

# Fast timing and trigger Cherenkov detector for collider experiments

*Tuesday, 6 October 2015 13:30 (15)*

Analysis of fast timing and trigger Cherenkov detector's design for its use in collider experiments is presented. Several specific requirements are taken into account – necessity of the radiator's placement as close to the beampipe as possible along with the requirement of gapless (solid) radiator's design. Characteristics of the Cherenkov detector's laboratory prototype obtained using a pion beam at the CERN Proton Synchrotron are also presented, showing the possibility of obtaining sufficiently high geometrical efficiency along with good enough timing resolution (50 ps sigma).

## Presentation type

Section talk (10+5 min)

**Primary author(s)** : Dr. KUREPIN, Alexei (INR RAS); Mr. RESHETIN, Andrey (INR RAS); Mr. SHABANOV, Arseniy (INR RAS); Mr. KONEVSKIKH, Artem (INR RAS); Mr. SEREBRYAKOV, Dmitry (INR RAS); Mr. TYKMANOV, Egor (NRNU MEPhI); Mr. MOROZOV, Igor (INR RAS); Mr. SLUPECKI, Maciej (University of Jyväskylä); Mrs. KARAVICHEVA, Tatiana (INR RAS); Mr. LOGINOV, Vitaliy (NRNU MEPhI); Mr. KAPLIN, Vladimir (NRNU MEPhI); Dr. GRIGORIEV, Vladislav (NRNU MEPhI); Dr. TRZASKA, Wladyslaw Henryk (University of Jyväskylä); Mr. MELIKYAN, Yury (NRNU MEPhI)

**Presenter(s)** : Mr. TYKMANOV, Egor (NRNU MEPhI)

**Session Classification** : Methods of experimental physics - parallel I

**Track Classification** : Methods of experimental physics