



Contribution ID: 34

Type: **Oral presentation**

## Pattern recognition for TOP counter

*Thursday, 6 May 2010 12:35 (25 minutes)*

For the Belle II detector a time-of-propagation (TOP) counter is foreseen for particle identification in the barrel region. In this counter particle identity is determined from a complicated pattern in the time and position of Cherenkov photon detection. We will present an extended likelihood method for particle identification, which is based on an analytical construction of likelihood function. The method is adopted to various types of TOP counter, including those with a focusing mirror and an expansion volume at the quartz bar exit window. Using this method and a Geant based Monte Carlo simulation the performance of different TOP counter configurations has been studied. We will discuss these results.

**Please indicate "poster" or "plenary" session. Final decision will be made by session coordinators.**

plenary

**Primary author:** Mr STARIC, Marko (Jozef Stefan Institute Slovenia)

**Presenter:** Mr STARIC, Marko (Jozef Stefan Institute Slovenia)

**Session Classification:** Pattern recognition and data analysis

**Track Classification:** Pattern recognition and data analysis