

1. Record Nr.	UNINA9910300415003321
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Titolo	CP Violation in $B_s^0 \rightarrow J/\psi \phi$ Decays : Measured with the Collider Detector at Fermilab // by Sabato Leo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-07929-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (146 p.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	539.725
Soggetti	Elementary particles (Physics) Quantum field theory String theory Elementary Particles, Quantum Field Theory Quantum Field Theories, String Theory
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 -- Flavor as a Probe for non-SM Physics -- The Collider Detector at the Fermilab Tevatron -- Analysis Selection -- Preparation of Tools -- The Fit to the Time Evolution -- Systematic Uncertainties -- Results -- Conclusion.
Sommario/riassunto	This thesis reports on the final measurement of the flavor-mixing phase in decays of strange-bottom mesons ( $B_s$ ) into $J/\psi$ and $\phi$ mesons performed in high-energy proton-antiproton collisions recorded by the Collider Experiment at Fermilab. Interference occurs between direct decays and decays following virtual particle-antiparticle transitions ( $B_s$ -anti $B_s$ ). The phase difference between transition amplitudes ("mixing phase") is observable and extremely sensitive to contributions from non-standard-model particles or interactions that may be very hard to detect otherwise – a fact that makes the precise measurement of the $B_s$ mixing phase one of the most important goals of particle physics. The results presented include a precise determination of the mixing phase and a suite of other important supplementary results. All measurements are among the most precise available from a single experiment and provide significantly improved

constraints on the phenomenology of new particles and interactions.

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