

1. Record Nr.	UNISA996418165403316
Autore	Nakagiri Kota
Titolo	Search for the Decay $K_L \rightarrow \nu \bar{\nu}$ at the J-PARC KOTO Experiment [[electronic resource] /] / by Kota Nakagiri
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-6422-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XVI, 151 p. 121 illus., 109 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	539.72162
Soggetti	Nuclear physics Heavy ions Particle acceleration Elementary particles (Physics) Quantum field theory Nuclear Physics, Heavy Ions, Hadrons Particle Acceleration and Detection, Beam Physics Elementary Particles, Quantum Field Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- The KOTO Experiment -- Data Taking -- Event Reconstruction -- Monte Carlo Simulation -- Analysis of the KL 0 and KL 0X0 Searches -- Discussion -- Conclusion -- Appendix.
Sommario/riassunto	This book reports on a new result from the KL0 search at the J-PARC KOTO experiment, which sets an upper limit of 3×10^{-9} for the branching fraction of the decay at the 90% confidence level, improving the previous best limit by an order of magnitude. To explain the matter–antimatter asymmetry in the universe, still unknown new physics beyond the standard model (SM) that breaks CP symmetry is necessary. The rare decay of a long-lived neutral K meson, KL0, is a CP-violating decay. It is an excellent probe to search for new physics because new physics can contribute to the decay and change its branching fraction, while the SM is as small as 3×10^{-11} . However, it is extremely difficult to search for because all of the decay products are neutral and two neutrinos are undetectable. The KL0 signal is

identified by measuring two photons from a 0 with a calorimeter and confirming the absence of any other detectable particles with hermetic veto counters. The book contributes to the analysis of neutron-induced backgrounds which were the dominant background sources in the search. For the background caused by two consecutive hadronic showers in the calorimeter due to a neutron, the author evaluated the background yield using a data-driven approach. For another background caused by an meson production— decays two photons—by a neutron that hits a veto counter near the calorimeter, the author developed an original analysis technique to reduce it. The book also contributes to the analysis of the normalization modes (KL30, KL20, KL2) to measure KL yield, the estimation of the signal acceptance based on a simulation, and the evaluation of the trigger efficiency. As a result, significant improvements in the measurement were achieved, and this is an important step in the continuing higher sensitivity search, which can reach new physics with the energy scales up to O(100-1000 TeV).

2. Record Nr.	UNINA9910782013803321
Titolo	Voices of emancipation [[electronic resource]] : understanding slavery, the Civil War, and Reconstruction through the U.S. Pension Bureau files // edited by Elizabeth A. Regosin and Donald R. Shaffer
Pubbl/distr/stampa	New York, : New York University Press, c2008
ISBN	0-8147-7734-1 0-8147-7626-4
Descrizione fisica	1 online resource (230 p.)
Altri autori (Persone)	RegosinElizabeth Ann ShafferDonald Robert
Disciplina	973/.0496073
Soggetti	African Americans - History - 1863-1877 African Americans - Social conditions - 19th century Slavery - United States - History - 19th century Enslaved persons - Emancipation - United States Reconstruction (U.S. history, 1865-1877) African American soldiers - Pensions African American sailors - Pensions United States Armed Forces African Americans History 19th century Sources United States History Civil War, 1861-1865 African Americans Sources

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 (p. 193-200) and index.
Nota di contenuto	Slavery and emancipation -- The Civil War -- Postwar patterns -- Marriage and family -- Appendix : complete sample documents.
Sommario/riassunto	Voices of Emancipation seeks to recover the lives and words of former slaves in vivid detail, mining the case files of the U.S. Pension Bureau, which administered a huge pension system for Union veterans and their survivors in the decades following the Civil War. The files contain an invaluable, first-hand perspective of slavery, emancipation, black military service, and freedom. Moreover, as Pension Bureau examiners began interviewing black Union veterans and their families shortly after the Civil War, the files are arguably among the earliest sources of ex-slaves reflecting on their lives, o