Contribution ID: **98** Type: **Oral Presentation**

Timing detectors with 10 ps resolution

Saturday 11 June 2011 12:10 (20 minutes)

We have developed particle detectors (QUARTICs) with 10 ps resolution, based on Cherenkov light in fused silica read out by micro-channel plate photomultipliers (MCP-PMTs) or silicon photomultipliers (SiPMs). Their geometry is edgeless, allowing an active area very close to the intense Large Hadron Collider (LHC) beam, with the photodetectors away from the beam to minimize radiation damage. They satisfy the requirements of a project to localize the collision point and study exclusive Higgs boson production at the LHC.

Author: Dr ALBROW, Michael (Fermi National Accelerator Laboratory (FNAL))

Co-authors: Dr RONZHIN, Anatoly (Fermilab); Dr ZATSERKLYANIY, Andriy (Fermilab); Dr RAMBERG, Eric (Fermilab); Dr MALIK, Sarah (Rockefeller University)

Presenter: Dr ALBROW, Michael (Fermi National Accelerator Laboratory (FNAL))

Session Classification: Particle ID Detectors

Track Classification: Particle Identification