Preselection for $\Lambda_b \to \Lambda_c^* \ell \nu$

Marcin Chrząszcz
mchrzasz@cern.ch

University of Zurich

Universität Zürich,
Institute of Nuclear Physics, Polish Academy of Science
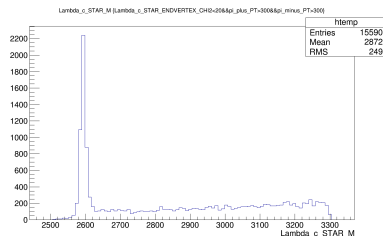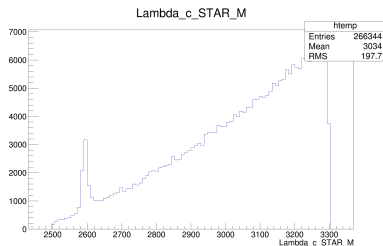
CERN
October 22, 2015

Preselection

- Stripping has a tight cuts on Λ_c candidates but no cuts on Λ_c^*.
- I run a small portion of MC without any cuts(aka paring each Λ_c with any 2 pions in the vents).
- Based on this sample I selected 3 cuts:

Var	value
$\pi \, \mathrm{Pt}$	> 300 MeV
$\Lambda_c^* \, \mathrm{VRT}\chi^2$	< 20

- The MC looks normally after those cuts, but still waiting for data.
- Efficiency of thouse cuts is $\sim 90 \%$.
- Idea is to keep the preselection loose but use MVA.

Preselection

- Impact on MC sample(left no preselection, right after preselection).

Backup