

# Overview

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Simulated with Madgraph + Pythia + Delphes

- Process:  $\mu^+ \mu^- \rightarrow H5z \nu_m \bar{\nu}_m$ , ( $H5z \rightarrow w^+ w^-$ ,  $w^+ \rightarrow jj$ ,  $w^- \rightarrow jj$ )
- 100k events
- Mass = (500, 1000, 2000, 3000) GeV
- Same delphes card, etc. as for EFT study
- Similar event selection as for  $\nu\nu$  channel of EFT study
- 6 TeV CM energy

# Neutral Heavy Higgs Limits

- Considered 3 TeV heavy higgs sample with 6 TeV
- POI: neutral heavy higgs signal strength
- No nuisance parameters, no systematics
- Limits found using TReXFitter
- Expected upper limit (single bin):  $4e-3$
- Expected upper limit (bins shown on right):  $6e-4$ 
  - Expanded first bin to avoid it being empty for ggWW.

