

# IHEP Diffractive group

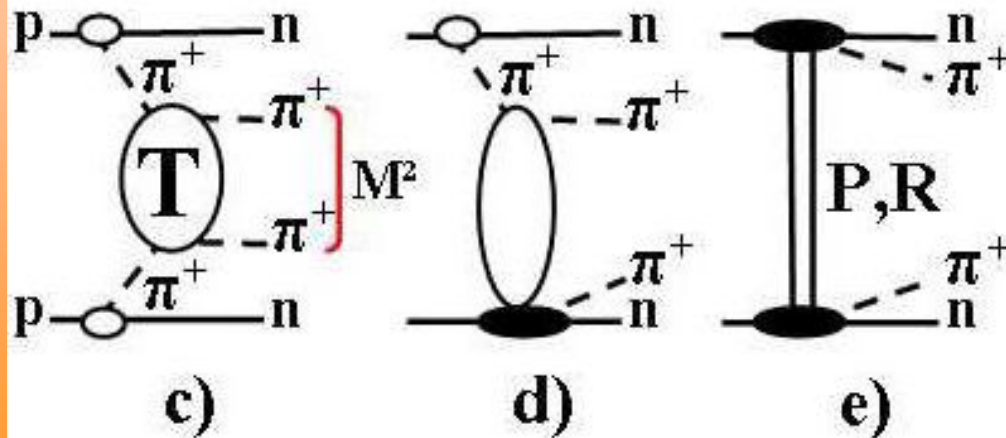
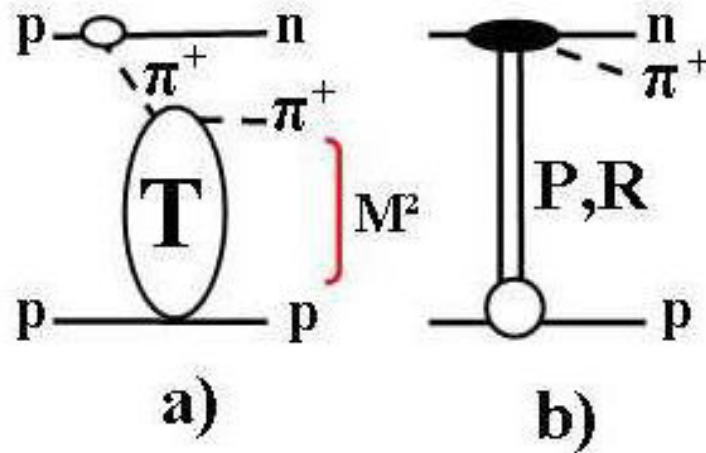


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## Single pion exchange simulation.

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# $p\pi^+$ and $\pi^+\pi^+$ elastic scattering

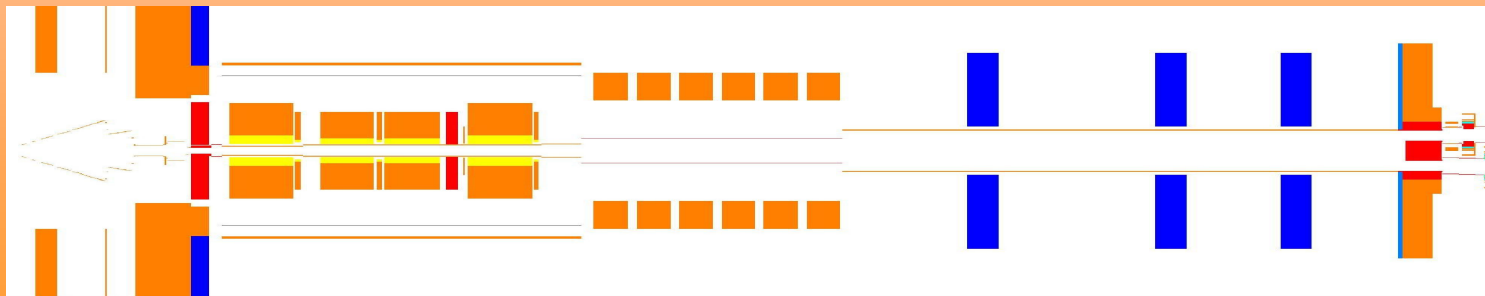
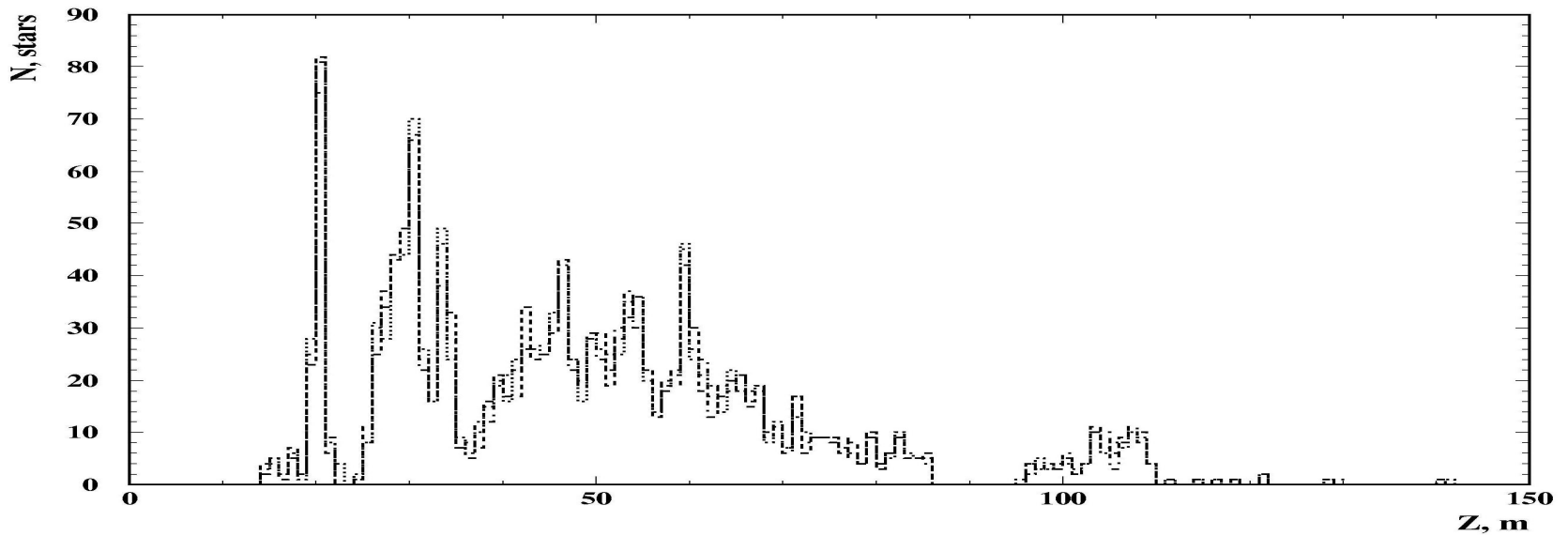


# $pp \rightarrow pn\pi^+$ 5+5 TeV $\pi^+$ -generated stars

- Source: 1440  $pp \rightarrow pn\pi^+$  events generated by EDDE
- pion tracking in LHC lattice & cascades: MARS code
- LHC optics: nominal, tuned for 5 TeV
- Options for the first run:
  - no CASTOR;
  - no beam angular spread (must be no effect);
  - no crossing (no effect of crossing on the TAS peak intensity!).

# $pp \rightarrow pn\pi^+$ 5+5 TeV $\pi^+$ -generated stars

pi-stars Z-distr 06.12.09



# In near future we are planning

- to finish modification of our new EDDE version to be able to perform full single pion exchange MC with CMSSW
- to study possibility to register showers secondaries around triplet
- to simulate  $\pi^+$ -generated stars from background processes and to look at S/B in different LHC lattice & cascades
- Future: TAS instrumentation? (was proposed by Mike Albrow several years ago)