

# WP1: Protons, d, t, alpha

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# Charged Particles

- Protons (and t, d alpha)
  - cause severe background in the trackers (5 MeV proto $\sim$ 100 MeV/c)
  - High level of ionization – straw/electronics must recover in reasonable time
  - Radiation may damage straws
  - Remediation: place absorber between target and tracker. This degrades the electron resolution- we'd like to know how thin we can make it. It also makes trackback of conversion electrons difficult.

# What do we want

- Spectrum of charged particles with an absolute normalization- this is important to the design of the proton absorber and performance and aging simulations in the tracker.
- Our tracker people think the proton rate is OK
  - Straws survive many coulombs of charge without apparent degradation
  - Can put in enough absorber to reduce rate yet not degrade the resolution unnecessarily- my opinion is we are not so sure