Pad Response Function

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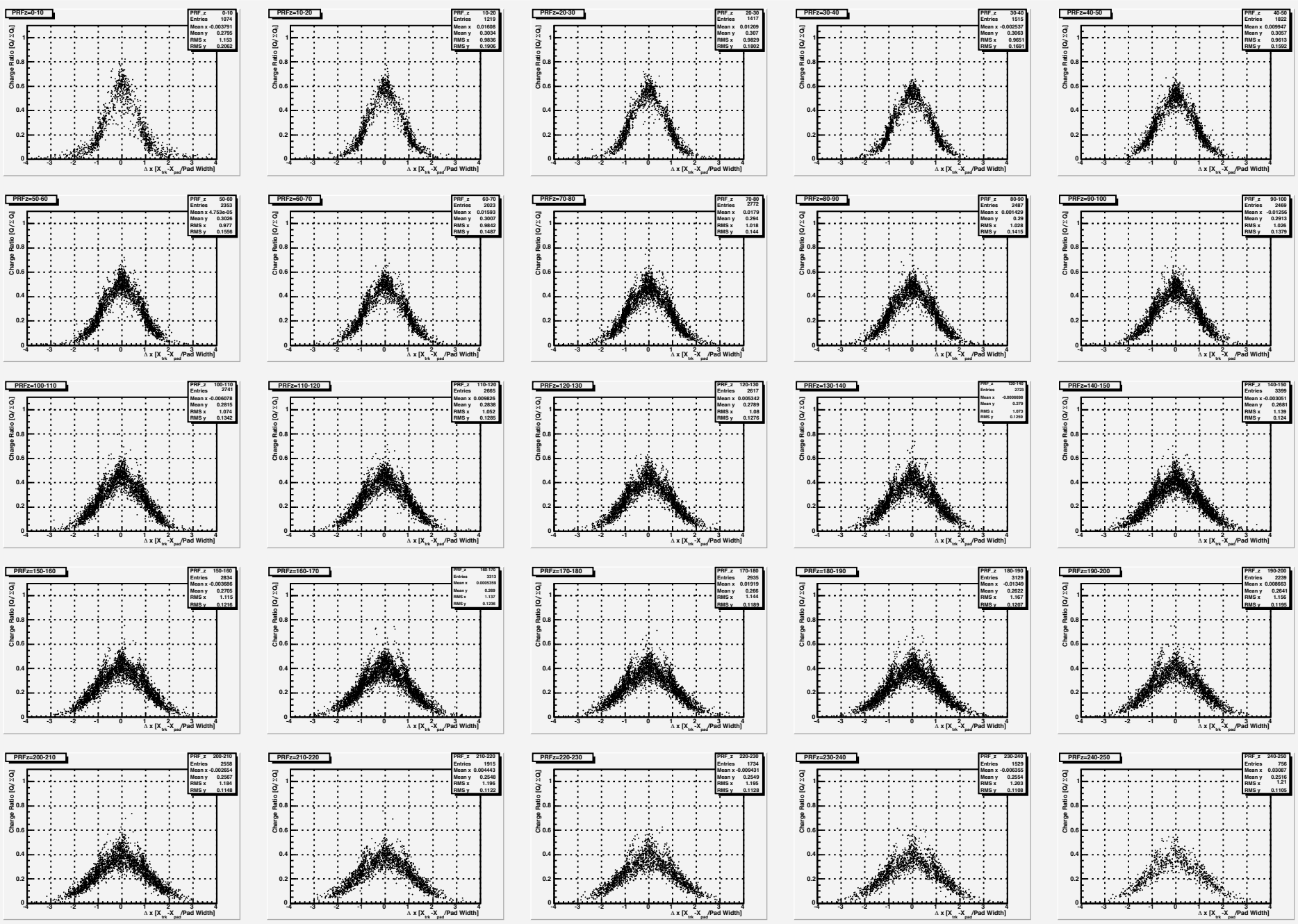
2004/08/27

Method

- Select track - associated hit points with 3 or more pads hit
- Plot Qi/Qtot against (Xtrack - Xpadi)/w for different Z bins (w=2.2mm)
- Divide the plot into different X-slices and fit each slice with a gaussian
- Plot the sigma as a function of Z

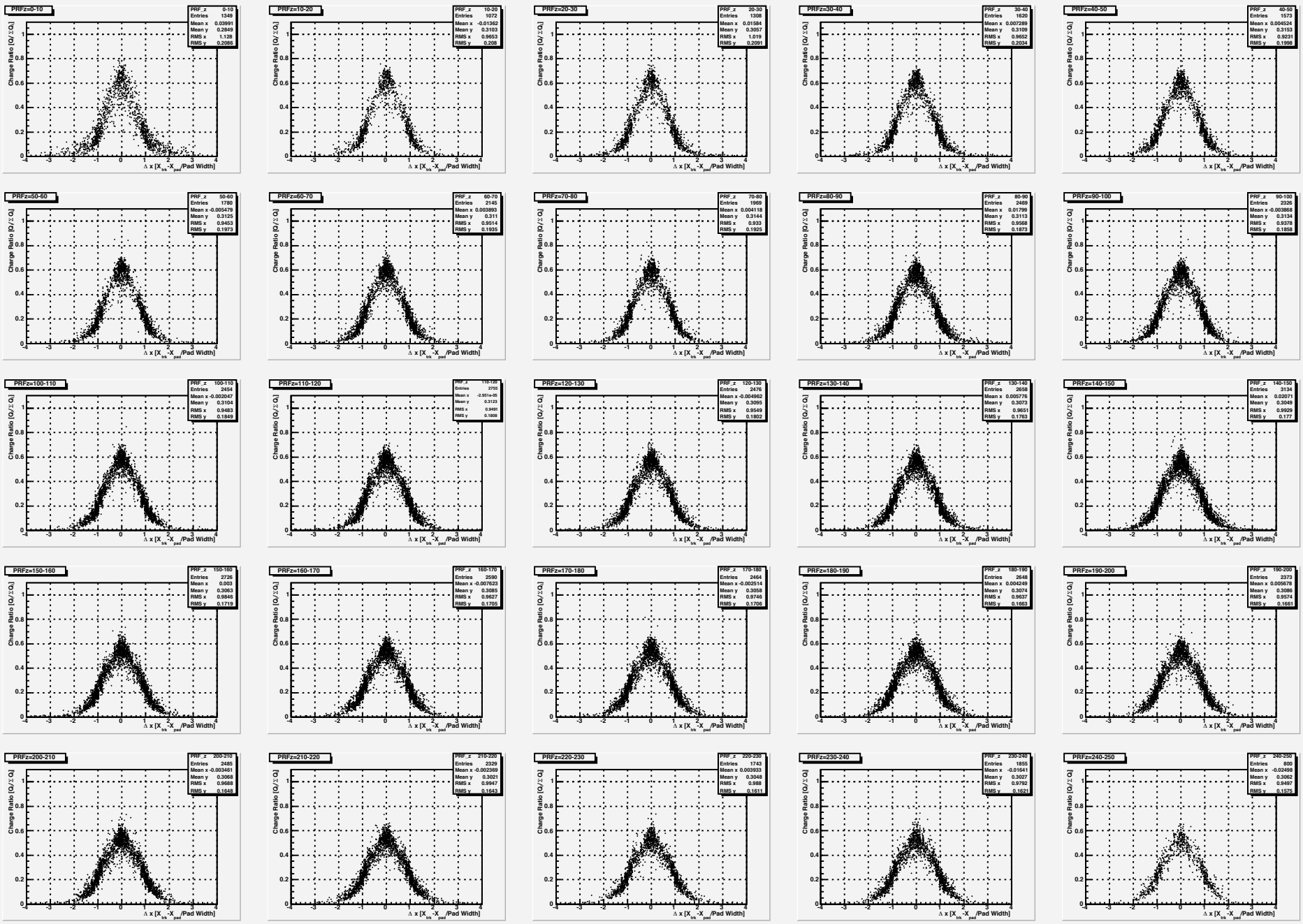
B=0T Results

- Z-bins: 0-1,1-2,2-3, …. ,23-24,24-25cm

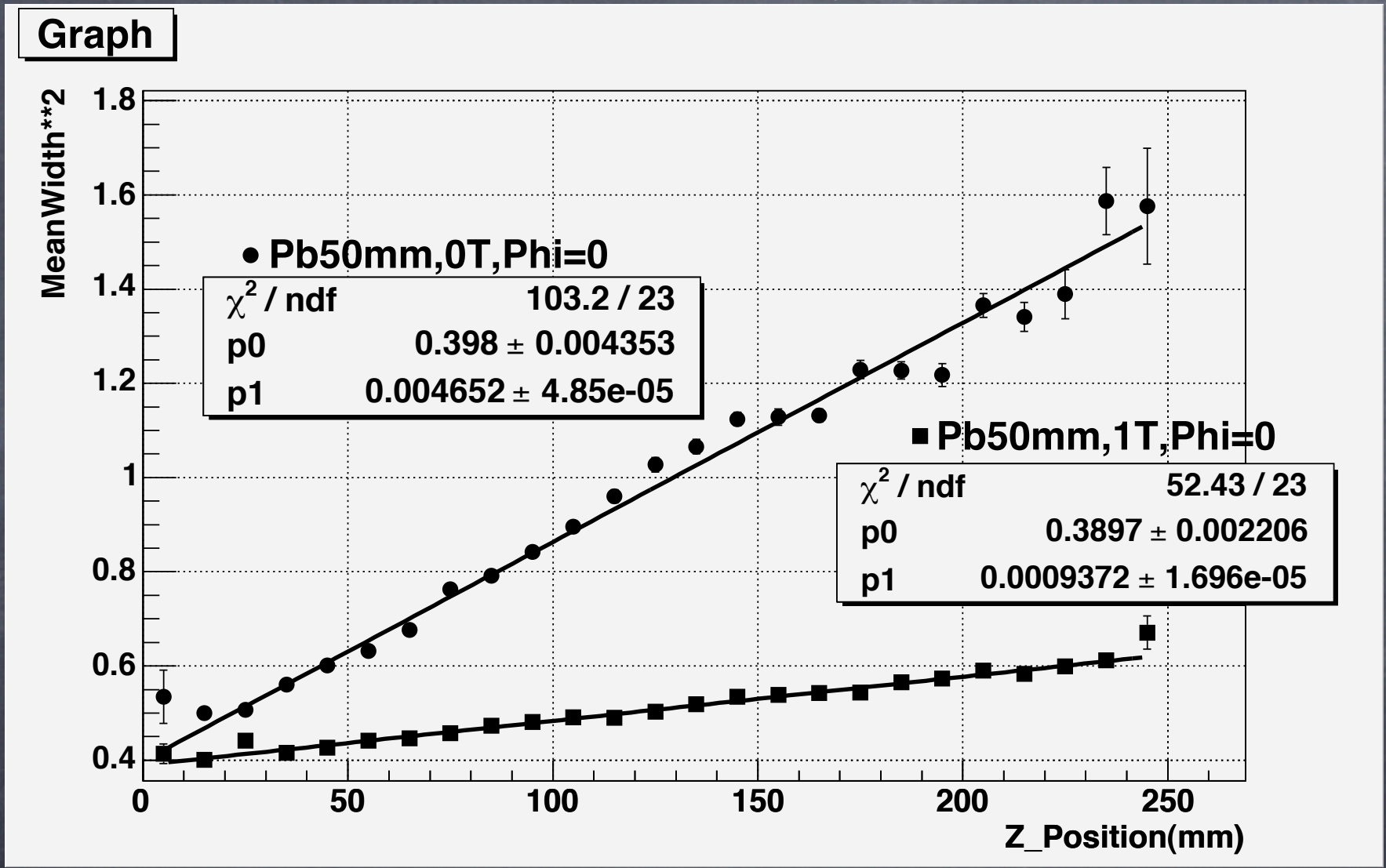


B=1T Results

- Z-bins: 0-1,1-2,2-3, …. ,23-24,24-25cm

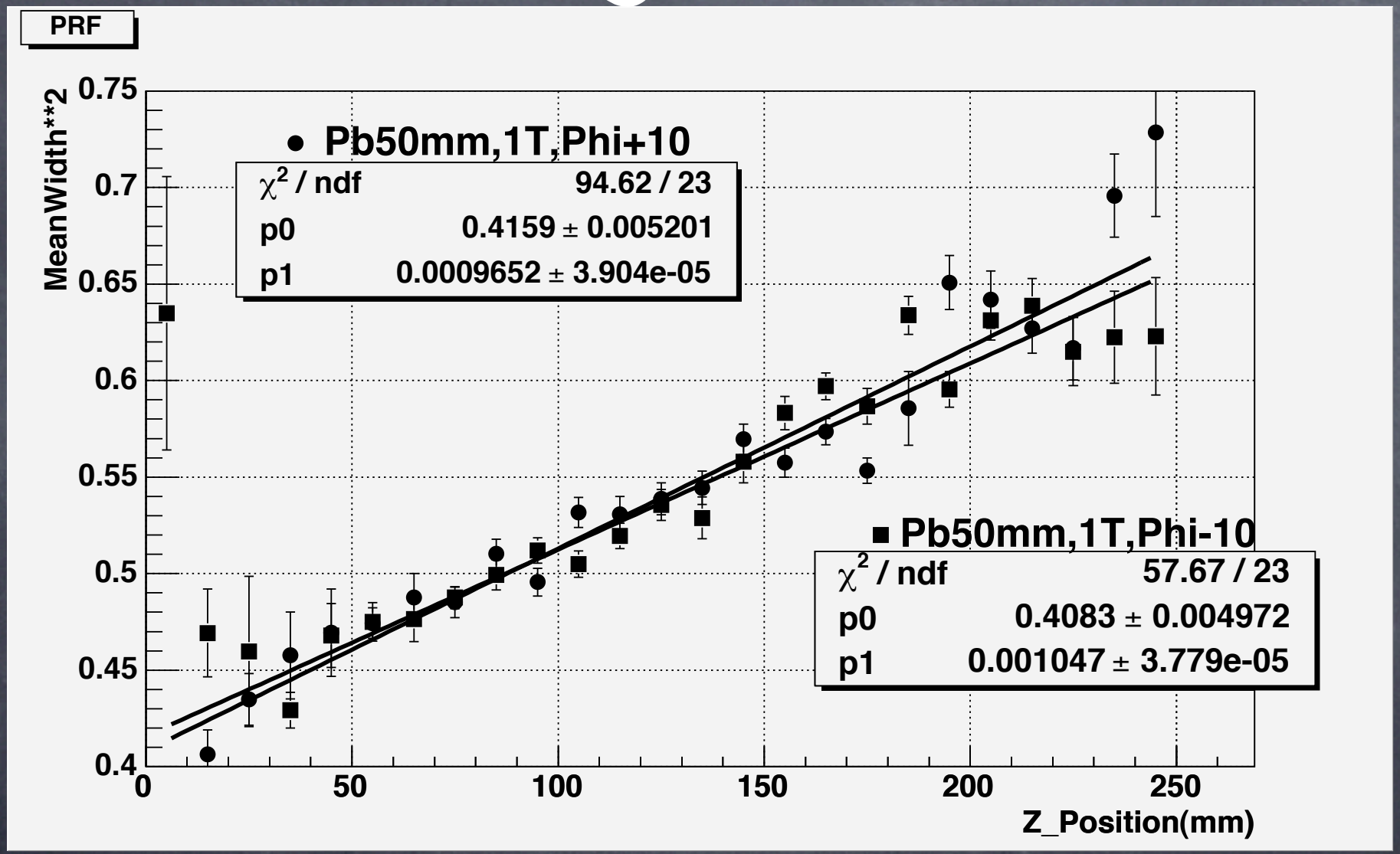


Summary (phi=0)



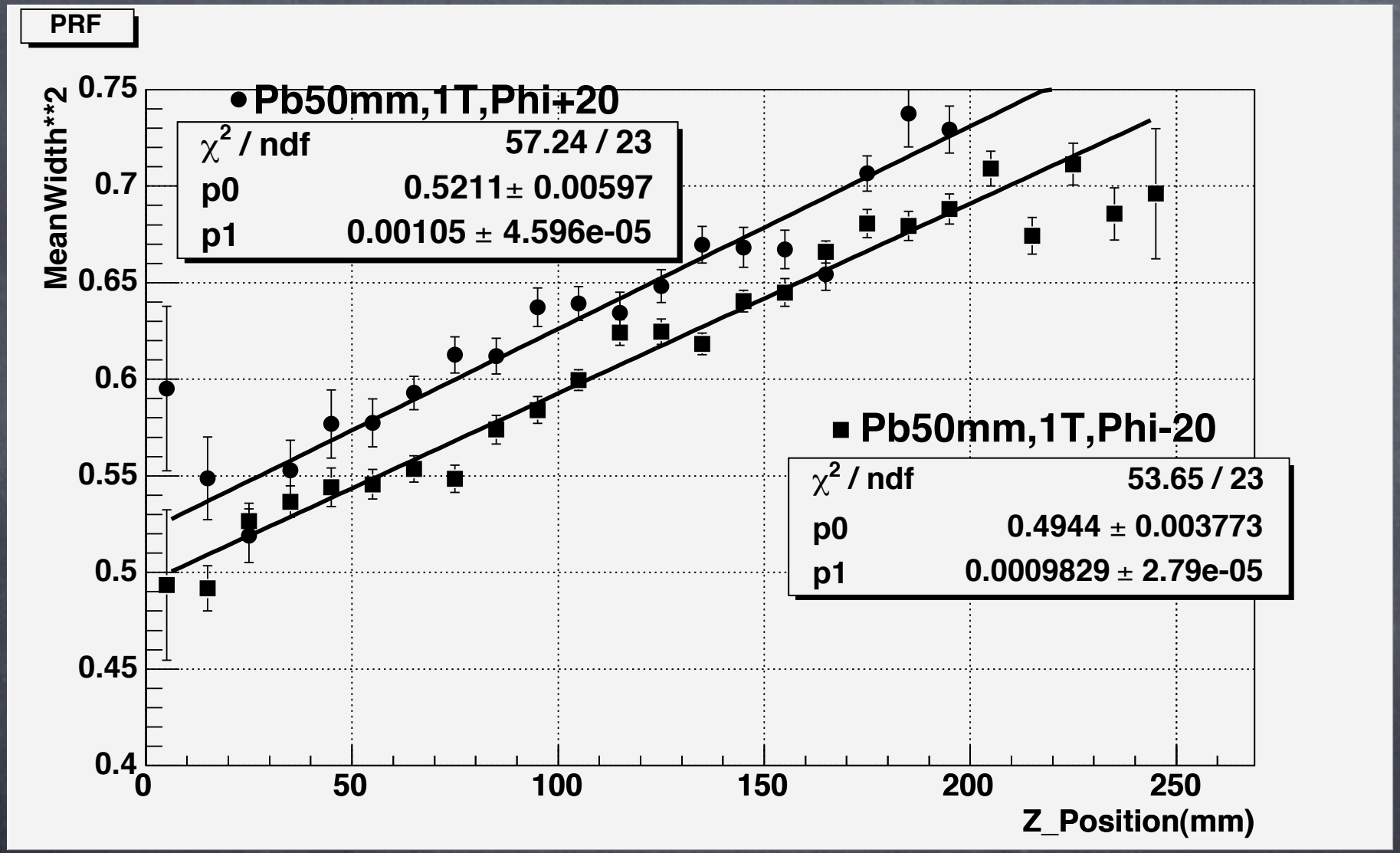
- B=0 & B=1T lines seem to meet at a single point for Z=0 which corresponds to PRF width of 1.4 mm

Wire Angular Effect



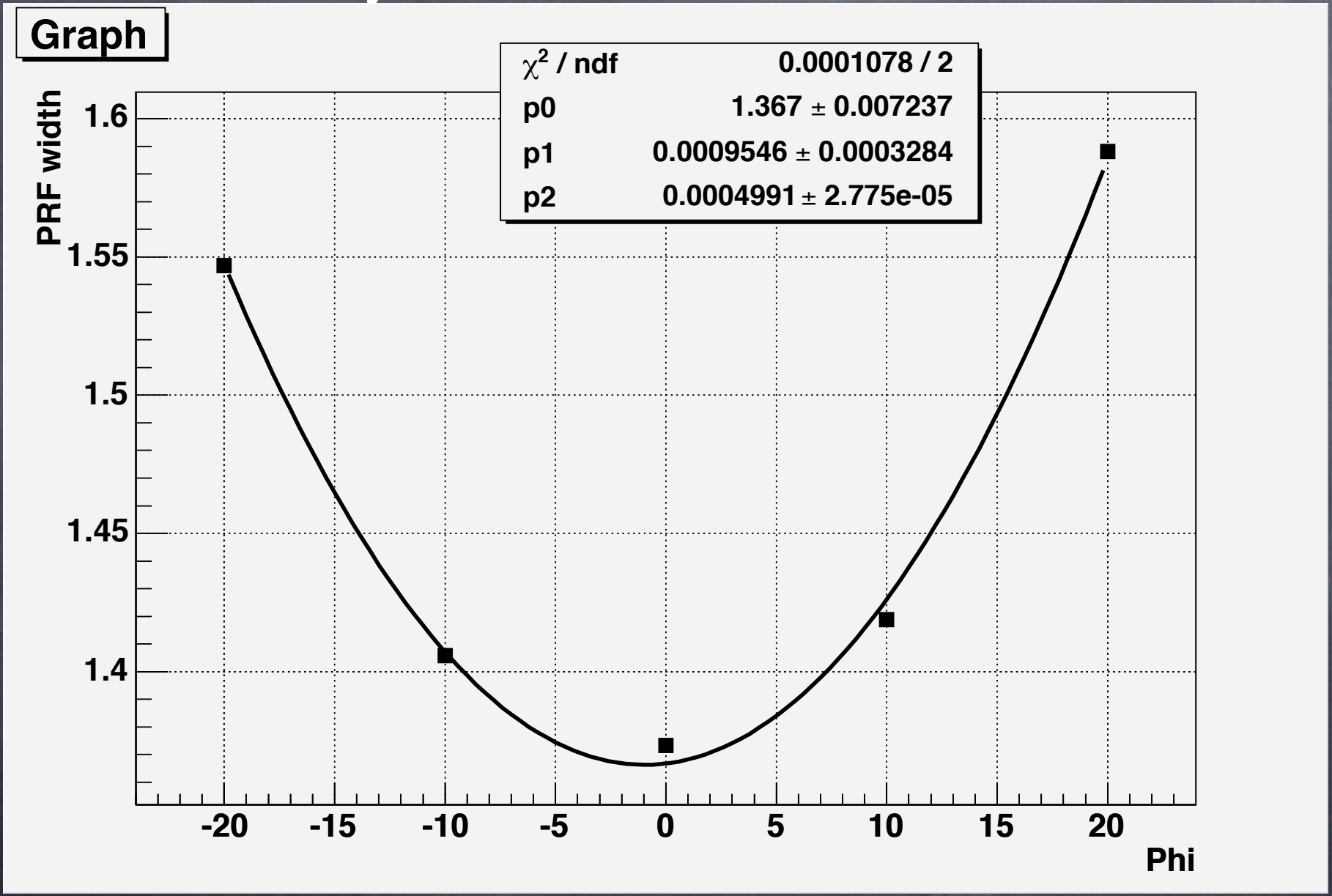
- There is no significant difference between Phi=+10 & Phi=-10 lines

continued



- Phi=+20 line corresponds to PRF width of 1.6 mm, while Phi=-20 line corresponds to PRF width of 1.55 mm

Summary(Phi vs PRF width)



- Minimum at a slightly negative phi angle --->wire angular effect

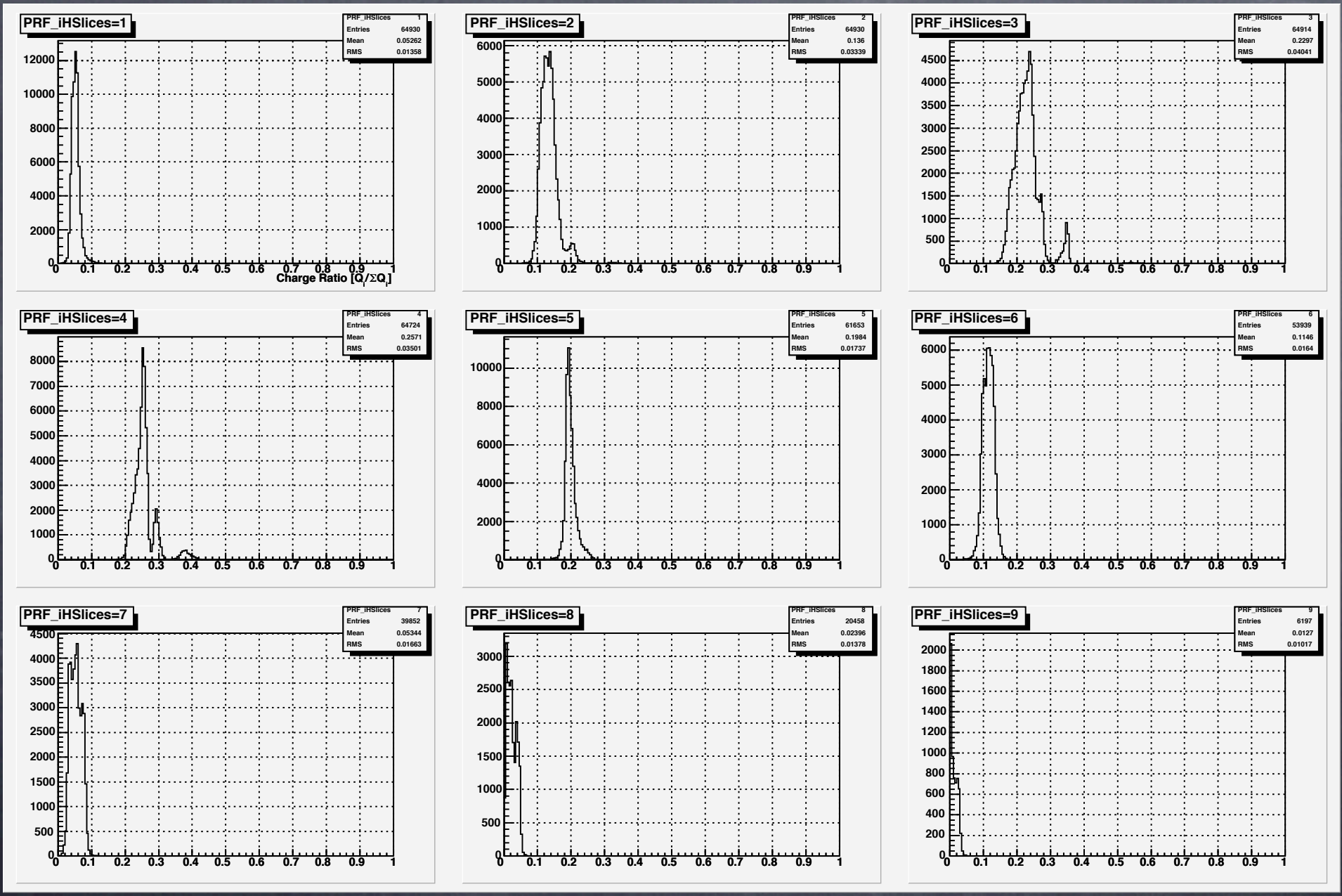
Time Distribution

Tomohiro Kijima

Method

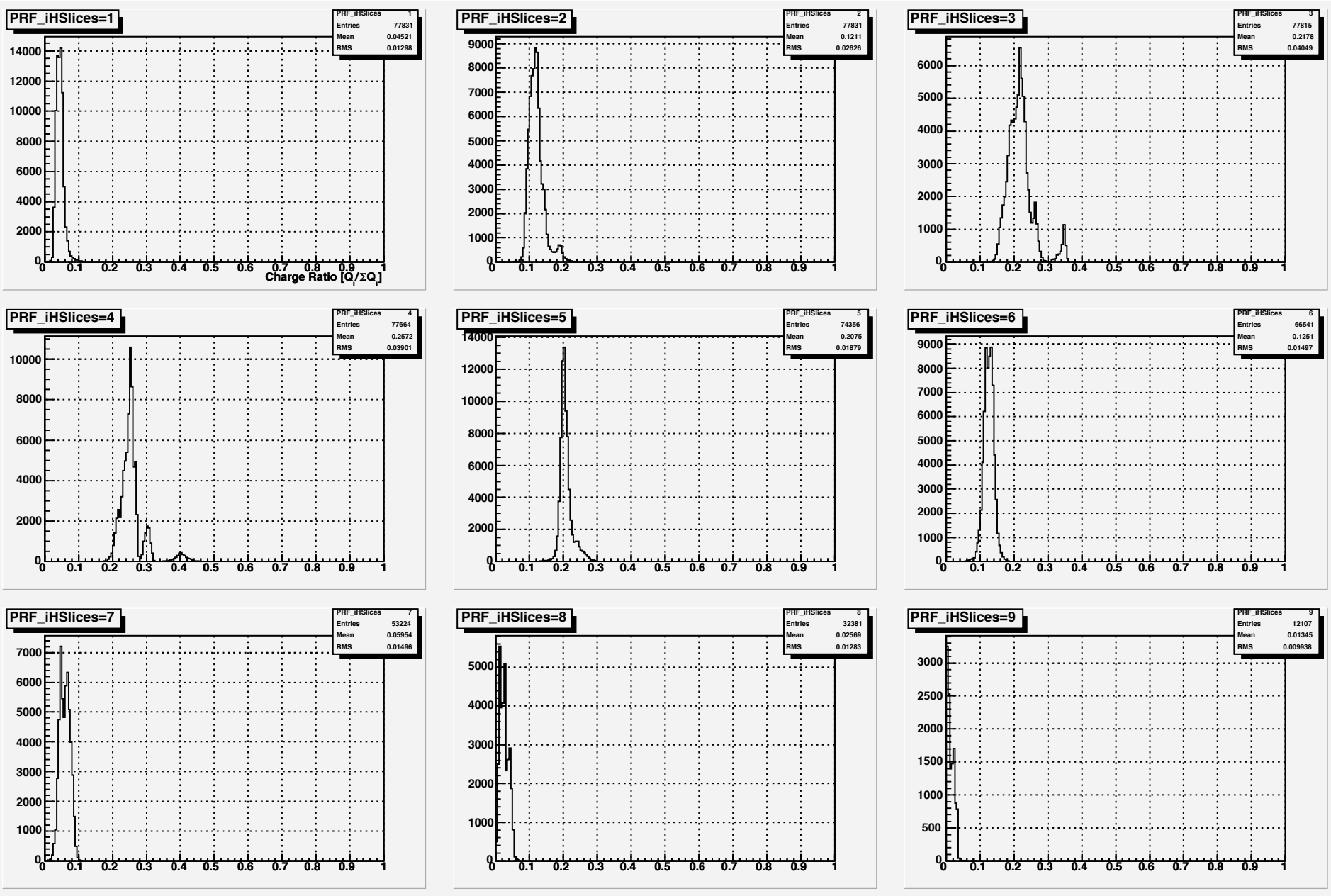
- Plot Qi/Qtot against time(nsec)
- Divide the plot into different time slices and get the mean value for each of them
- Compare 0T & 1T at clock = 80nsec , Pb = 50mm
- Plot for different Z bins (0-50,mm 50-100mm, 100-150mm, 150-200mm, 200-250mm)

Result

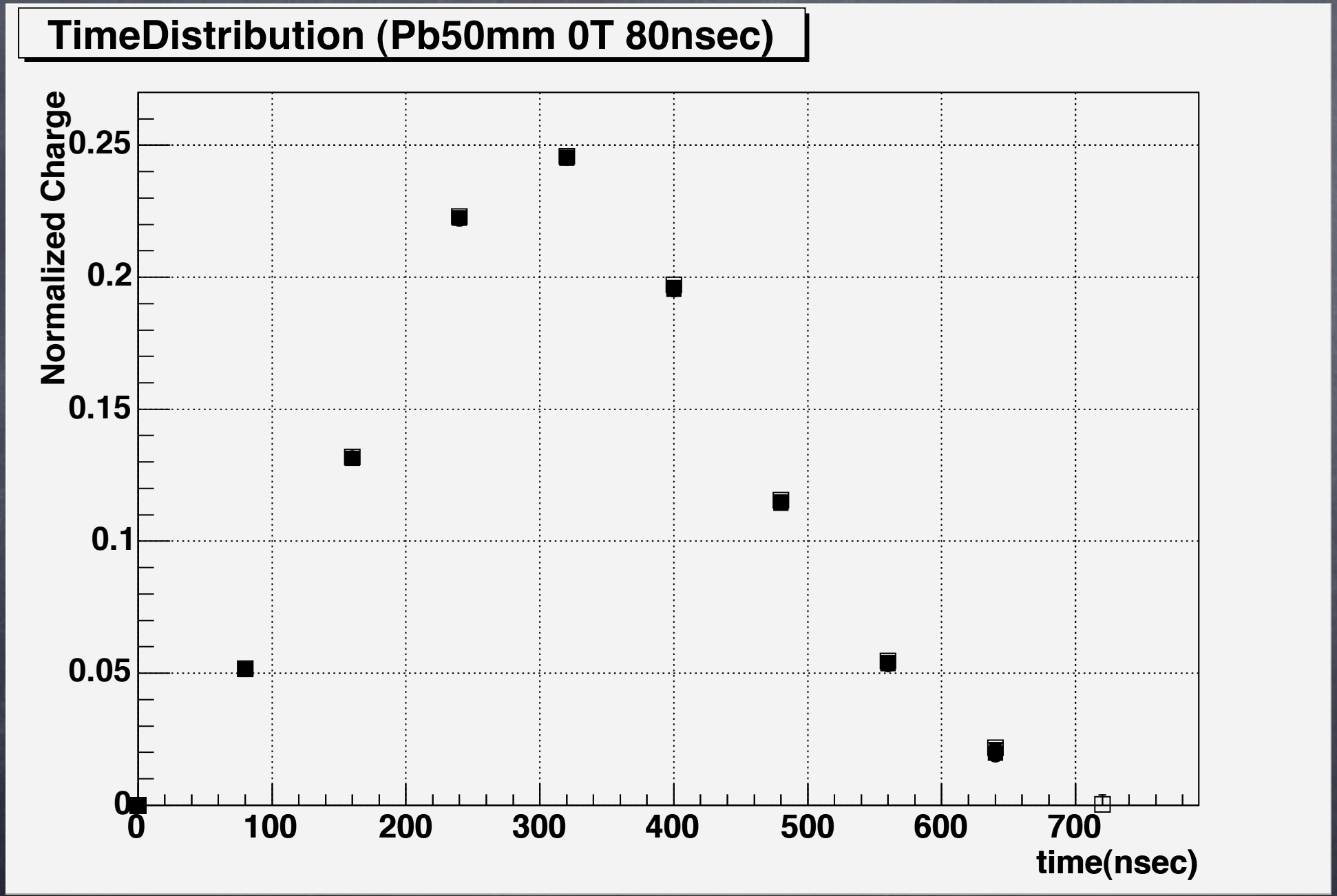


- Pb50mm, 0T, 80nsec

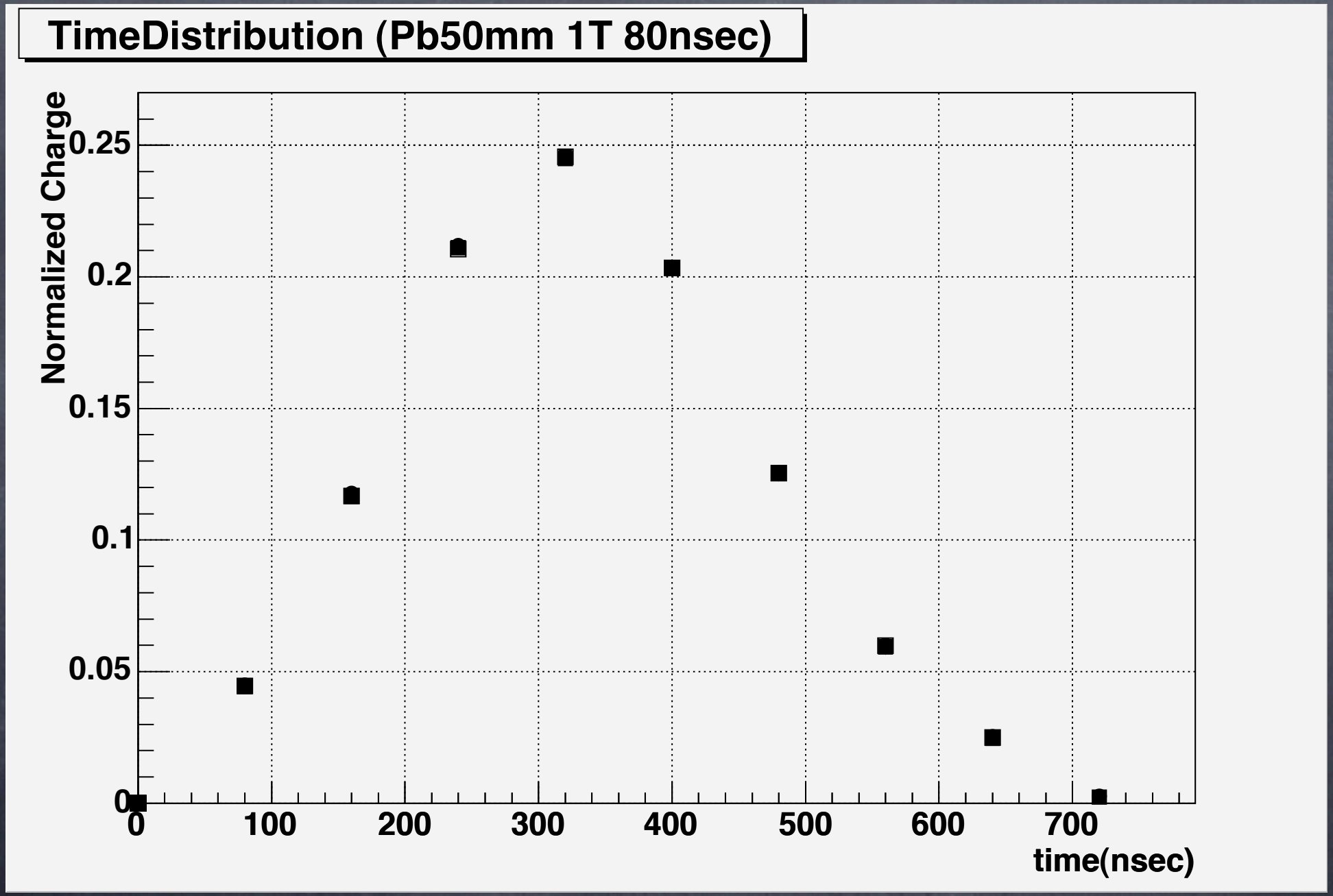
Result



- Pb50mm, 1T, 80nsec



- All plots are almost identical.
- Signal shape doesn't depend on drift length.



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