

Chapter 3

- **Soft diffraction and total cross section—Tim Martin/Valentina Avati**
- Total Cross Section Prospects
 - Informally discussed with ALFA. Will look to confirm.
- Single diffractive J/psi (CMS/TOTEM)
- Soft diffraction with proton tagging, gaps, E+-pZ xi reconstruction. (T. Martin)
 - See this morning. Progress ongoing. Some more investigative work & write up.
- Diffraction (Soft & Hard) with proton tag (CMS/TOTEM)
 - Soft SD, Double Diffraction, Single Diffraction dijets, "multi gap events"
- Charge Exchange (Rainer Schicker)
 1. Physics motivation: Charge exchange channels as test or Reggeon exchange at high energies, interest in associated electromagnetic radiation,
 2. experimental setting: how to identify charge exchange channels, where to place detectors to see forward going pions, considerations on zero degree calorimeters
 3. data situation: review existing data at lower energies, extrapolation cross section to RHIC and LHC energies
 4. discussion beam conditions for such measurements