

Signal selection efficiency (%)

 $X \rightarrow HH \rightarrow \gamma\gamma b\bar{b}$ 

- High+Medium Purity - Low mass - fit  $m_{\gamma\gamma}$
- High+Medium Purity - High mass - fit  $m_{\gamma\gamma jj}$
- High Purity - Low mass - fit  $m_{\gamma\gamma}$
- High Purity - High mass - fit  $m_{\gamma\gamma jj}$

 $m_X \text{ (GeV)}$ 