$H^0 \rightarrow ZZ^* \rightarrow 4l$

BACKGROUND

- $t\bar{t}$
- $Zb\bar{b}$

SELECTION CRITERIA

- Find $\mu^+\mu^-$ or e^+e^- pair: $p_t > 20$ GeV
- From Z ? $m_{ll} = m_Z \pm 4, 6$ GeV
- Find 2nd pair, $\mu^+\mu^-$: $p_t > 10, 5$ GeV

  or e^+e^-: $p_t > 10$ GeV
- From Z* ? $m_{ll} > 12$ GeV
- No b– or t–jet around ? (isolation)

  no charged track with $p_t > 2.0, 2.5$ GeV around (ΔR=0.15, 0.30) each lepton,
  E ($0.1<\Delta R<0.2$) < 12 GeV
- From vertex ? – impact param. cut

ATLAS, CMS, both