

# Status and plan of Dielectron analysis

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LMEE PAG meeting

31.03. 2015

# Status of dielectron analysis

- Electron reconstruction: **done**
- Background subtraction: **done** To be done
- Pair correction
  - Single electron efficiency:
    - **Include (eta, phi) dependence  $\sim$  1 week**
  - Using hadronic cocktail:
    - **Consistency check with other model(MCNLO?) or additional weighting**
- Cocktail
  - LMEE: **Ready**
  - Heavy flavor: using Pythia, **MCNLO?**
  - **$J/\psi$ ,  $\Upsilon$** 
    - **What is the best way to evaluate?  $\sim$  contact  $J/\psi$  persons**
- Evaluation of trigger performance
  - Trigger efficiency: **Consistency check with MC  $\sim$  1 week**
  - Rejection factor: **Study collision rate dependence  $\sim$  present at TRD meeting**

# Systematic Uncertainty

- Efficiency correction
  - Some track cut variations
  - Using different model
  - Trigger efficiency
    - Different fitting setting
- Background subtraction
  - pp :  $\text{dB}/\text{B} \cdot (\text{S}/\text{B})$   $\text{dB}/\text{B}=0.03$ 
    - $(\text{B}_{++}-\text{B}_{--})/(\text{B}_{++}+\text{B}_{--})$
  - Charge difference is larger due to TRD effects
    - need re-evaluation

~2-3 weeks

# Possible physics messages

- Higher mass( $> J/\psi$ ), higher  $p_T$ ( $> 3 \text{ GeV}/c$ )
  - $b\bar{b}$  pair correlation
    - Relatively back to back correlation
    - $p_T$  dependence
  - Event activity(multiplicity)
    - Possible, but not so fine
  - Invariant cross section: promising for  $b\bar{b}$  pairs
- Study CNM effects
  - Need  $pp$  reference
    - Doesn't exist at higher mass
    - Compare to the model calculation: FONLL? Pythia? MCNLO?

# Hard Probes

- Preliminary
  - Inclusive spectrum
  - Pair  $p_T$  dependence
- DQ coordinator suggest to talk
  - “Low mass dielectron in pp and PbPb collisions with ALICE”