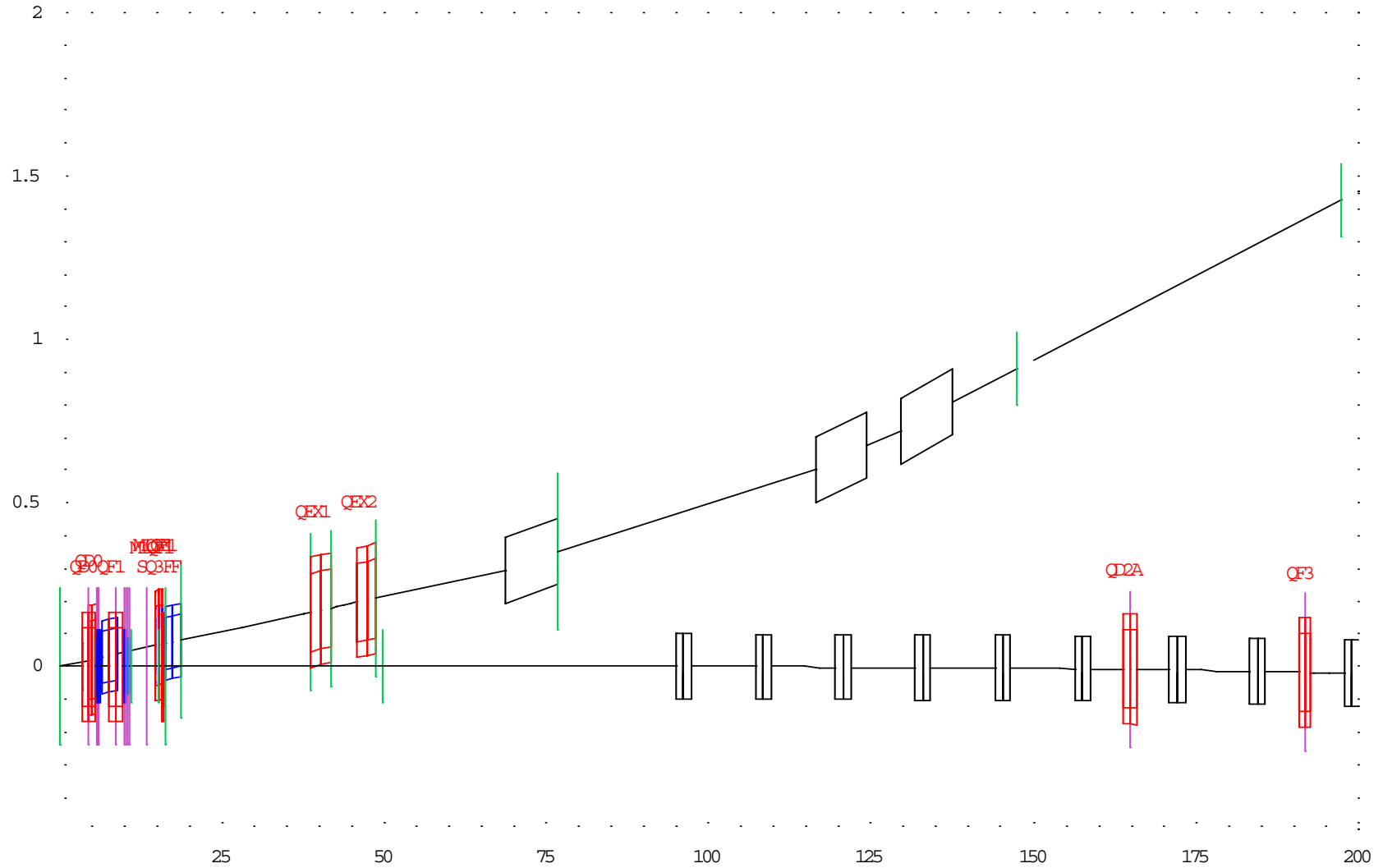


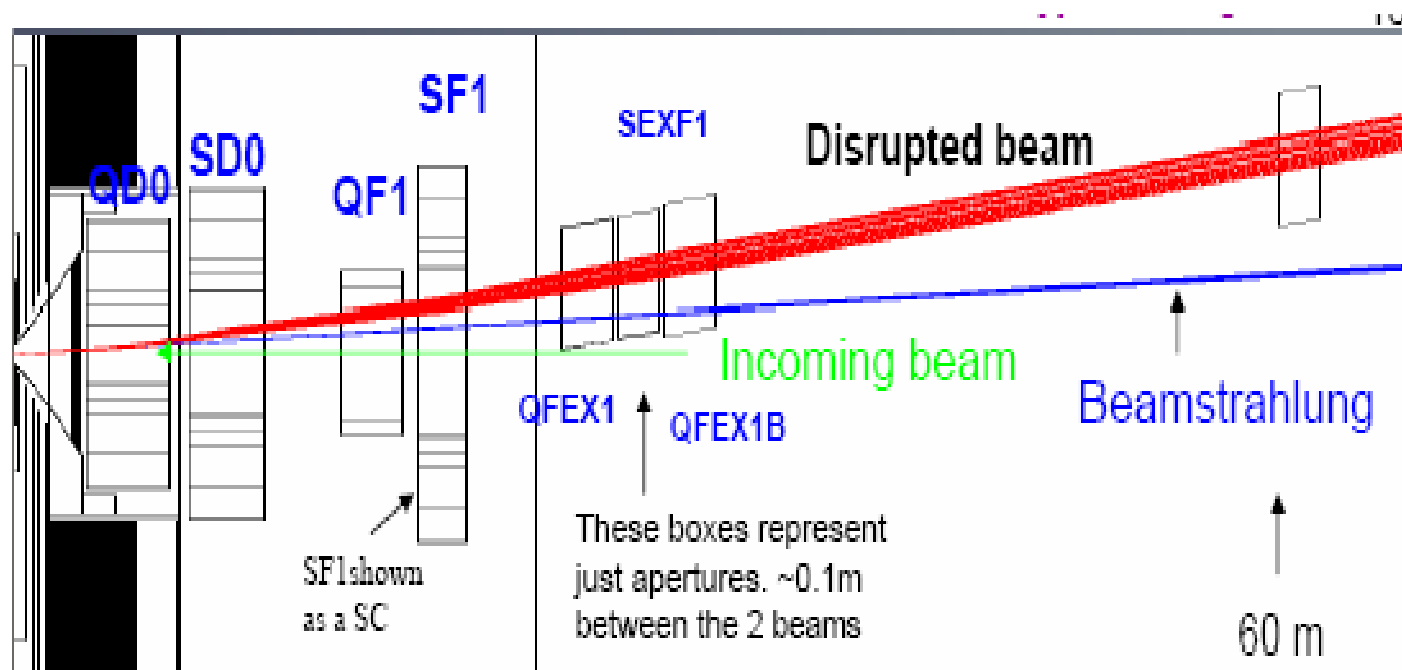
# Cross check of the DIMAD calculations for the 2mrad extraction line

(with the help of Robert Appleby  
and his slides)

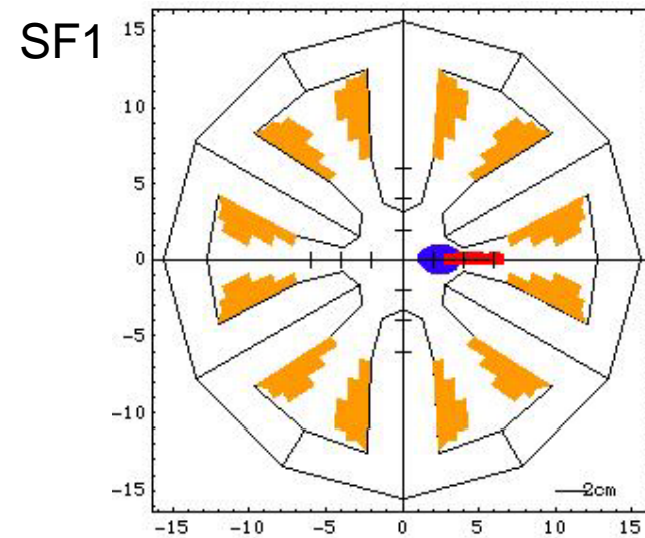
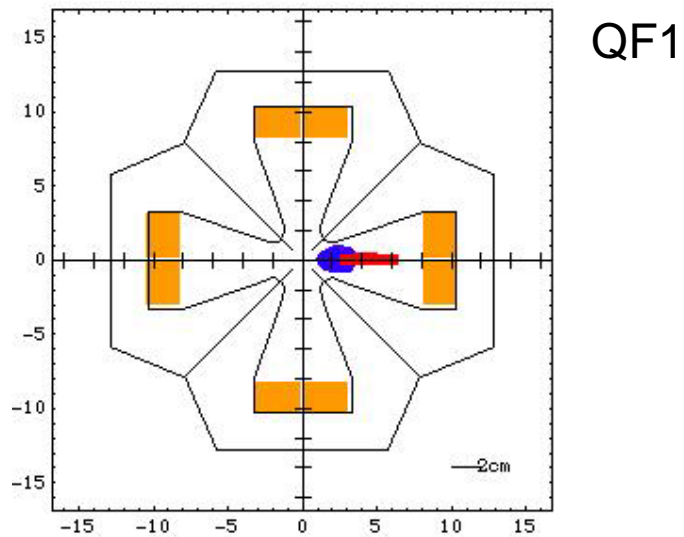
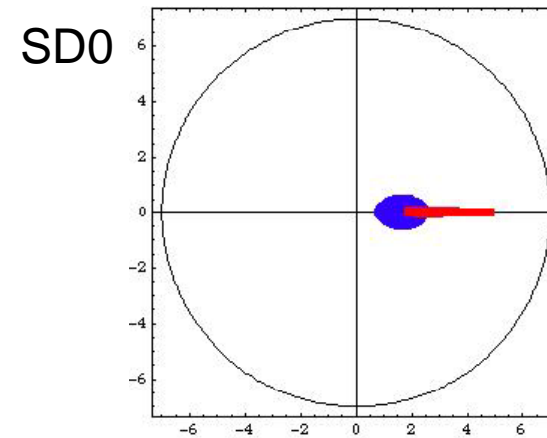
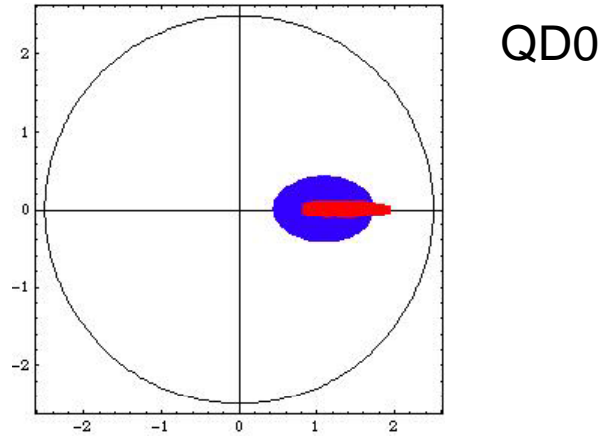
# 2mrad extraction line



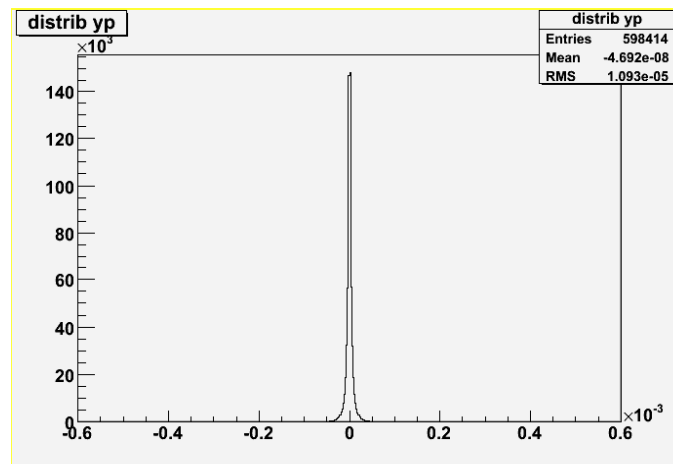
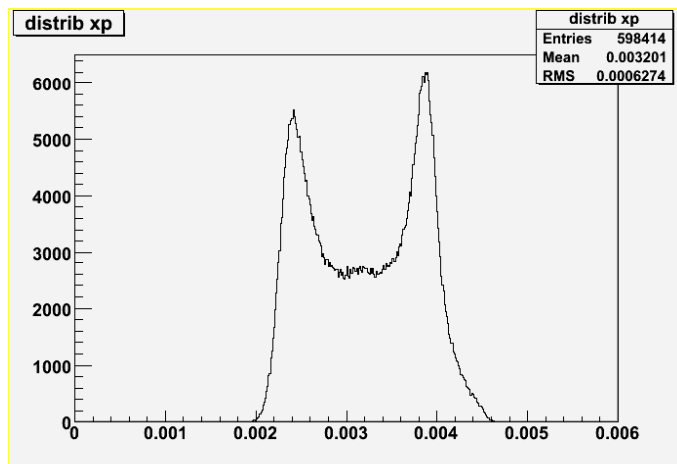
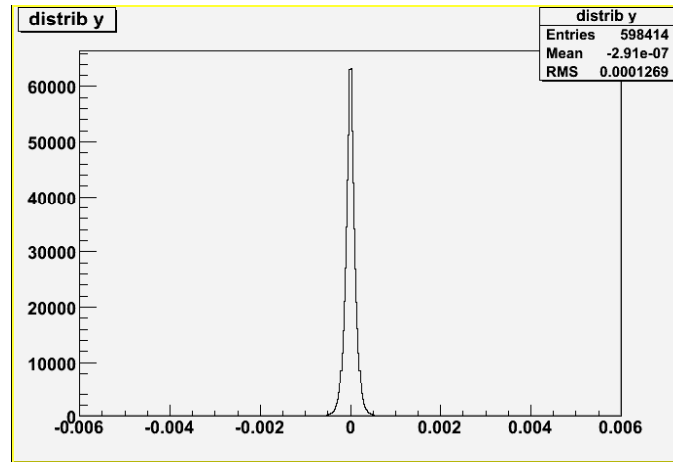
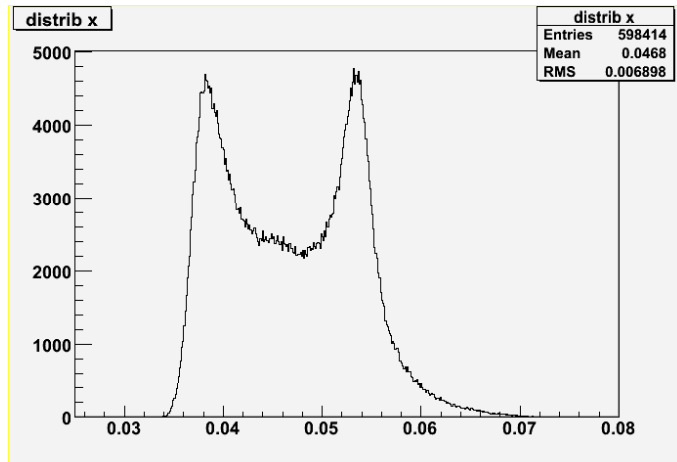
# Final Doublet (FD)



# The FD, beam red, beamsthalung blue



# DIMAD Results at the end of the FD (for 600k macroparticles, 500GeV)



Xp mean = 3.2mrad

X mean = 46mm

# After the FD

- Use of 500 GeV CM High Luminosity beam
- Use of three files of 200k to get a file of 600k
- Use of PAW for the size of the beam
- Comparison of the results with those found by Rob (mine in red)

# Results after the FD high lumi

Name	QEX1 (start)	Qex1start	QEX1 (end)	Qex1end	QEX2 (start)	Qex2start	QEX2 (end)	Qex2end
Length [m]	4		4		4		4	
S [m]	45,7		49,7		53,7		57,7	
Strength	0,009		0,009		-0,002		-0,002	
Orbit [mm]	149,2		162		174,8		187,6	
Photon middle [mm]	91,4		99,4		107,4		115,4	
Photon x upper [mm]	125,675		136,675		147,675		158,675	
Photon x lower [mm]	57,125		62,125		67,125		72,125	
Photon y upper [mm]	38,845		42,245		45,645		49,045	
Photon y lower [mm]	38,845		42,245		45,645		49,045	
Beam x upper [mm]	66,9	72,5	65,6	71,6	57,6	63,7	50,8	57,1
Beam x lower [mm]	-74,8	-72,5	-76,4	-74,2	-68,7	-66,8	-62,7	-61,1
Beam y upper [mm]	20,46	20,9	25,1	25,7	32,6	33,3	39,1	39,9
Beam y lower [mm]	-16,5	-14,6	-20,3	-17,9	-26,3	-23,1	-31,6	-27,7
Aperture [mm]	92,075		99,875		107,675		115,475	
Gradient [T/m]	7,497		7,497		-1,666		-1,666	
Field [T]	0,69028628		0,74876288		-0,17938655		-0,19238135	
Name	QEX1COLL		QEX2COLL		BHEX1COLL		COLL1	
Length [m]	1		1		1		2,5	
S [m]	44,7		52,7		52,7		130,9	
Power Load [kW]	0,2		0		0,1		52,3	

# Results after the FD High Lumi

BHEX1 (start)	BHEX1start	BHEX1 (end)	BHEX1end	BB1 (start)	BB1start	BB1 (end)	BB1end	BB2 (start)
6		6		4		4		4
77,7		83,7		140,9		144,9		148,9
0,002		0,002		0,0012		0,0012		0,0012
251,615		276,8		574,6		597,8		623,4
155,4		167,4		281,8		289,8		297,8
213,675		230,175		387,475		398,475		409,475
97,125		104,625		176,125		181,125		186,125
45,066		48,546		81,722		84,042		86,362
45,066		48,546		81,722		84,042		86,362
33,9	35,8	34,2	33,4	67,1	67,3	75,4	74,6	86,2
-42,4	-46,2	-44,1	-44,3	-22,9	-26,1	-21,7	-24,8	-22
32,8	44,3	44,3	49,7	29,9	29,9	31	31	32,1
-42,7	-44,7	-42,7	-50,2	-28,8	-29,9	-29,9	-31,1	-32,1
0		0		0		0		0
0		0		0		0		0
0,27766667		0,277666667		0,2499		0,2499		0,2499
COLL2		COLL3						
2,5		2,5						
183		285,5						
207,5		0						



# Results at the dump with Paw

