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Disciplina	530.12
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Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Experimental Apparatus -- Data and Monte Carlo Simulation -- Event Selection -- Discriminating Observables -- Photon + 3 Jets Events at Detector Level -- Correction and Unfolding -- Systematic Uncertainties -- Results -- Conclusion.
Sommario/riassunto	This book mainly focuses on the study of photon + 3 jets final state in Proton-Proton Collisions at $s = 7\text{TeV}$, searching for patterns of two (or more) distinct hard scatterings in the same collision, i.e the so-called Double Parton Scattering (DPS). A new method by using Monte Carlo generators was performed and provides higher order corrections to the description of the Single Parton Scattering (SPS) background. Further it is investigated whether additional contributions from DPS can improve the agreement between the measured data and the Monte Carlo predictions. The current theoretical uncertainties related to the SPS background are found to be larger than expectation. At the same

time a rich set of DPS-sensitive measurements is reported for possible further interpretation.
