

# $H \rightarrow \mu \mu$ Update

C. Calancha  
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- Implementing suggestions/comments from reviewers.
- Cut based analysis as the approach method.

# Preselection

## 2 Muons

- 2 opposite charged PFO's
- $E > 15$  GeV
- $E_{calE}/(E_{calE} + E_{calH}) < 0.5$
- $(E_{calE} + E_{calH})/|\vec{P}| < 0.3$

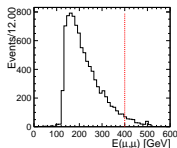
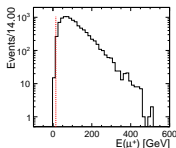
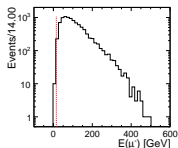
## H candidate

- $E_{muon1} + E_{muon2} < 400$  GeV
- $|M(\mu^+, \mu^-) - 125| < 30$  GeV/c<sup>2</sup>

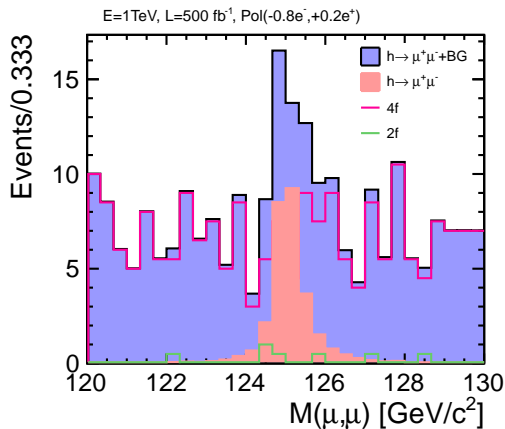
## Event (NEW)

- $\cancel{E} > 300$  GeV
- # charged PFO's with  $E > 15$  GeV < 4
- # charged leptons with  $E > 15$  GeV < 3

- No isolation requirement.



# Mass H After Optimization



- All 2f and 4f background samples included.
- Toy mc study under process.
  - Fixing resolution Det. and fitting background shape.

- Implementing suggestions/comments from reviewers.
- Toy MC generation study starting now.
- Updating note.