

# Prospects of Higgs Boson Research at the LHC

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The search for Higgs bosons in the Standard Model (SM) of particle physics and Beyond the Standard Model (BSM) started intensively at the Large-Electron-Positron (LEP) collider, which operated from 1989 to 2000, and later at the Tevatron from 2001 to 2011. With the discovery of a Higgs boson at the Large Hadron Collider (LHC) at CERN, a new era began. This led to precision measurements of the Higgs boson properties which, so far, are all consistent with the SM expectations. Many searches for predicted BSM Higgs bosons advanced the field of experimental Higgs boson physics. The LHC operated already in three running periods: Run-1 from 2010 to 2012, Run-2 from 2015 to 2018, and currently Run-3 from 2022-2026. The High Luminosity LHC (HL-LHC) operation is foreseen from 2029. The prospects of experimental Higgs boson research for the next decade are reviewed.

## References

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