

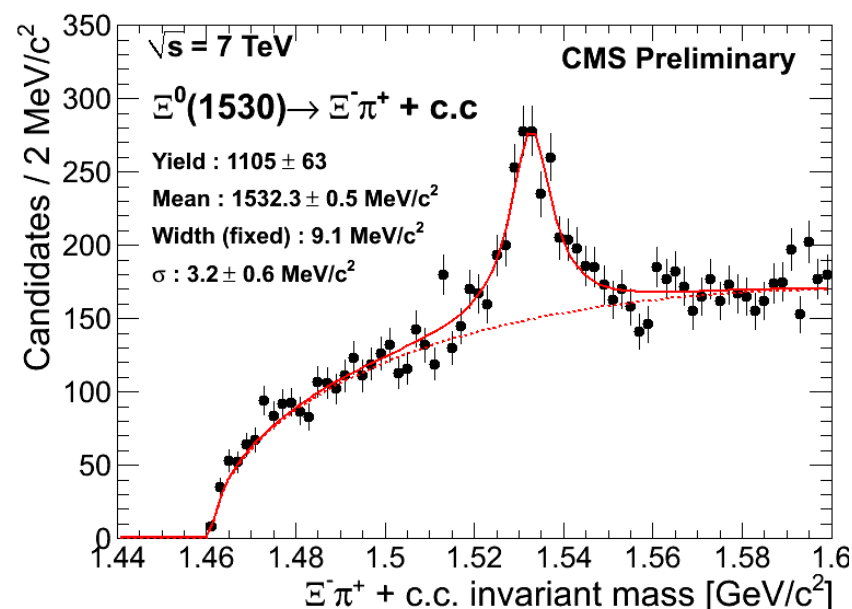
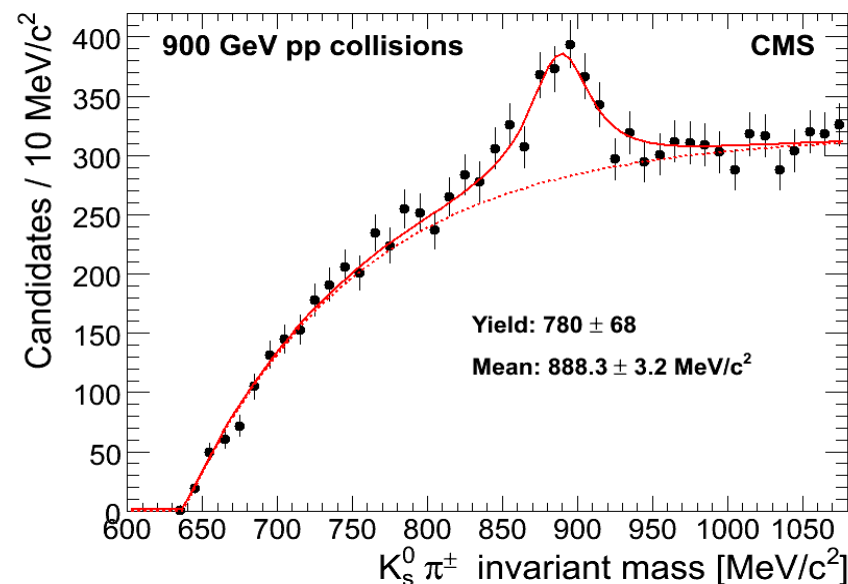
# Higgs Group - PRC Slides

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*CMS DESY Meeting, 27 Sep 2010*

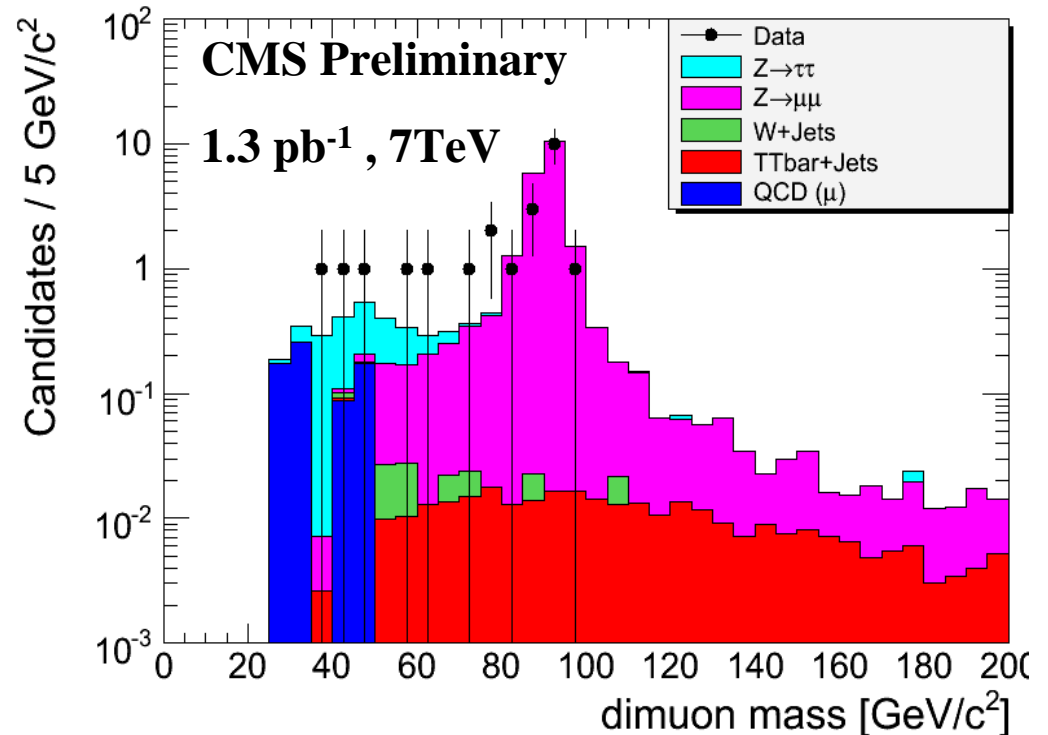
# Strange Resonance Production at 0.9 and 7 TeV

- Studied channels
  - $K^\pm(892) \rightarrow K_s^0 + \pi^\pm$
  - $\Sigma^\pm(1385) \rightarrow \Lambda^0 + \pi^\pm$
  - $\Xi^0(1530) \rightarrow \Xi^- + \pi^+$
- Objectives :
  - verification of tracking performance
  - CMS paper on strange resonance production
- Results of  $K^*$  analysis at 0.9TeV included in CMS paper**
  - “CMS Tracking Performance Results from Early LHC Operation”**  
**arXiv:1007.1988**



# Work in Progress ( $Z \rightarrow \tau\tau \rightarrow \mu\mu$ Analysis)

- Novel analysis in CMS
  - $Z \rightarrow \tau\tau$  – template process for commissioning of MSSM Higgs analysis
  - Potential contribution to the CMS paper on  $Z \rightarrow \tau\tau$  signal
- Analysis challenges
  - Small branching ratio :  $\text{Br}(Z \rightarrow \tau\tau \rightarrow \mu\mu) \approx 3\%$
  - Large  $Z \rightarrow \mu\mu$  background
- $Z \rightarrow \tau\tau \rightarrow \mu\mu$  signal observation possible with  $20 \text{ pb}^{-1}$



Trying to get approval for PRC

Plot can be updated!