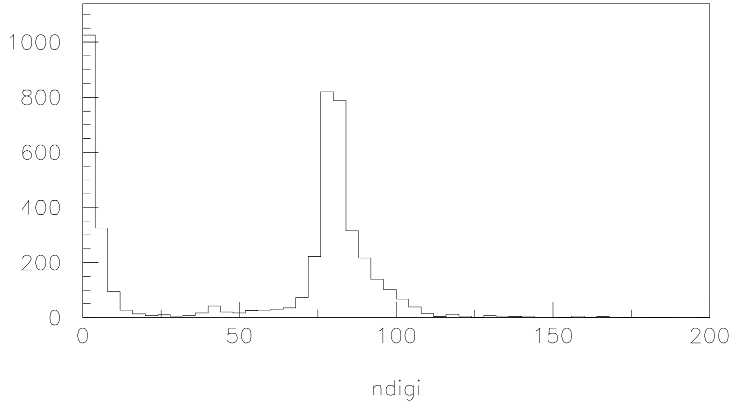
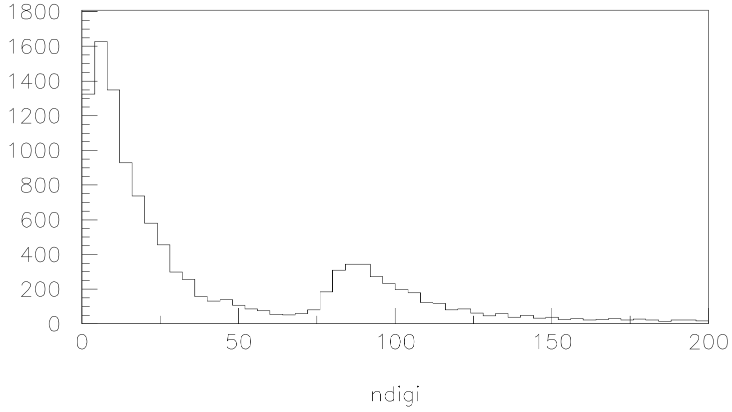
DCH Backround versus Beam Current

- Motivation:
  - Fix the amount of Background to be used in the following study of the DCH performances at high luminosity.
- Strategy:
  - Extrapolate the Number of Digis/event to the foreseen beam currents using the dedicated Background runs.
- Background Sources:
  - Single Beam Interaction: Single Beam runs
  - Beam-Beam Interaction: Two Beam Background runs (after the subtraction of the two single beam contributions)
  - Electronic Noise: no Beam run
- Use of random trigger only to remove the physics events in the two beams runs (to be done...)

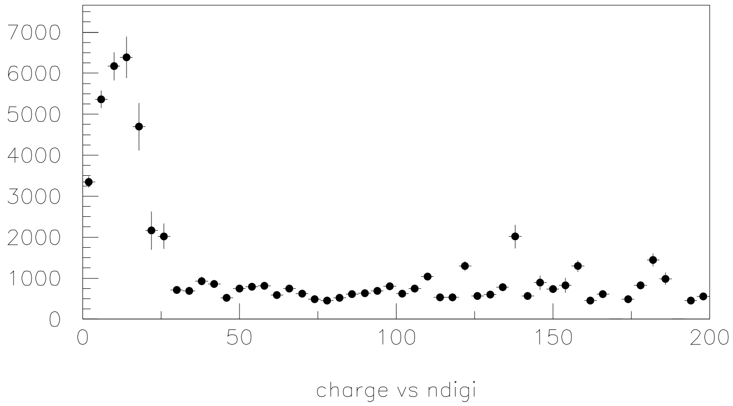
Very Preliminary Results-1

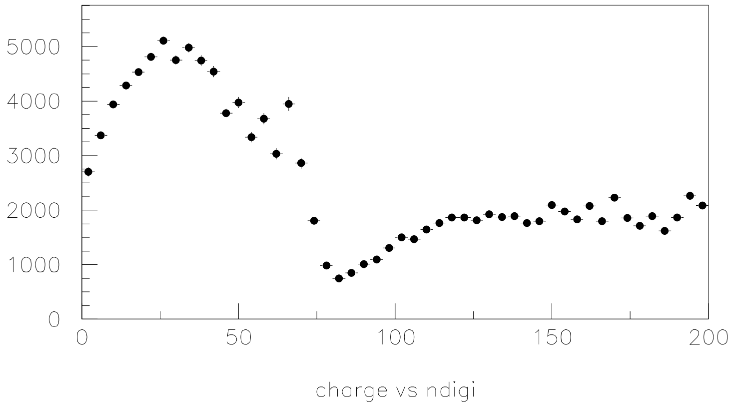
- The distribution of the Number of Digis shows an $\sim$ exponential behaviour and a peak (~ 80): Cosmics?
- No Current $\qquad I_{LER} = 1190\ mA, I_{HER} = 0$





- Average Charge vs Ndigis:

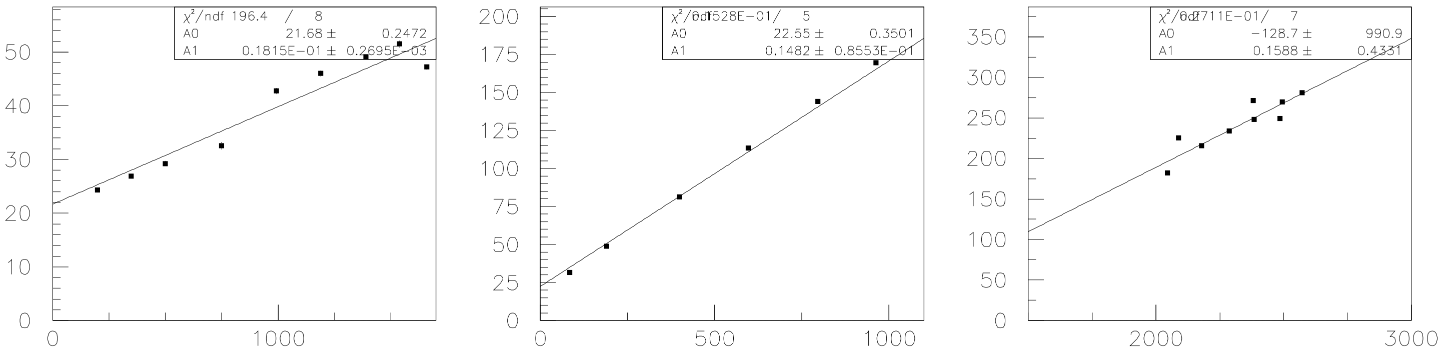




DCH Background

Very Preliminary Results-2

- Average Number of Digis versus I (included "cosmics")
- I_{LER} scan $\quad$ I_{HER} scan $\quad$ $I_{LER} + I_{HER}$ scan



- Next Steps:
  - Add the Trigger Informations to the DchOprNtuple to subtract the Cosmics and the Physics events (two beam runs)
  - Extrapolation to high luminosity of the different Background Sources.