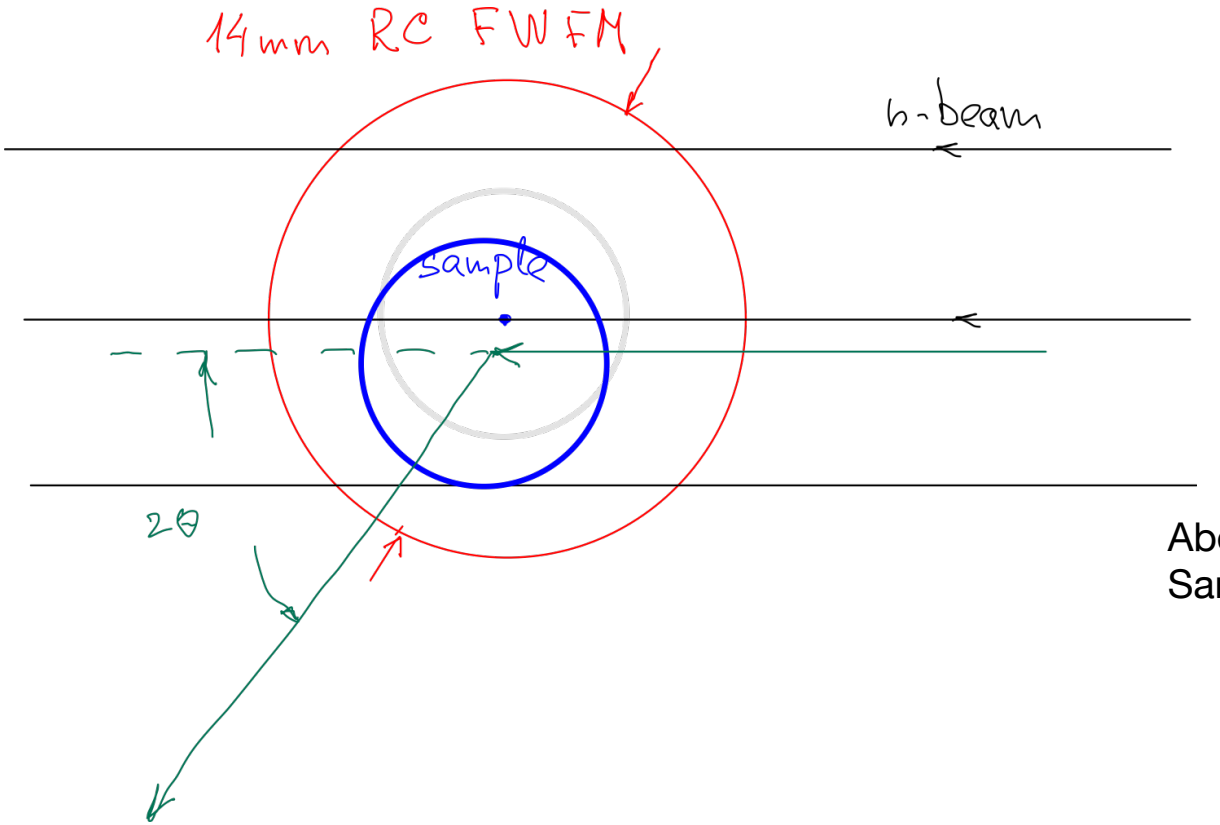
Some drawbacks of radial collimators (RC)

Related to RC and positioning business



Aberration:
Sample shifted from calibration position

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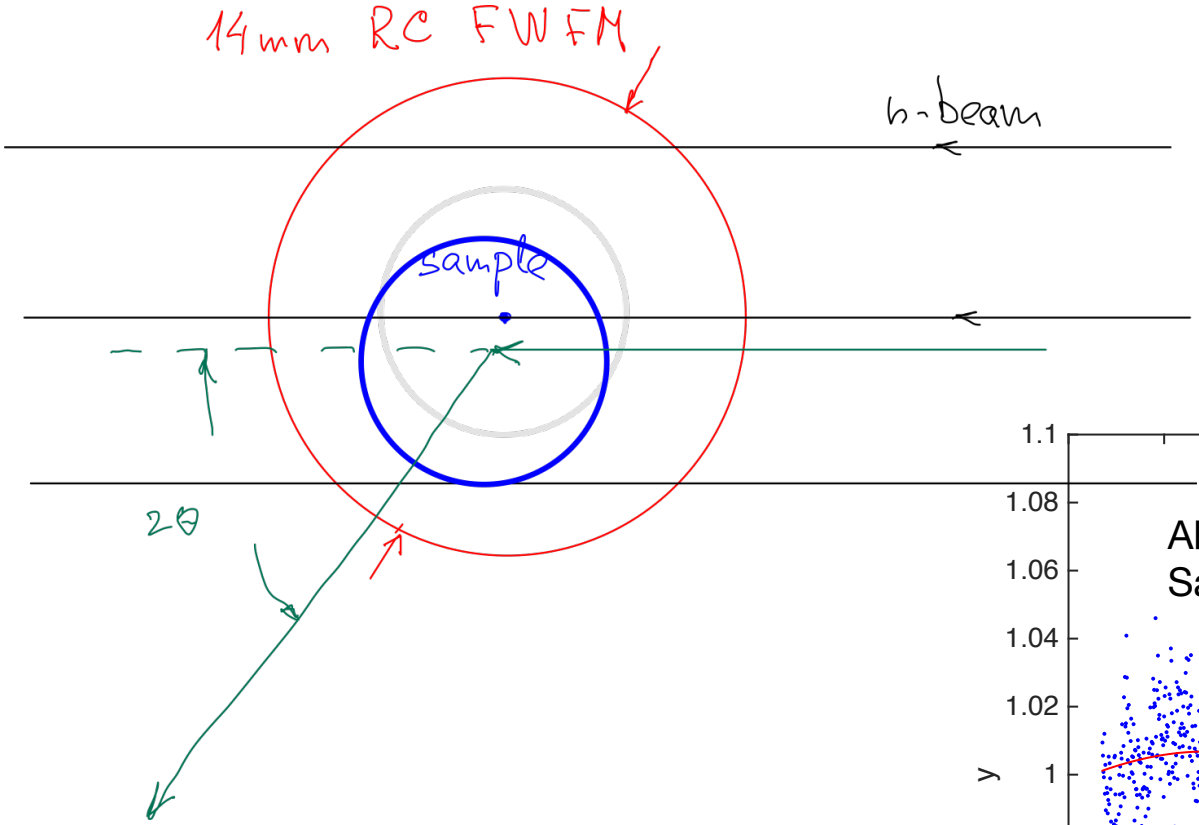

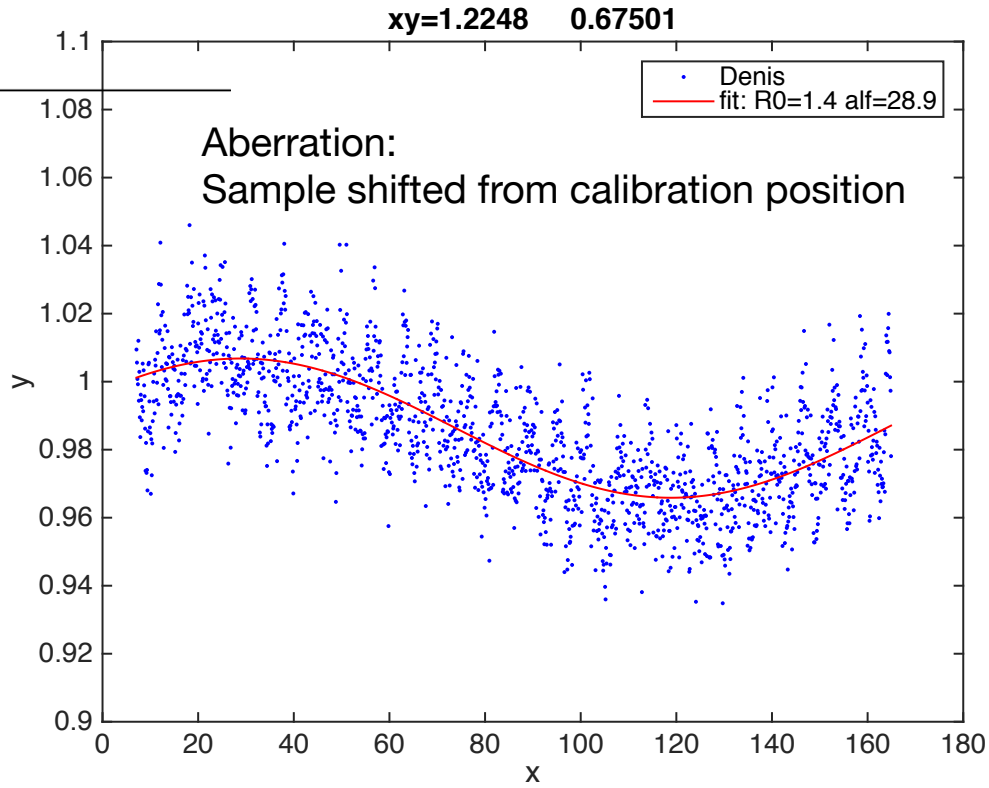

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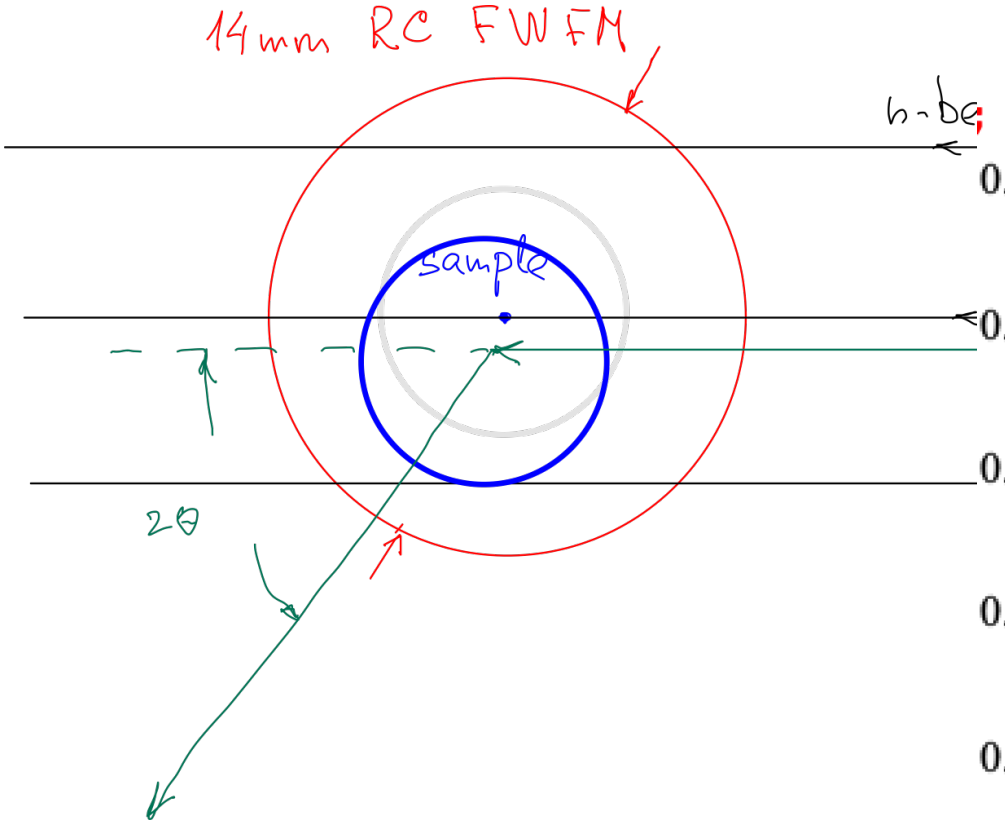
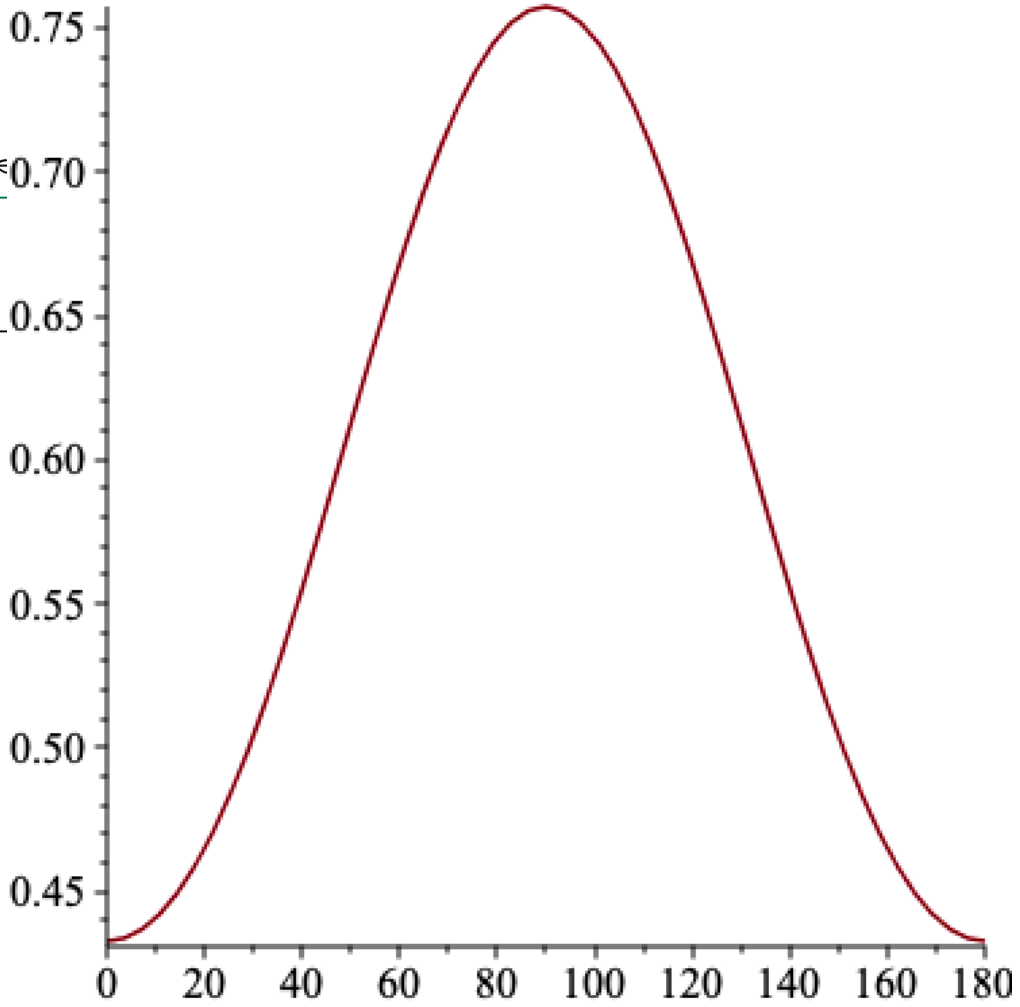
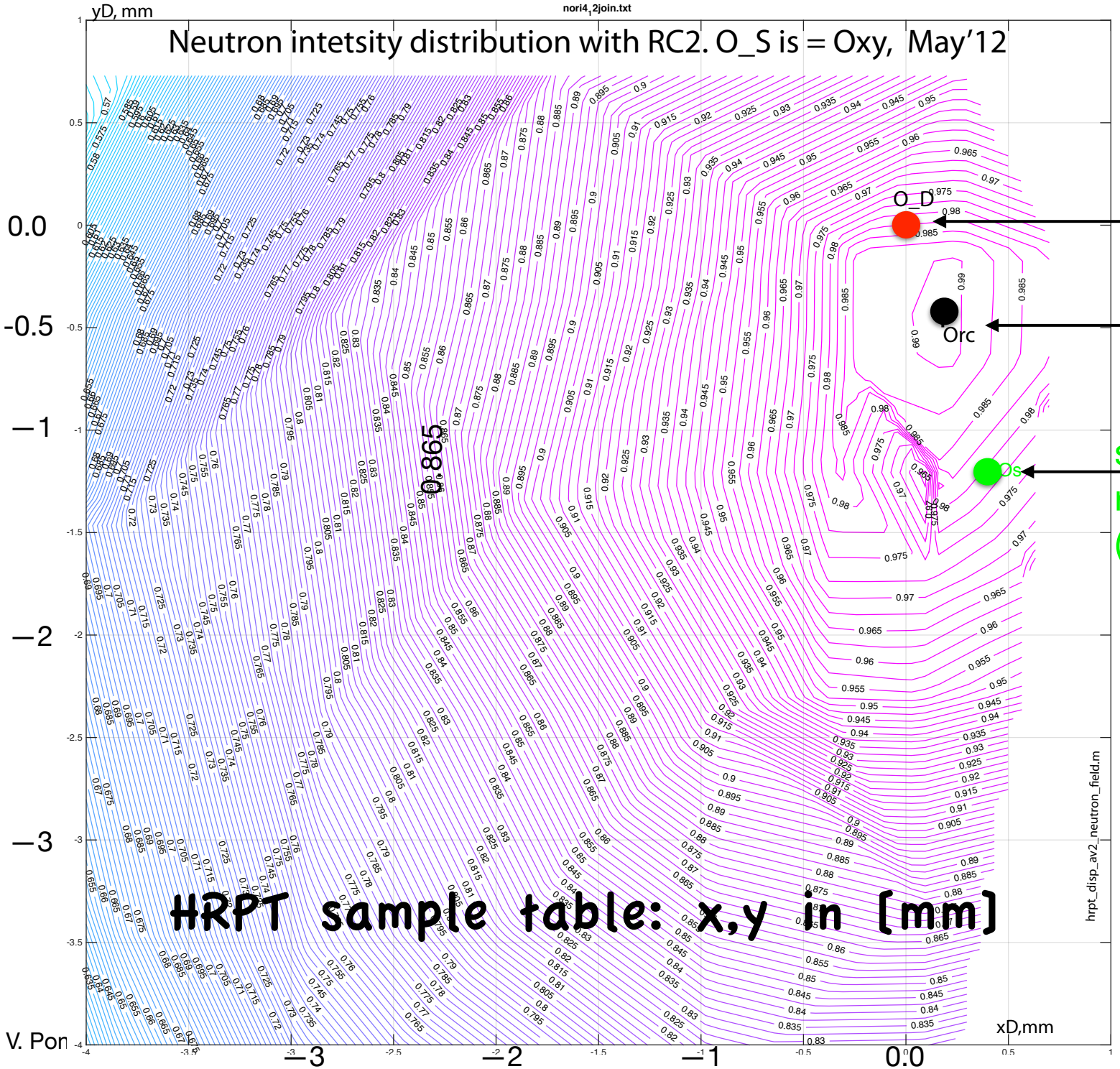


8mm dia sample shifted by 4mm in direction of 2θ=90deg

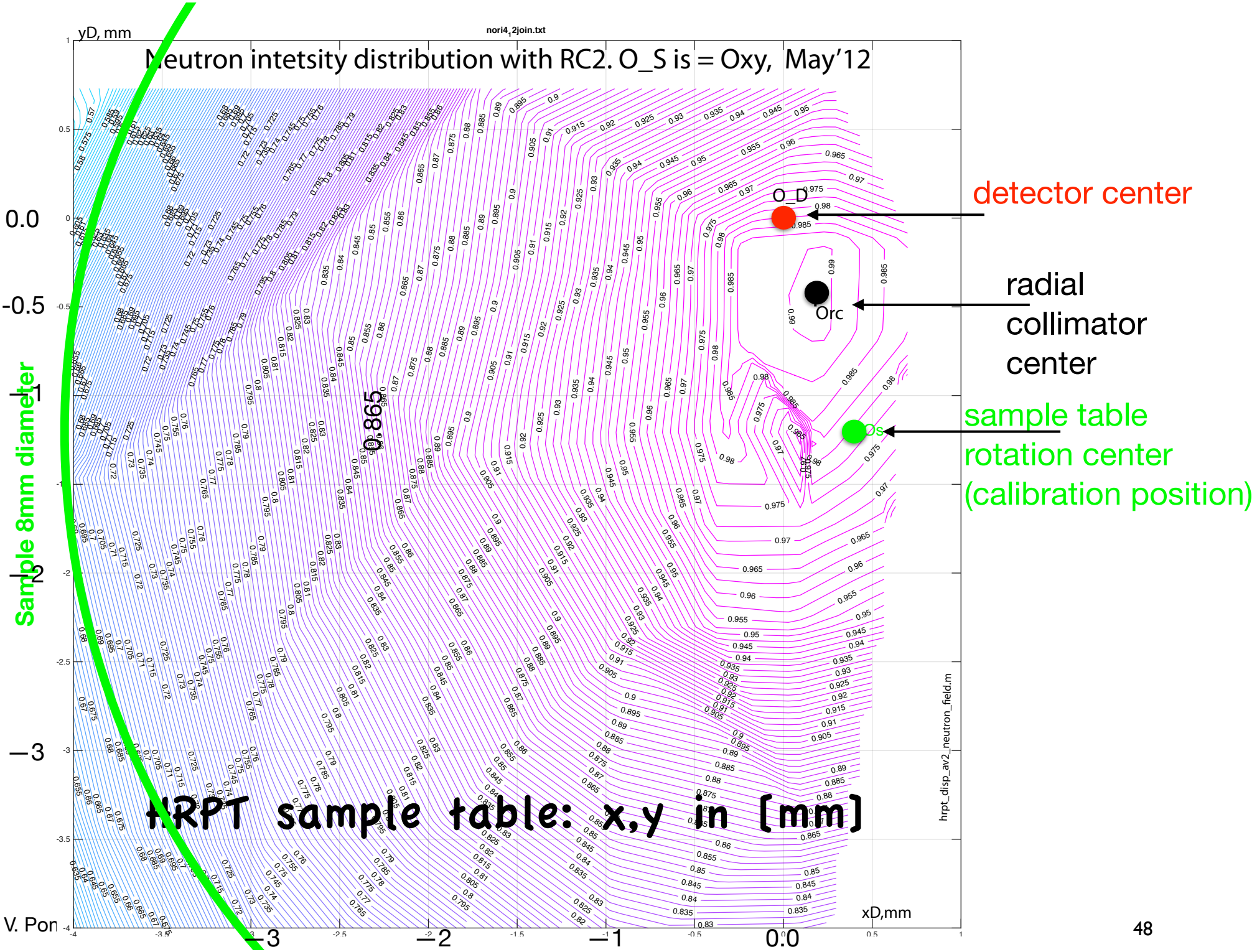




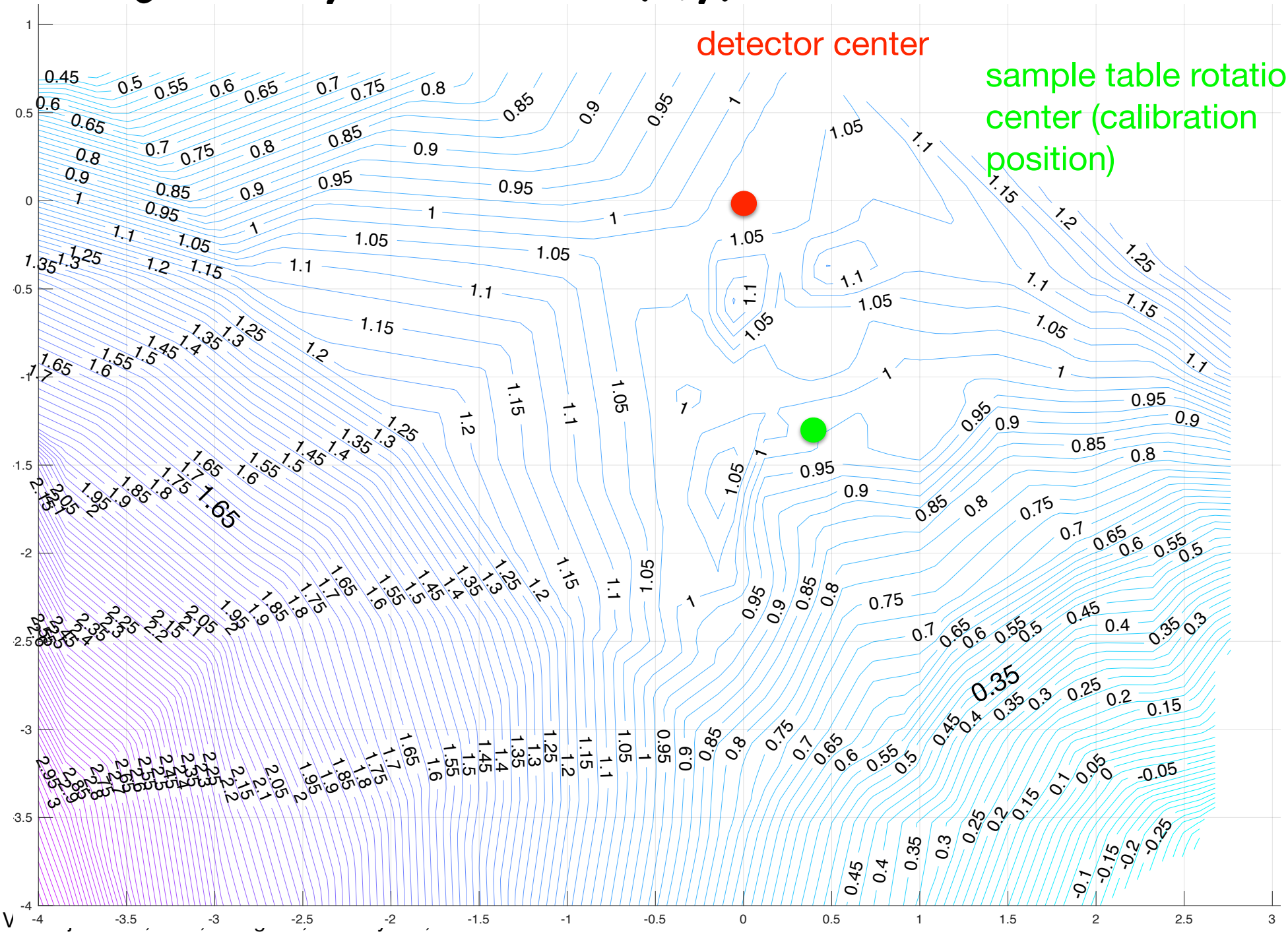
detector center

radial collimator center

sample table rotation center (calibration position)

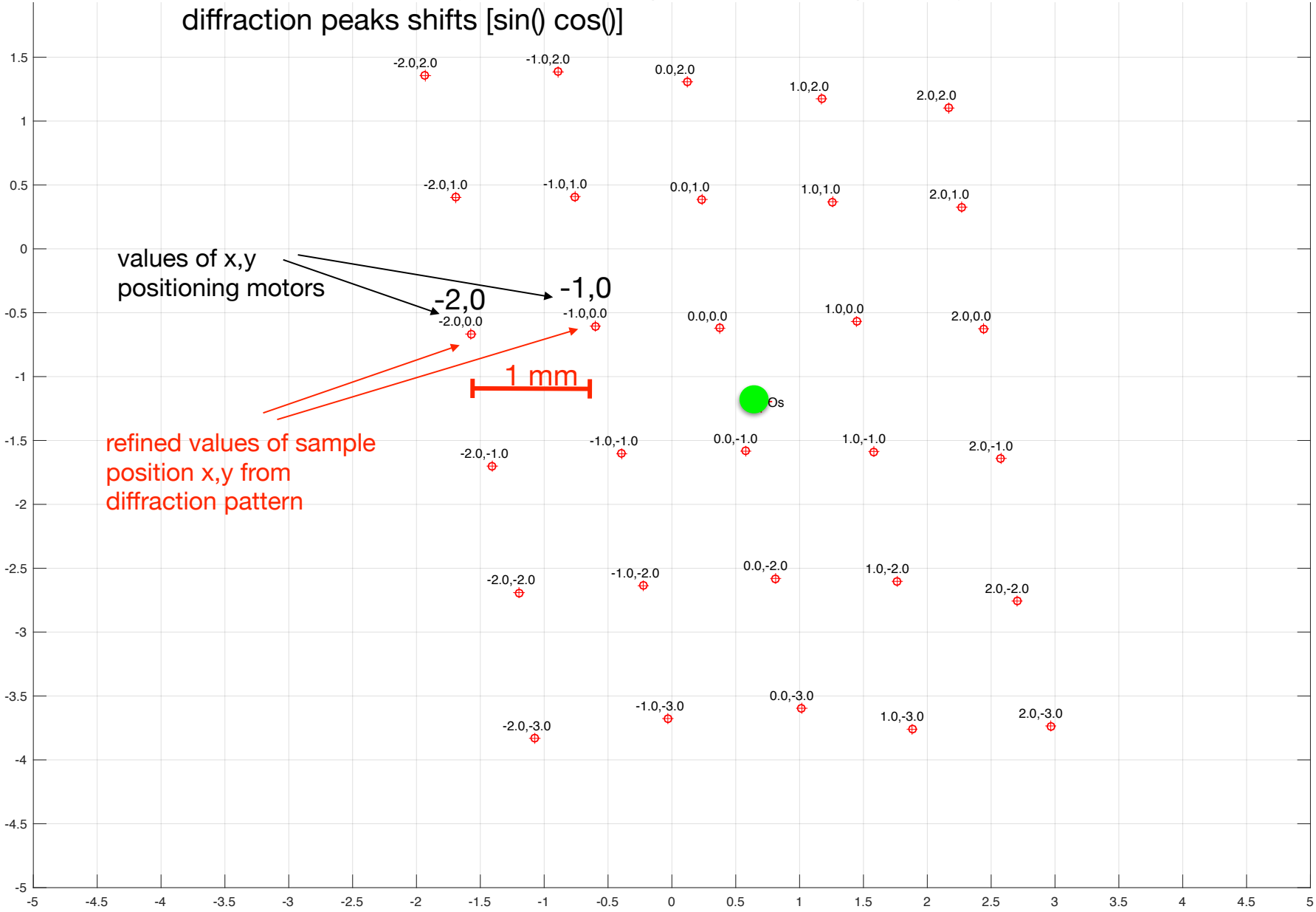

yD, mm
nori4_12join.txt
Neutron intetsity distribution with RC2. O_S is = Oxy, May'12
O_D
Orc
Os
detector center
radial collimator center
sample table rotation center (calibration position)
Sample 8mm diameter
HRPT sample table: x,y in [mm]
hrpt_disp_av2_neutron_field.m
xD,mm
V. Pon
48

average Debay-Waller ADP(x,y) of Na2Ca3Al2F14 at 1.9A



precise sample positioning with respect to calibration

We can determine by diffraction the (x,y) position of sample with the accuracy better than 0.1mm! by the detector (radius 1500mm) from systematic diffraction peaks shifts [sin() cos()]



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