1. Record Nr. UNINA9910300411103321 Autore Wolf Roger Titolo The Higgs Boson Discovery at the Large Hadron Collider [[electronic resource] /] / by Roger Wolf Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-18512-8 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (IX, 187 p. 51 illus., 44 illus. in color.) Collana Springer Tracts in Modern Physics, , 0081-3869; ; 264 539.721 Disciplina Soggetti Elementary particles (Physics) Quantum field theory Particle acceleration Physical measurements Measurement Elementary Particles, Quantum Field Theory Particle Acceleration and Detection, Beam Physics Measurement Science and Instrumentation Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references. Introduction -- The Higgs Boson in the Standard Model of Particle Nota di contenuto Physics -- Higgs Boson Searches Before the Advent of the Large Hadron Collider -- Discovery of the Higgs boson at the Large Hadron Collider. - Properties of the New Particle.- Conclusions. Sommario/riassunto This book provides a comprehensive overview of the field of Higgs boson physics. It offers the first in-depth review of the complete results in connection with the discovery of the Higgs boson at CERN's Large Hadron Collider and based on the full dataset for the years 2011 to 2012. The fundamental concepts and principles of Higgs physics are introduced and the important searches prior to the advent of the Large Hadron Collider are briefly summarized. Lastly, the discovery and first mensuration of the observed particle in the course of the CMS experiment are discussed in detail and compared to the

results obtained in the ATLAS experiment.