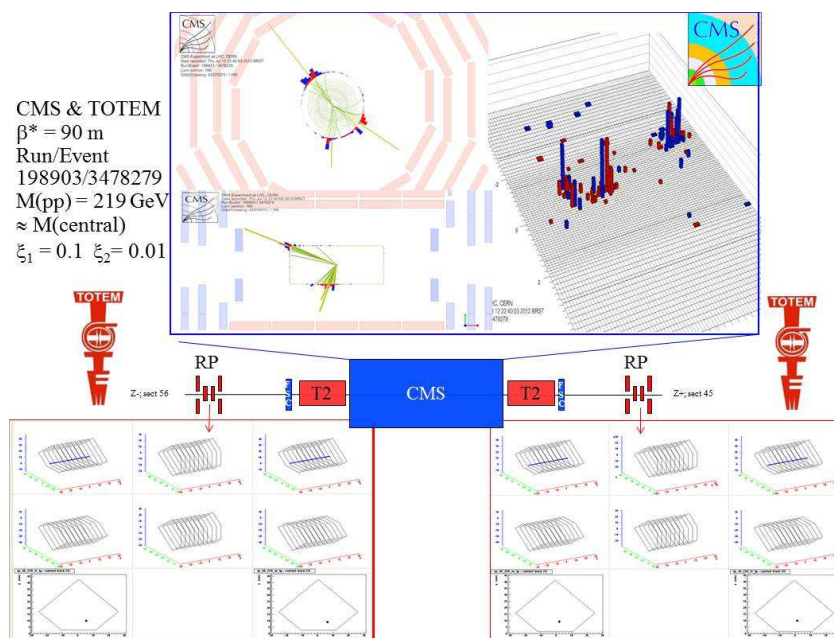


# Discussion about plans for forward physics

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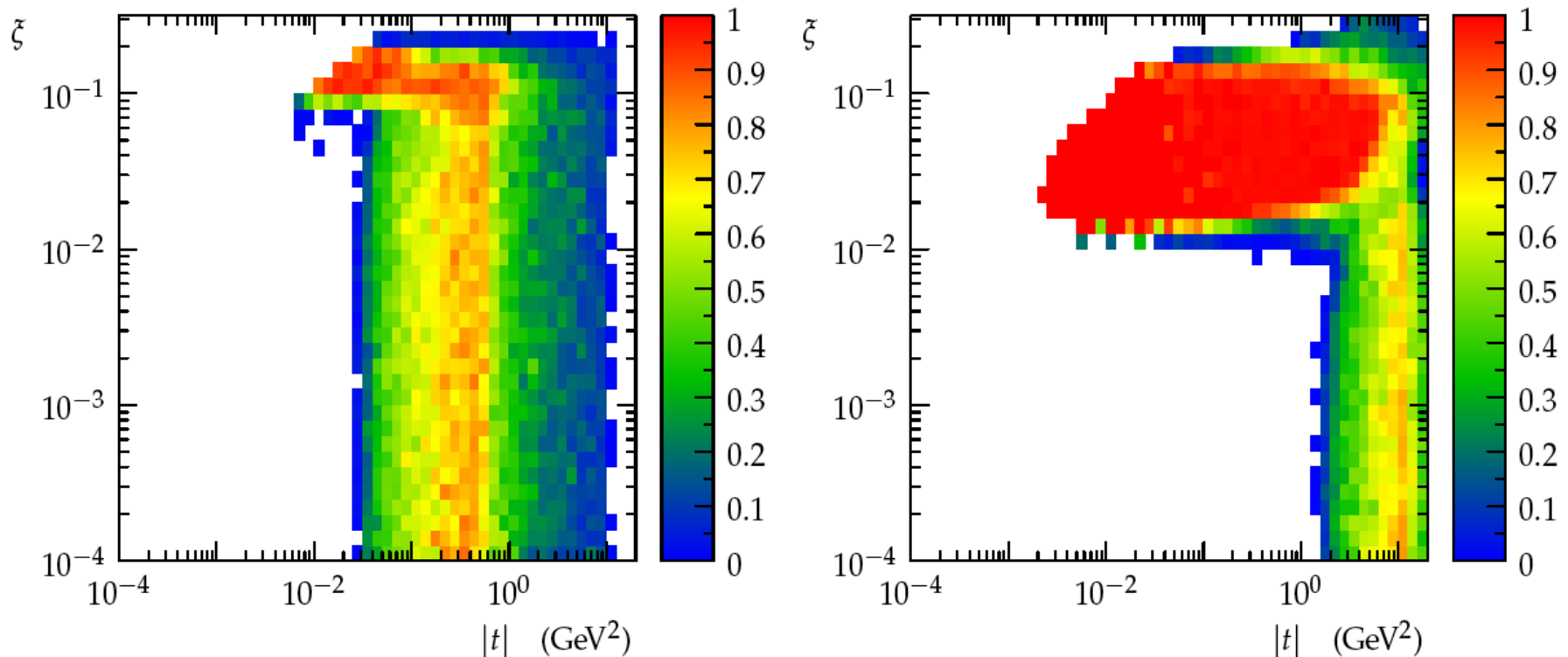
Workshop on Forward Physics and Heavy Ions, Trento, Italy,  
September 26-30 2016



- Measurements to be performed
- Special runs needed
- Which values of  $\beta^*$

## Running conditions: proton tagging

- Possibility to tag intact protons in the final state in CMS-TOTEM and in CT-PPS
- High  $\beta^*$  runnings using vertical pots mainly low mass diffraction (small luminosity, special runs, sensitivity to processes with high cross section)
- Low  $\beta^*$  runnings using horizontal pots: Standard high luminosity physics, sensitive to low cross sections and to new physics



## Physics topics

- Elastic, total cross sections: Do we need more data?
- Exploration of Pomeron structure:
  - Dijets sensitive to gluon density
  - $\gamma$ + jet sensitive to quark density
  - $W/Z$  asymmetries: sensitive to quark density
  - Jet gap jet in diffraction
- Exclusive diffraction: Vector mesons, jets
- Diffraction in pA?
- Anomalous couplings studies at high lumi
- Which  $\beta^*$ ? 90 m for medium mass analysis? Differences between AFP/CMS-TOTEM/LHCb/Alice? lower  $\beta^*$  for the acceptance in AFP? How many pile up? Need to collect  $>\sim 100 \text{ pb}^{-1}$
- A proposal has to be submitted to LHCC by the end of October for the next two years