

# Projects

## Muon Reconstruction

- Global Muon Reconstruction
  - Muon Reconstruction Note
- Cosmic and Beam Halo Muon Reconstruction
- Fast Muon Analysis

## High-Level Trigger

- Muon Level-3 Trigger algorithms
- Muon HLT DQM
- Muon L3 vetting
- Iterative L3 Trigger Reconstruction

## Measurement of the Drell-Yan di-muon cross section

- References
  - Study of Drell-Yan Dimuon Production with the CMS Detector, CMS Note 2006/123
  - Drell-Yan Production at the Fermilab Tevatron
  - A Measurement of Low-Mass Drell-Yan Production at the Collider Detector at Fermilab
  - Drell-Yan Cross Section Measurement at CDF, M. Schmitt, APS 2006
  - Drell-Yan and  $Z'$  Searches at CDF, M. Schmitt, 2004
  - Angular distribution of dileptons in high-energy hadron colliders
  - Drell-Yan Production Cross Section with RunI data at DZero
  - Inclusive Drell-Yan  $e^+e^-$  Cross Section in the Invariant Mass Range 30-60GeV with RunI data at DZero
  - Drell-Yan and FB Asymmetry with RunII data at DZero
  - Evaluation of the Theoretical Uncertainties in the  $Z \rightarrow \mu\mu$  Cross Section at the LHC
  - Muon Identification at Dzero
  - Run-II Dimuon Trigger Optimization and Efficiency Measurement in CDF
  - Upsilon Note by Purdue
  - Upsilon Note by Princeton
- DY Note Twiki
- DY Analysis Twiki
- Chang Liu's thesis
- 2010 Drell-Yan paper arXiv:1108.0566v1 hep-ex
- Drell-Yan Analysis Procedure 2011
- Drell-Yan Analysis Procedure 7-8 TeV

## Search for hi-mass di-muon resonances

- Statistical Analysis:  $Z'$  statistics project timeline

## Search for four-lepton resonances

- Recipe for analysis procedure (8 TeV)

## H $\rightarrow$ $\mu\mu$

- 8 TeV pre-approval presentation
- 8 TeV analysis note
- 8 TeV publication

## FPIX commissioning

- Planning