HEP 2013
Stockholm
18-24 July 2013

Contribution ID: **575**

Type: **Talk presentation**

Study of CP and CPT symmetries violation in kaon decays with KLOE

Friday, 19 July 2013 18:45 (15 minutes)

The Ks –> 3pi0 decay is a pure CP violating process which, assuming CPT invariance, allows direct CP violation to be investigated. This decay has not been observed so far, and the best upper limit on the branching ratio BR(KS –> 3pi0)< 1.2 10-7 is two orders of magnitude larger than predictions based on the Standard Model. We present the search for the Ks –> 3pi0 decay performed with the KLOE detector at the DAFNE Phi-factory of the INFN Frascati Laboratory improving the present upper limit by a factor about 5. We describe the experimental techniques used in the background rejection and signal events selection. We also discuss briefly the perspectives for a new measurement using the KLOE-2 apparatus equipped with a new Inner Tracker and calorimeters at low theta angle.

Primary author: BOSSI, Fabio (Laboratori Nazionali di Frascati (LNF))

Presenter: DE LUCIA, Erika (Laboratori Nazionali di Frascati (LNF)-Istituto Nazionale Fisic)

Session Classification: Flavour Physics and fundamental symmetries

Track Classification: Flavour Physics and Fundamental Symmetries