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Soggetti	Particles (Nuclear physics) Quantum field theory Mathematical physics Sociophysics Econophysics Elementary Particles, Quantum Field Theory Theoretical, Mathematical and Computational Physics Data-driven Science, Modeling and Theory Building
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Premises -- Introduction to High Energy Physics -- Elements of Theory -- Phenomenology -- The Large Hadron Collider and the Compact Muon Solenoid -- Monte Carlo techniques and Physics Generators -- Discovery, overview and motivation of beauty physics -- Physics analysis -- General strategy and outline of the analysis -- Analysis at detector level -- Analysis at particle level -- Results -- Conclusions -- Summary, Conclusions and Perspectives -- Appendices -- Index.
Sommario/riassunto	A measurement of the double differential cross section for inclusive b jet production in proton-proton collisions as well as fraction of b jets in the inclusive jet production is presented as a function of the transverse momentum p_T and the absolute rapidity $ y $. The data samples were collected in the CMS experiment at LHC during 2016 and correspond to

an integrated luminosity of 35.2 fb⁻¹ at a centre-of-mass energy of 13 TeV. The jets are selected with $p_T > 74$ GeV and $|\eta| < 2.4$; the b jets must contain a B hadron. The measurement has significant statistics up to $p_T \sim \mathcal{O}(\text{TeV})$. Advanced methods of unfolding are performed to extract the signal. It is found that fixed-order calculations with underlying event describe the measurement well.
