

1. Record Nr.	UNINA9910438115103321
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Titolo	Photon physics at the LHC : a measurement of inclusive isolated prompt photon production at [square root of s] = 7 TeV with the ATLAS detector // Michael Hance
Pubbl/distr/stampa	Heidelberg, : Springer, 2013
ISBN	1-283-91023-3 3-642-33062-2
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (151 p.)
Collana	Springer theses, , 2190-5053
Disciplina	539.7217
Soggetti	Photons Proton-antiproton colliders Large Hadron Collider (France and Switzerland)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction and Theoretical Background -- The LHC and the ATLAS Detector -- Data Samples and Event Selection -- Reconstruction and Identification of Prompt Photons -- Efficiency Measurements -- Background Estimation -- Measurement and Systematics -- Results of the Measurement and Comparison with Predictions -- Extending the Measurement.
Sommario/riassunto	This thesis reports on the first studies of Standard Model photon production at the Large Hadron Collider (LHC) using the ATLAS detector. Standard Model photon production is a large background in the search for Higgs bosons decaying into photon pairs, and is thus critical to understand. The thesis explains the techniques used to reconstruct and identify photon candidates using the ATLAS detector, and describes a measurement of the production cross section for isolated prompt photons. The thesis also describes a search for the Higgs boson in which the analysis techniques used in the measurement are exploited to reduce and estimate non-prompt backgrounds in diphoton events.