

SR update

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Latest SR calculations

- Based on following machine parameters

	Z	W	H(ZH)	top	top+
Energy (GeV)	45.6	80	120	175	182.5
Emitt. X (nm)	0.27	0.84	0.63	1.34	1.46
Emitt. Y (pm)	1.0	1.7	1.3	2.7	2.9
Beta* X (m)	0.15	0.2	0.3	1.0	1.0
Beta* Y (mm)	0.8	1.0	1.0	1.6	1.6
Bunch (10^{11})	1.7	2.3	1.8	3.2	3.35
# bunches	16640	1300	328	40	33
Current (mA)	1390	147	29	6.4	5.4
Bend K_c (keV)	1.84	9.35	33.57	99.98	113.38

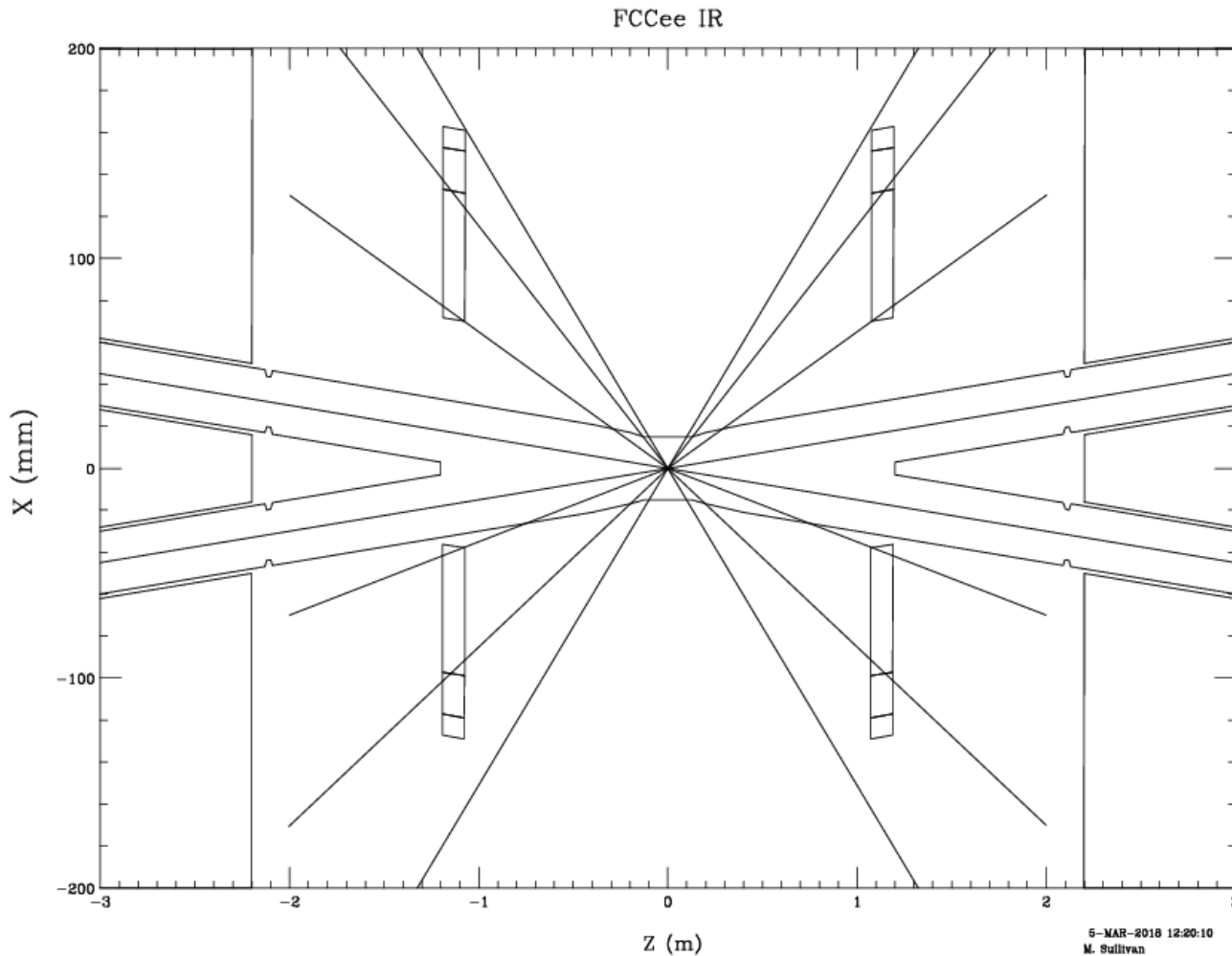
SR photon rates

	Energy (GeV)	Critical energy (keV)	number of bunches	Current (mA)	Inc. /xing 500um from tip	Scattered rate/xing	Inc. on Central pipe/xing	Inc. on Central pipe/sec
tt+	182.5	113.38	33	5.41	3.32E+09	1.46E+07	1195	1.18E+08
tt	175	99.98	40	6.4	3.06E+09	1.04E+07	1040	1.25E+08
h	125	36.43	328	29	1.05E+09	5.55E+05	10.3	1.01E+07
W	80	9.55	1300	147	6.11E+08	2.05E+04	0.18	7.02E+05
Z	45.6	1.77	16640	1390	9.62E+07	1.36E+02	1.92E-04	9.58E+03

**The central beam pipe is a cylinder +/- 12.5 cm in Z
with a 1.5 cm radius**

Started work on an updated drawing

- Mogens has asked for an updated IR drawing with the current LumiCal design



**Need to put in
the colors etc. but
I think I have the
geometry finished**