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Higgs Hunt In The ZZ Channel

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This talk describes the search and the discovery of the Higgs boson in the ZZ decay mode. The journey of the Higgs boson discovery is described through two searches at the CMS experiment. The search in the $H \rightarrow ZZ \rightarrow 2l2\nu$ final state was able to exclude a wide mass range from 270-440 GeV at the end of 2011. When combined with other search channels, it was able to narrow down the mass of the standard model Higgs boson between 115-127 GeV. The search in the $H \rightarrow ZZ \rightarrow 4l$ final state performed with data collected in 2011 and 2012, was then instrumental in the discovery of the Higgs boson, the precise measurement of its mass at $125.6 \pm 0.4(\text{stat}) \pm 0.2(\text{syst})$ GeV, and other properties.