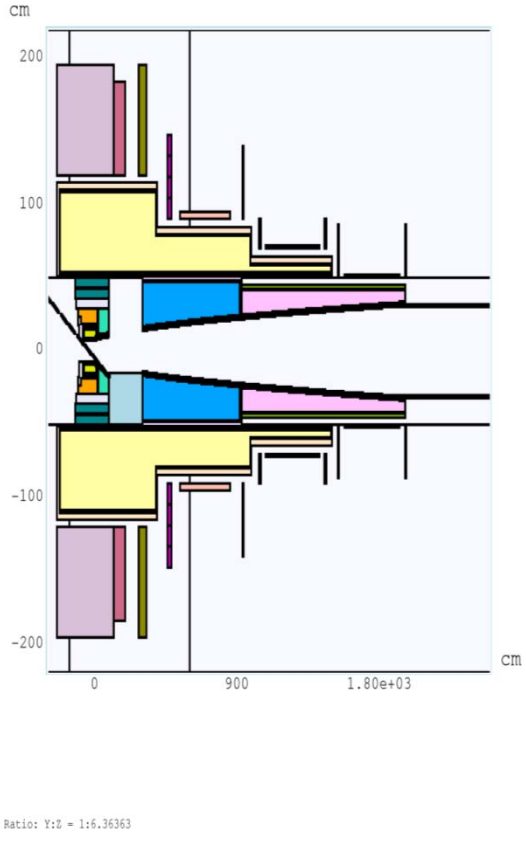
IDS120j WITH/WITHOUT GAPS

SC#4 AZIMUTHAL DPD DISTRIBUTION ANALYSIS

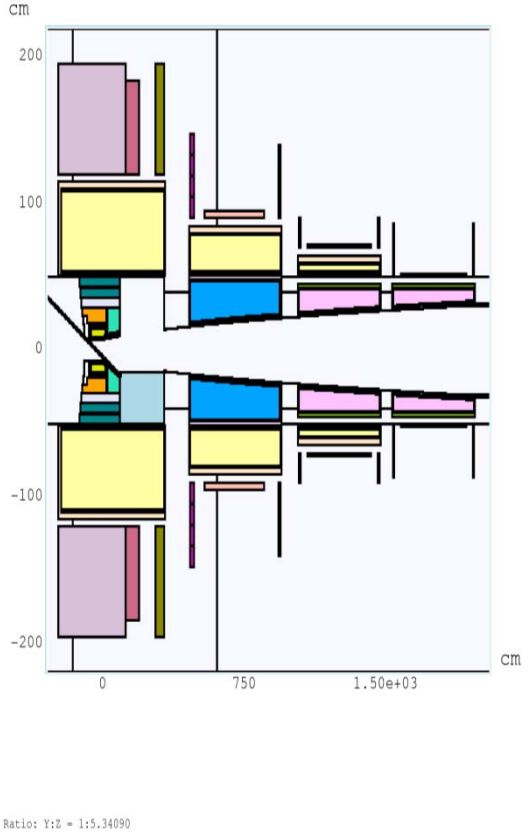
Nicholas Souchlas, PBL (3/15/2012)

IDS120j WITHOUT (LEFT) AND WITH GAPS (TWO SHIELDING CONFIGURATIONS RIGHT)

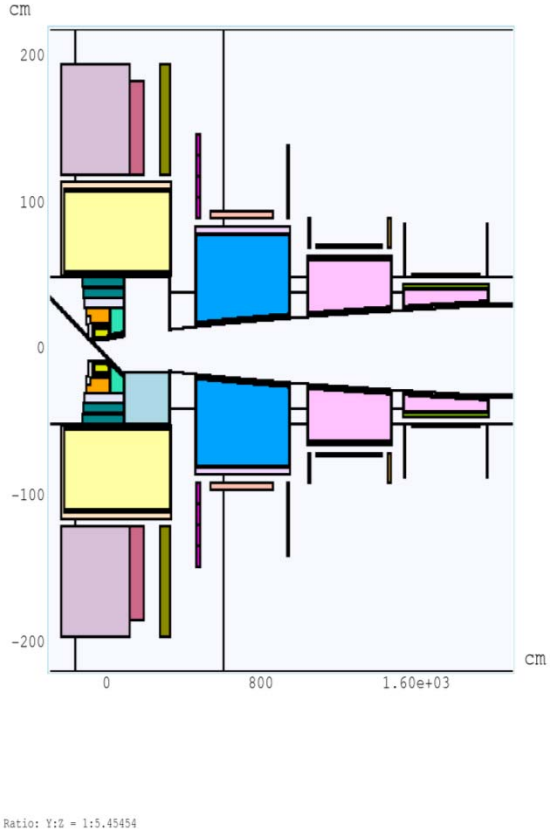
YZ CROSS SECTION PLOTS.



Aspect Ratio: Y:Z = 1:6.36363

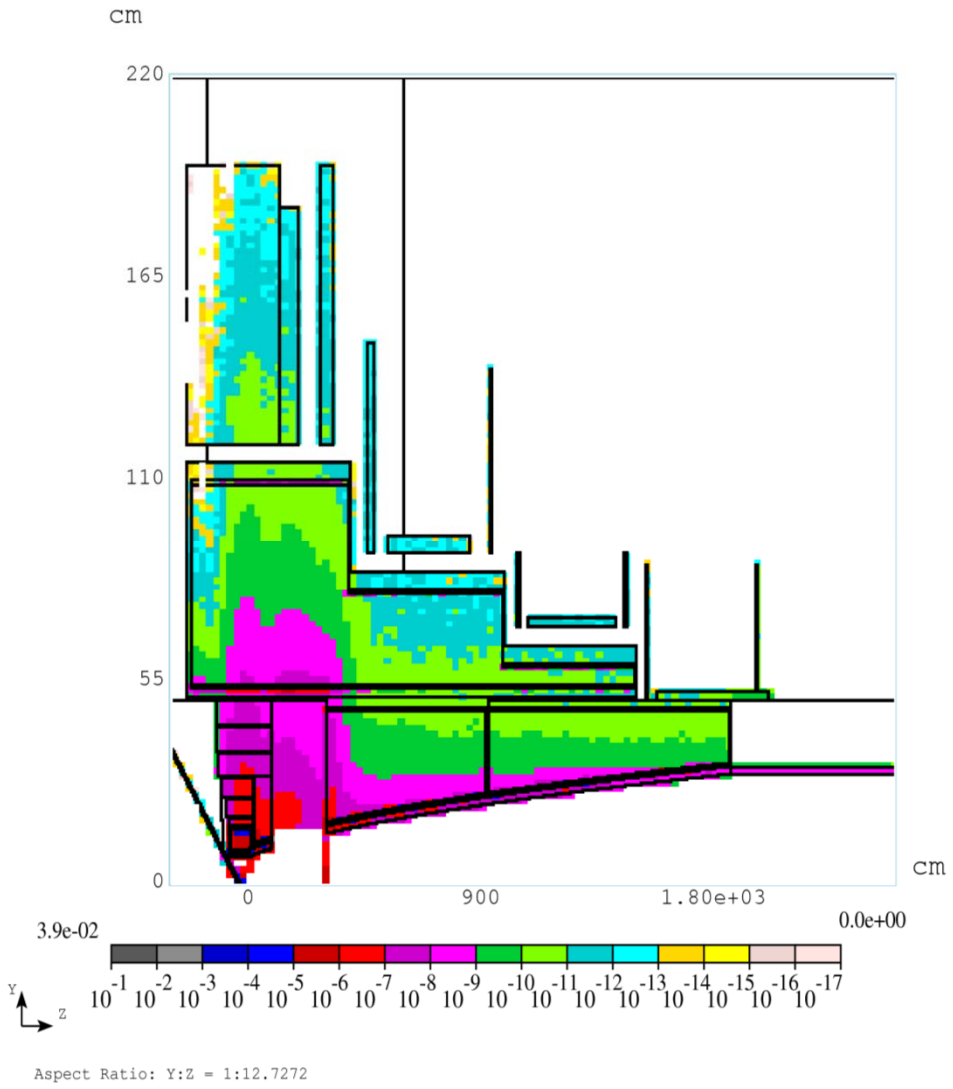


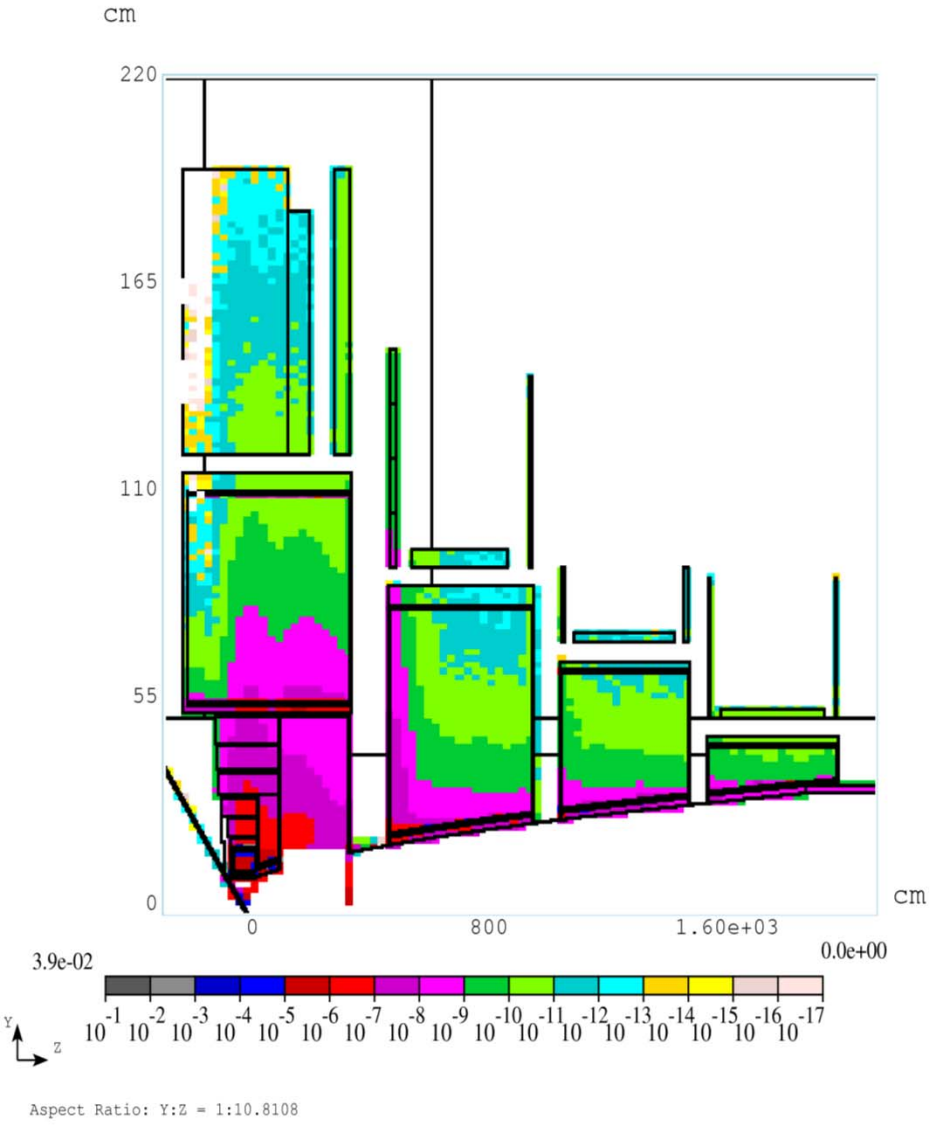
Aspect Ratio: Y:Z = 1:5.34090



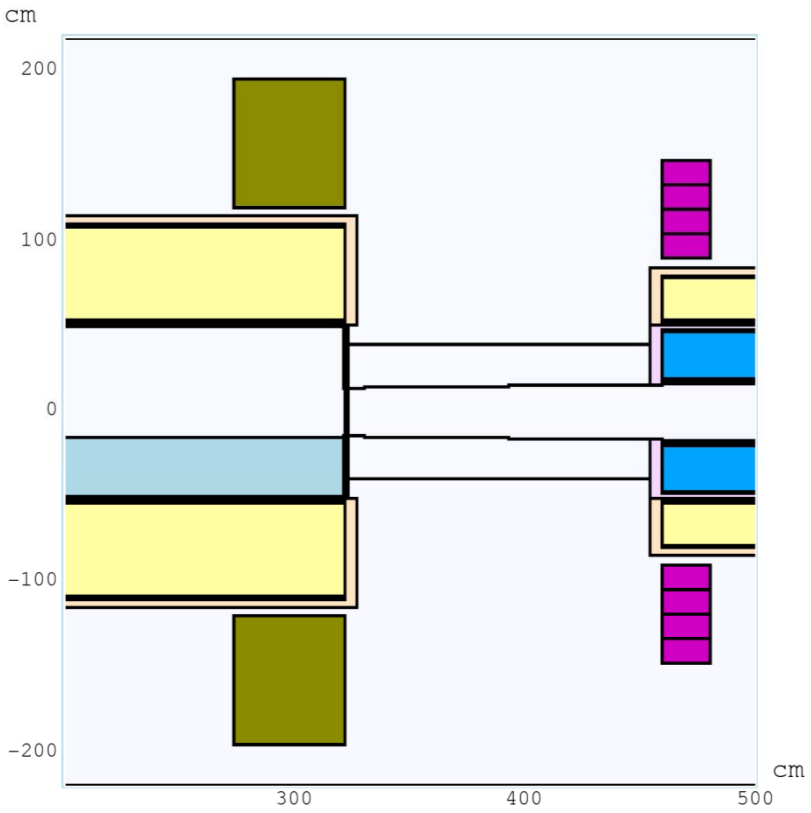
Aspect Ratio: Y:Z = 1:5.45454

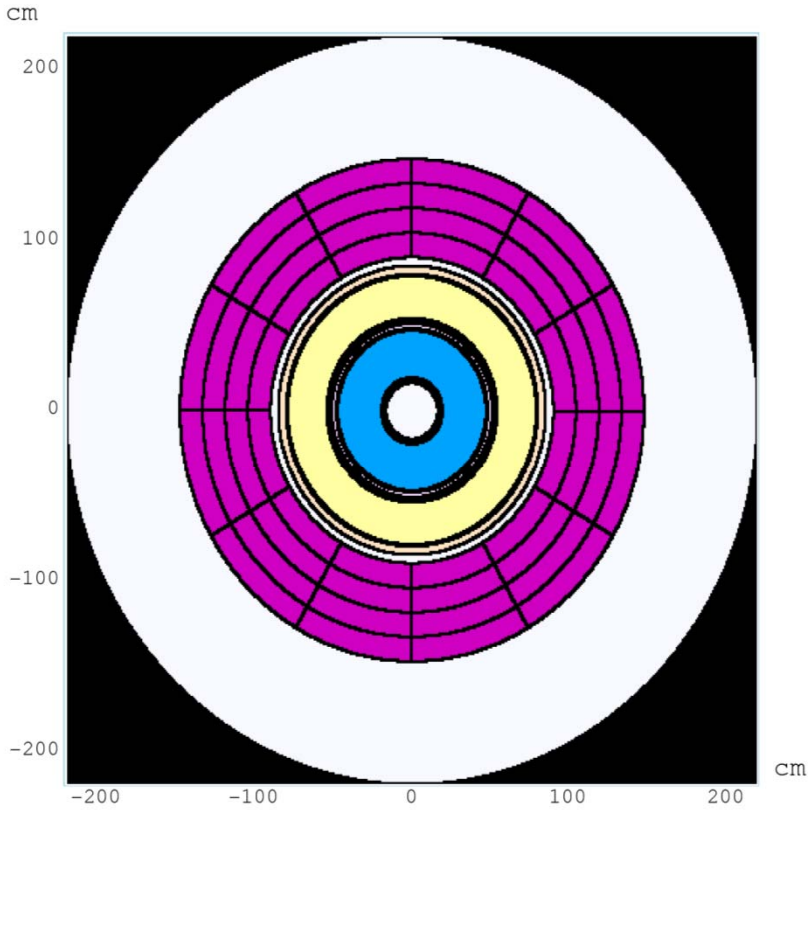
IDS120j: DP DISTRIBUTION WITHOUT GAPS (LEFT) AND WITH GAPS (RIGHT)





IDS120j: GAP BETWEEN CRYO 1-2 AND SC#4 SEGMENTATION DETAILS.





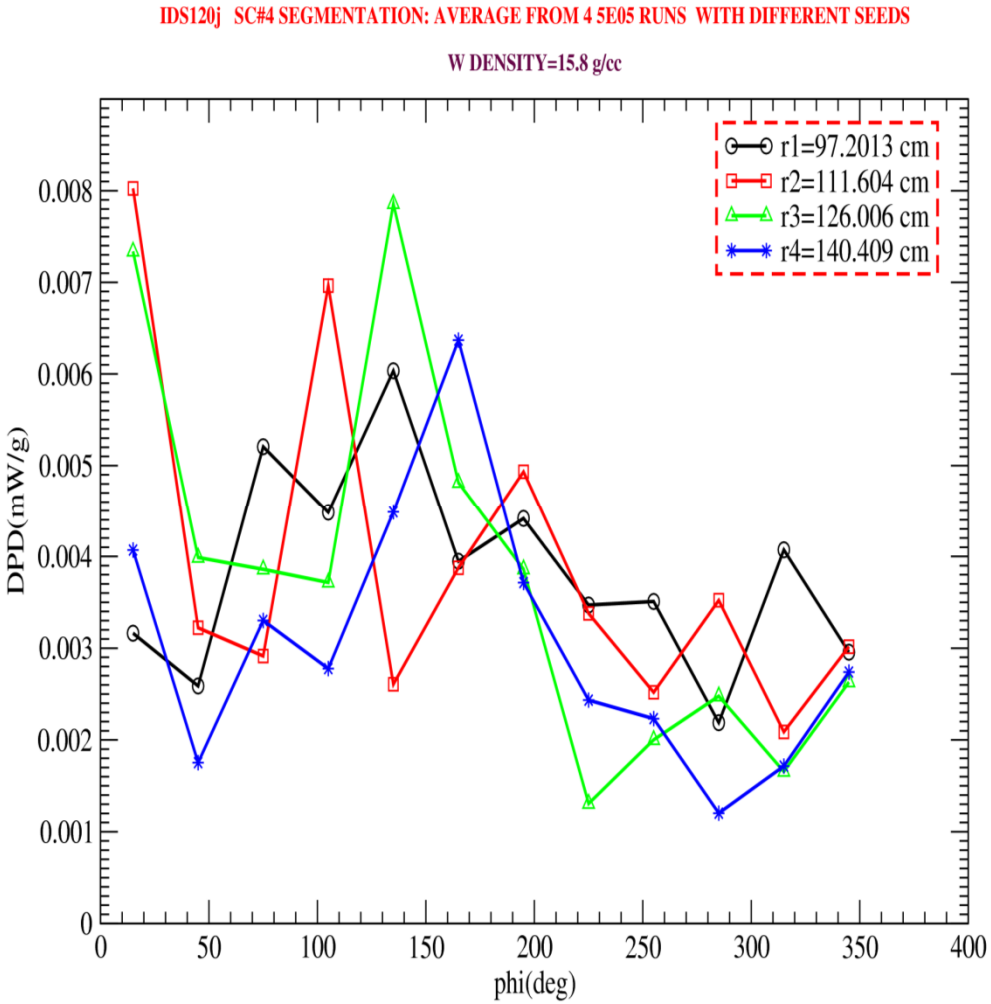
90 < r < 147.61 cm dr = 14.40 cm N_r = 4 bins

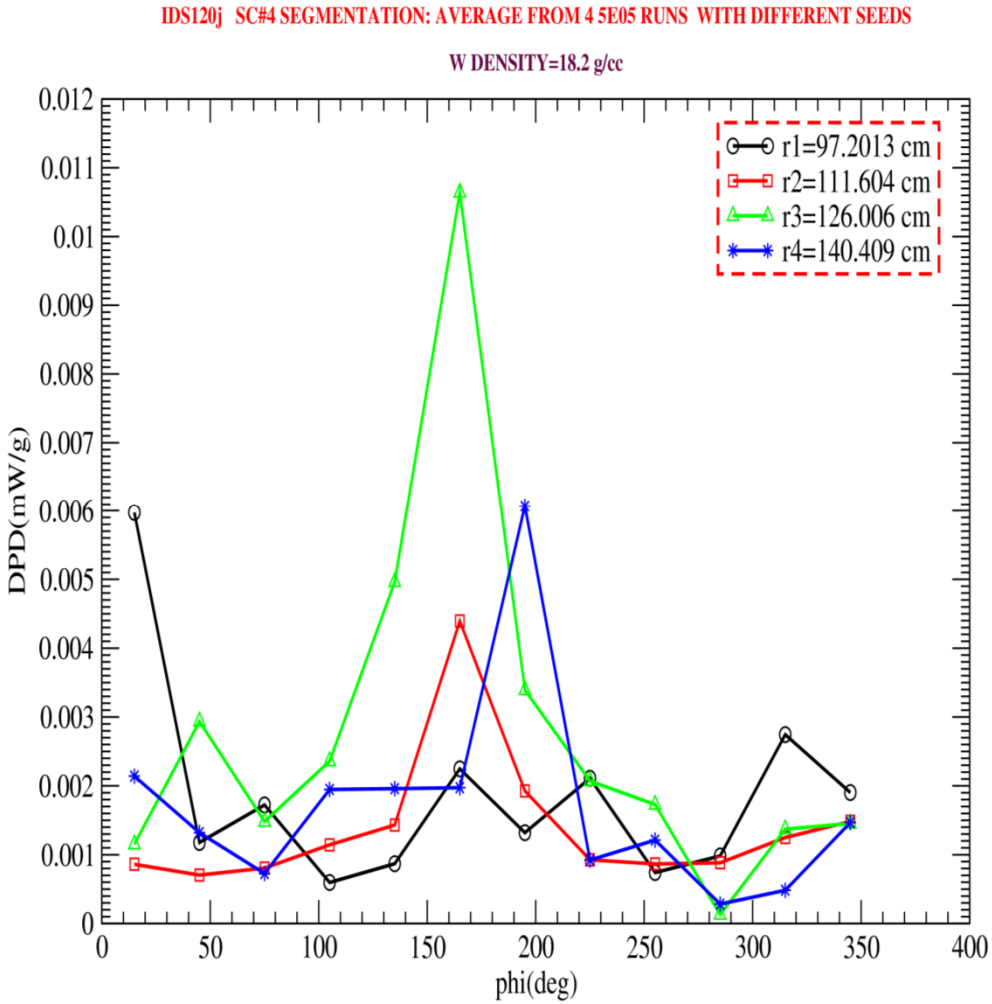
459.0 < z < 480.31 cm dz = 21.31 cm N_z = 1 bin

0.0 < φ < 360.0 deg. dφ = 30 deg. N_φ = 12 bins

N_{tot} = 48 "pieces"

SC#4 DPD AZIMUTHAL DISTRIBUTION WITHOUT GAPS: 15.8 g/cc (LEFT) AND 18.2 g/cc (RIGHT) W DENSITY.



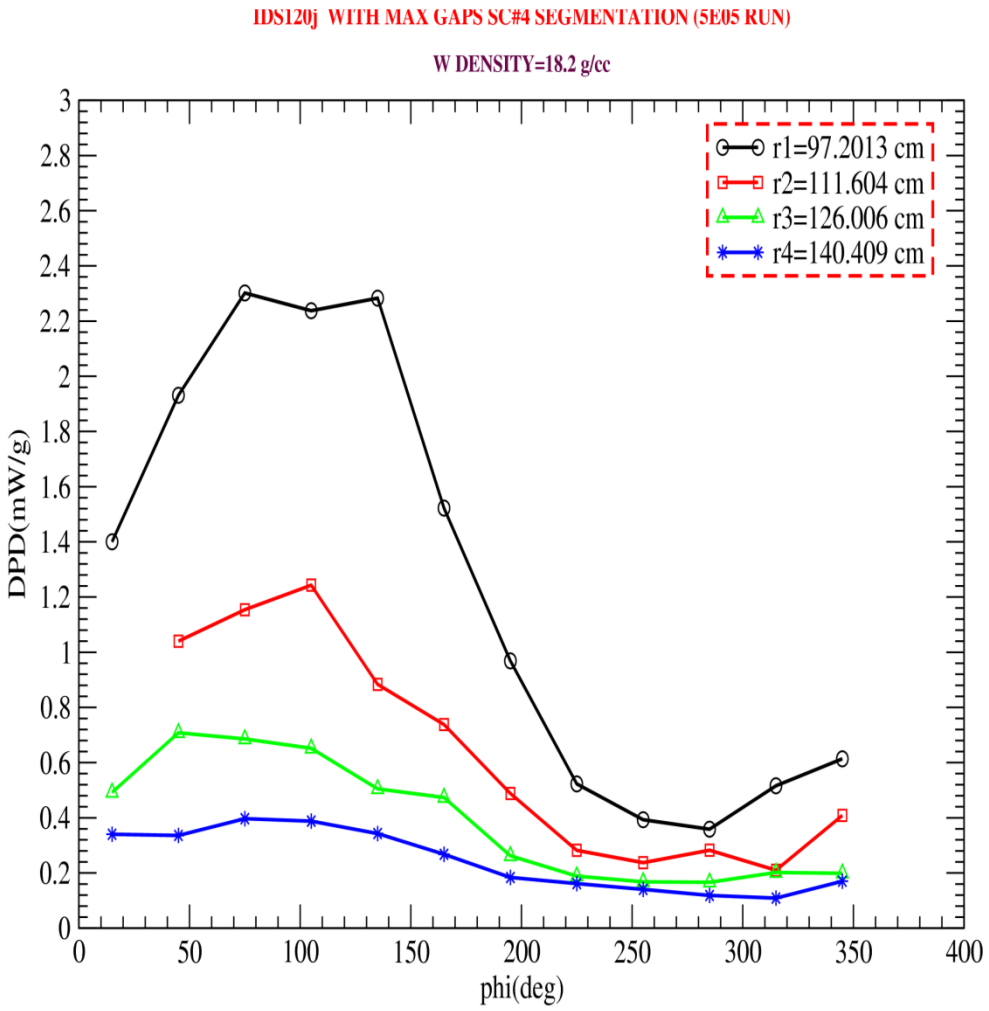


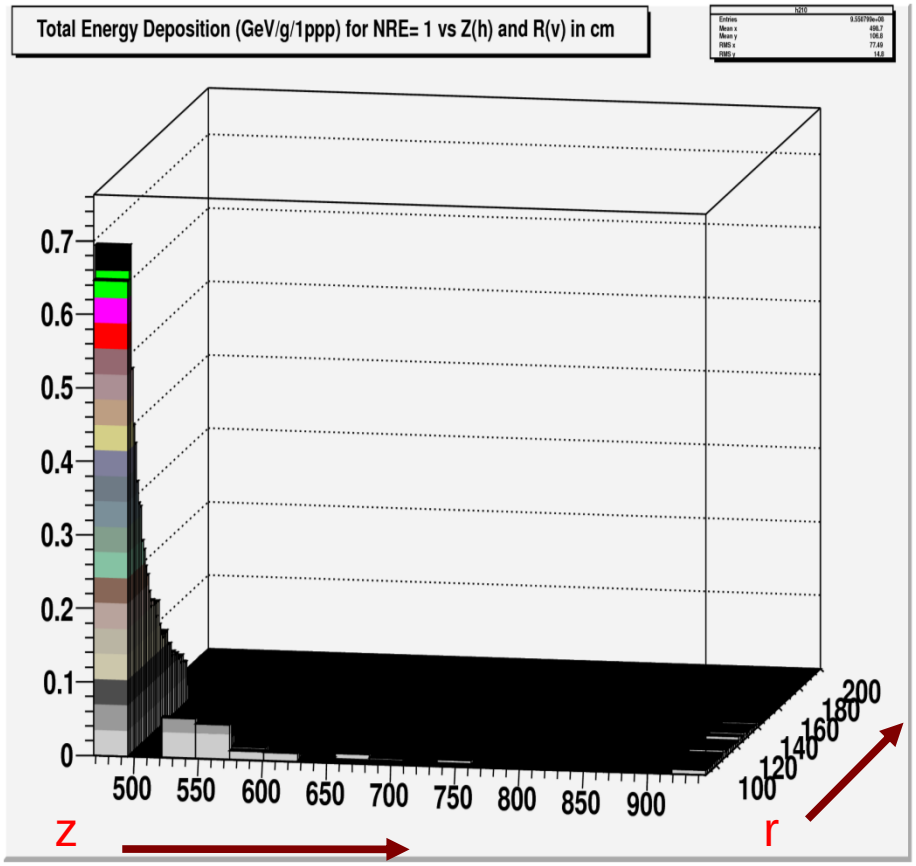
DPD $\lesssim$ 0.008 mW/g

DPD $\lesssim$ 0.011 mW/g

PEAKS APPEAR TO BE IN THE UPPER HALF OF SC#4, TOWARD – x AXIS

SC#4 DPD AZIMUTHAL DISTRIBUTION WITH GAPS: 18.2 g/cc W DENSITY (LEFT). AZIMUTHALLY AVERAGE DPD PLOT BY USING ROOT SOFTWARE (RIGHT).





SH#4: DPD ≲ 2.4 mW/g

DPD ≲ 0.7 mW/g

FROM RIGHT PLOT: DOES THAT MEAN THE STUDY II GEOMETRY SC#1 PEAK IS IN REALITY > 19 mW/g ?!!