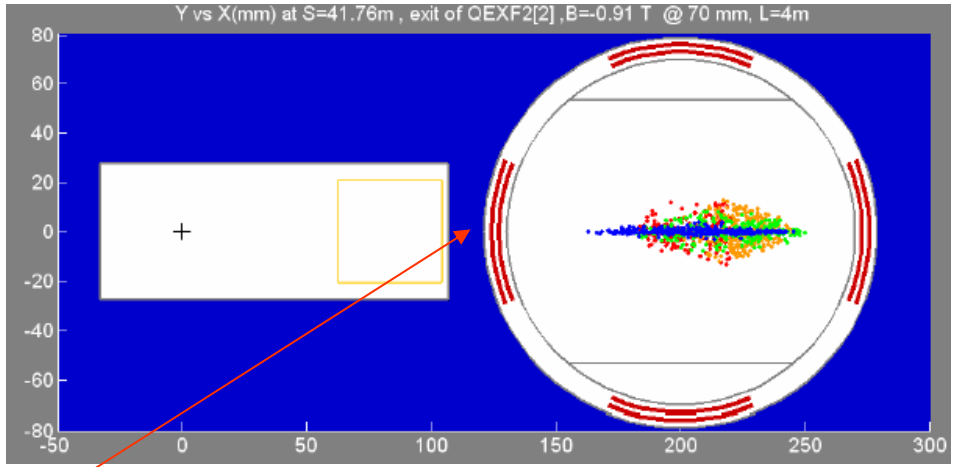
- Feb 20 version
  - Sync radiations at QEFX2
- March 4 version
  - QEFX2 is removed.

Sync Radiations in 2 mrad extraction

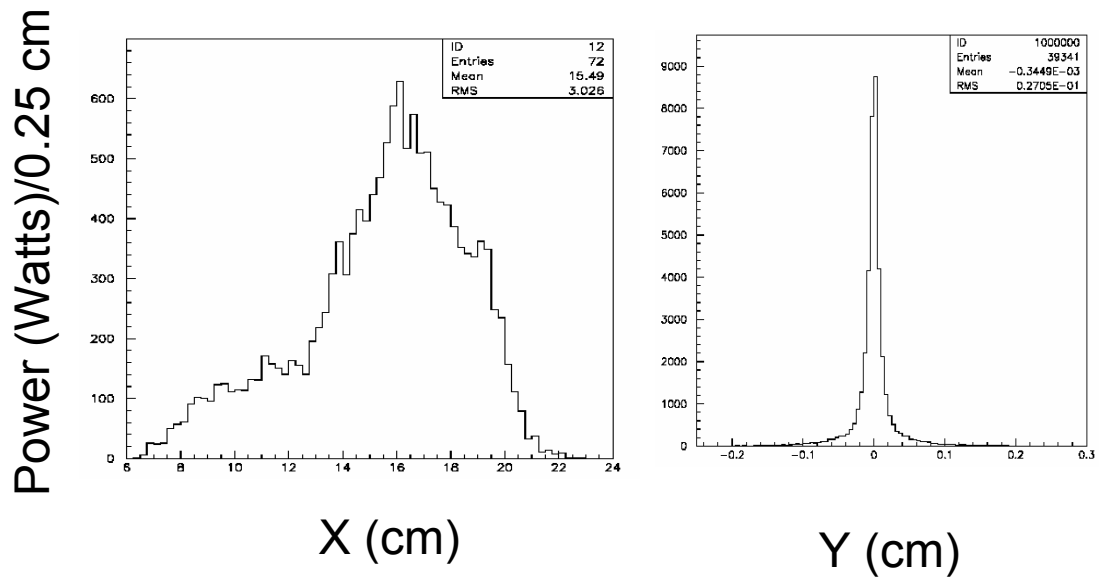
Feb 20 Version



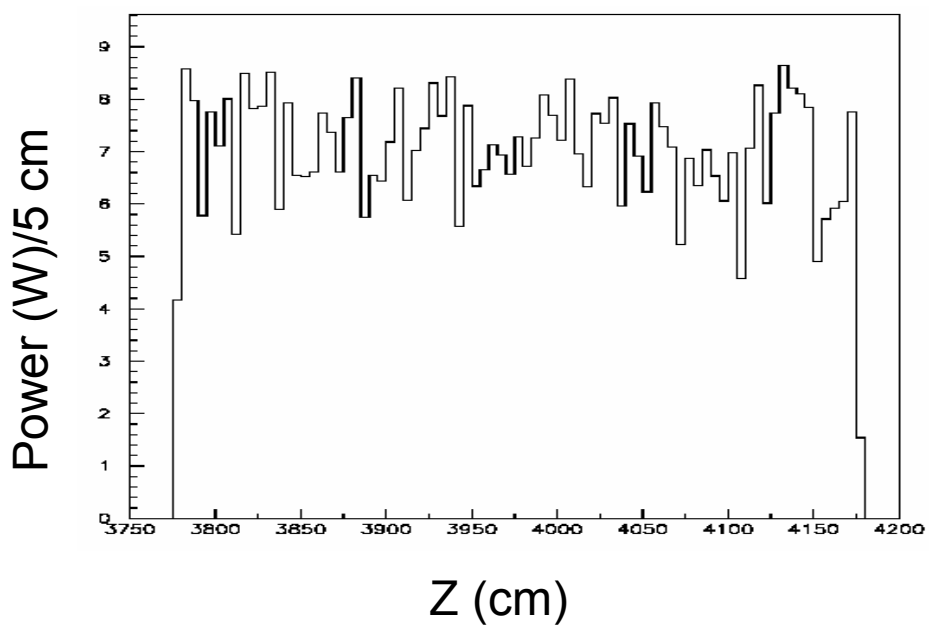
Sync radiations at QEXF2[2]

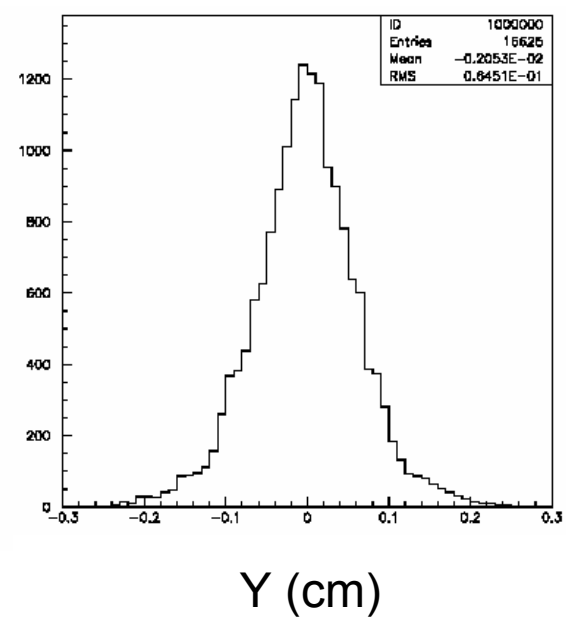


Power density =
~100 W/0.25 cm x 0.02 cm
~20 kW/cm^2



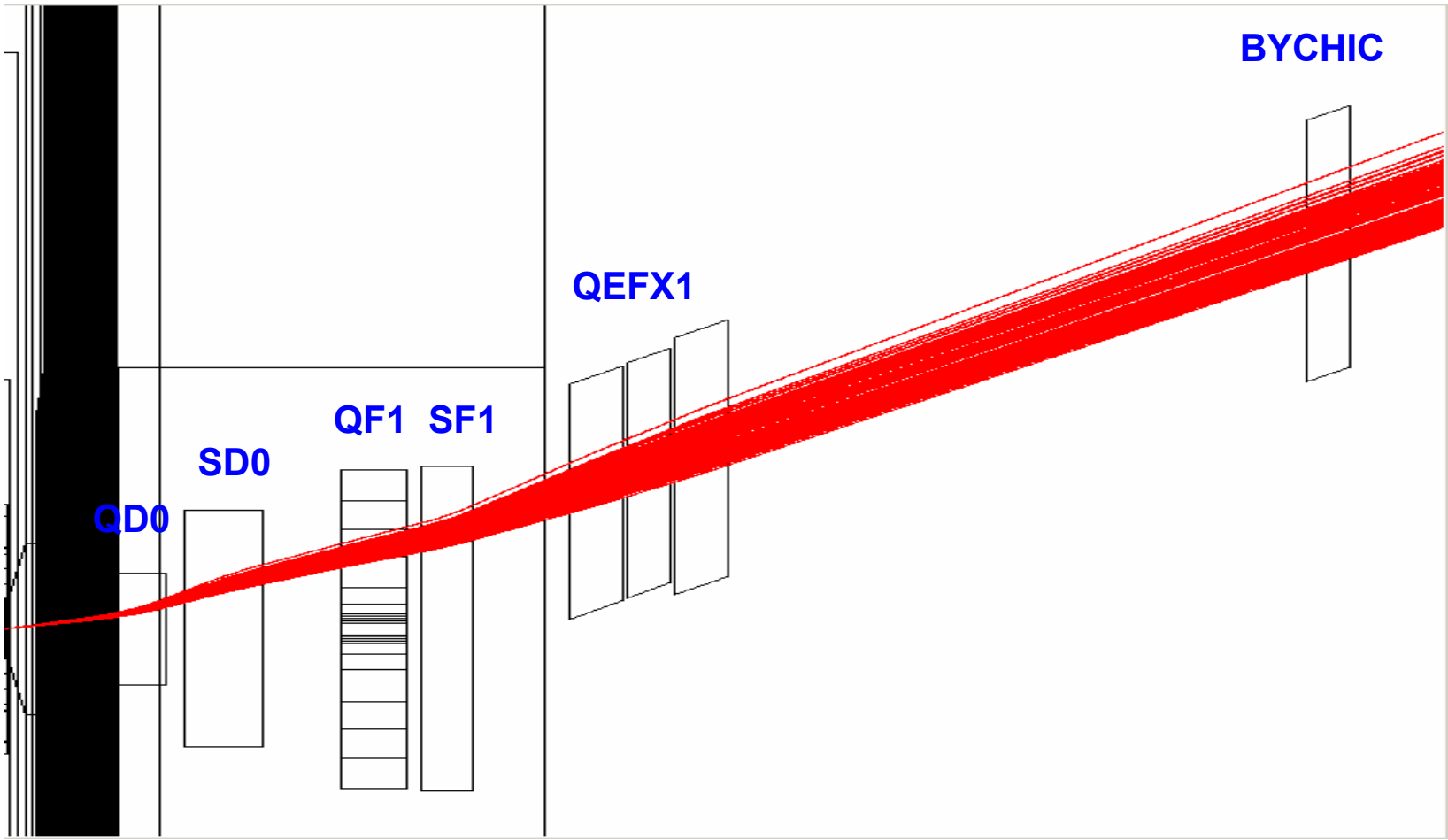
Sync Radiations at QEXF2[2]



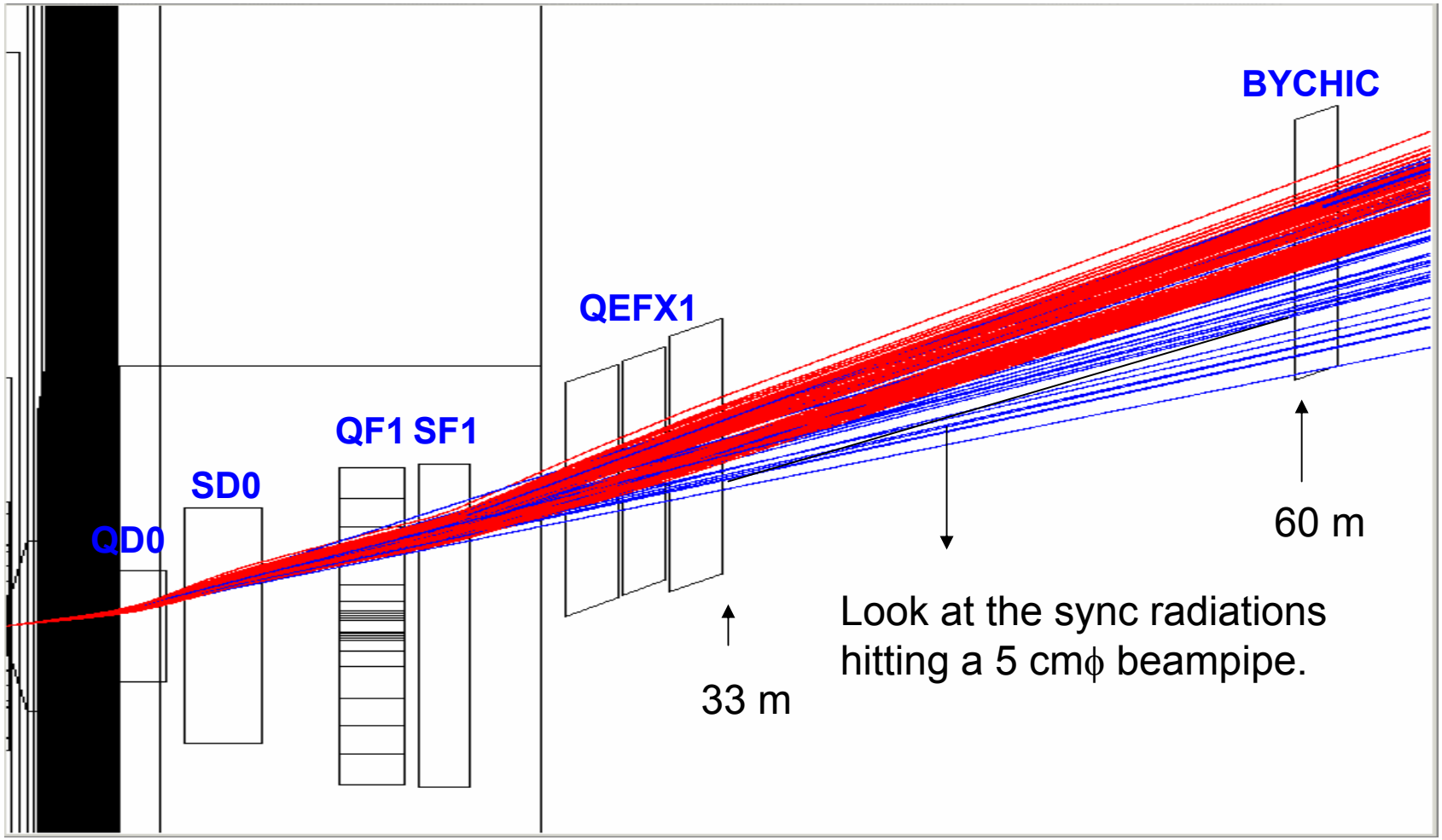


Power density = ~7 W / (5 cm x 0.1 cm)
14 W/cm^2

March 4 Version



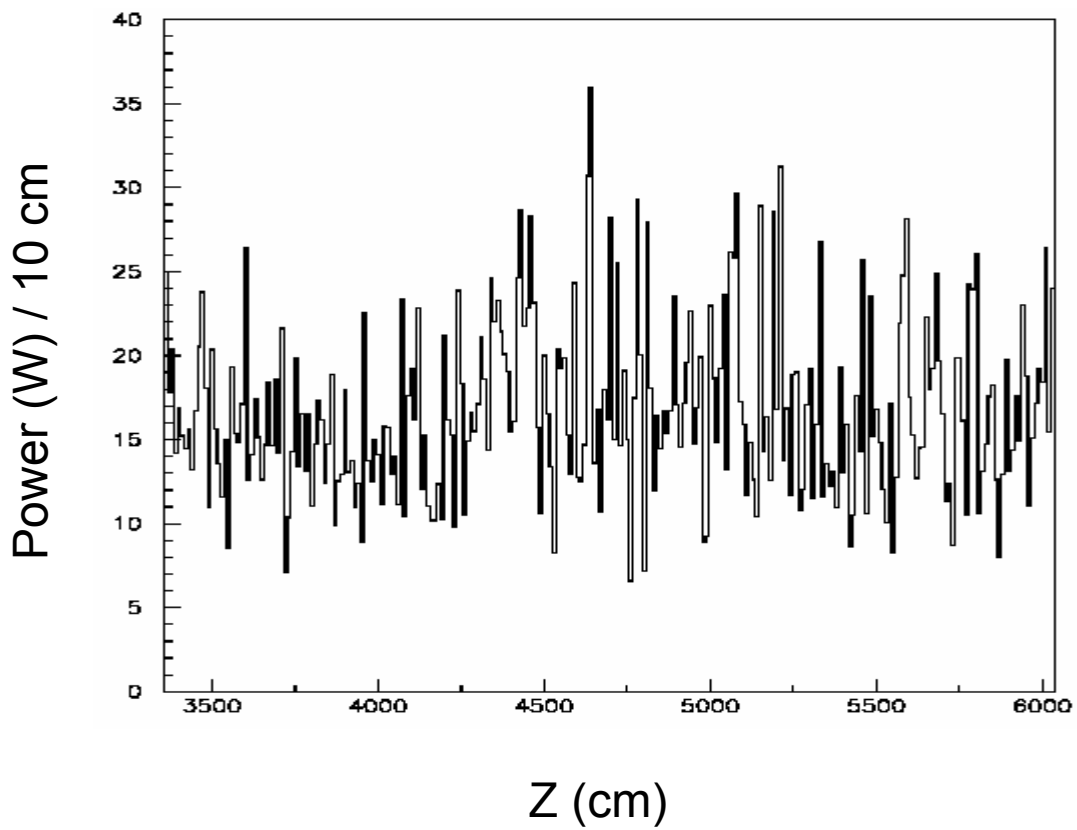
Sync radiations



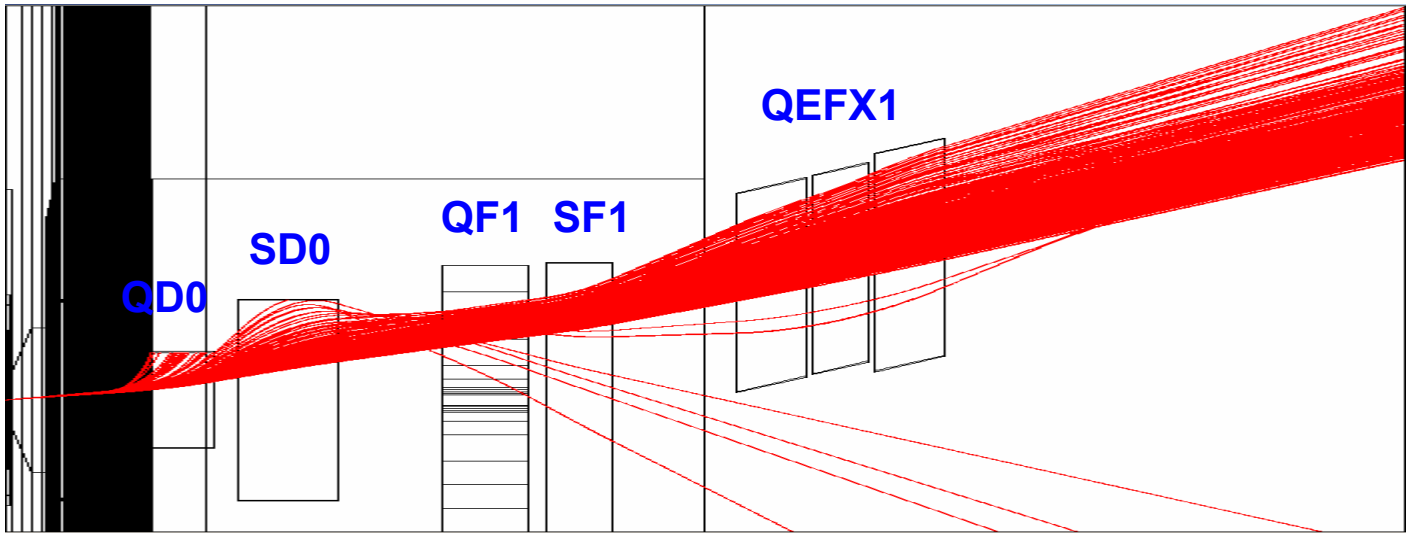
Sync radiations from Z=33 to 60 m

Total power = 5 kW

Power density =
~15 W/cm^2



Radiative Bhabhas



	# loss/bx	< E > (GeV)	Power (W)
QD0	9080	31	0.6
SD0	286	60	0.4
QEFX	272	69	0.4

Similar loss is expected for 20 mrad extraction.