

## ZH spin-off analysis

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Several HH searches are already being performed in ATLAS with different final states, but no evidence of SM-like HH production is expected until High-Luminosity LHC. The associated production of a single Higgs boson via ZH is a background in HH searches. When considering ZH, the cross-section is larger than for the corresponding SM-like HH channel. A slight modification of the HH searches to detect ZH instead of HH with a focus on the  $bb\gamma\gamma$  and  $bb\tau\tau$  channels, as a first step towards HH detection, is ongoing. Upper limits will be placed on ZH by using the full Run-2 dataset, while an evidence may be reached in Run-3.

### Abstract Track

Flash talk, LHC

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