Contribution ID: **106** Type: **not specified**

KM3NeT Digital Optical Module Electronics

Tuesday, 15 September 2015 11:51 (15 minutes)

KM3NeT is a European research facility that is being built in the Mediterranean Sea and that will house a neutrino telescope of cubic kilometer scale. Cherenkov light from neutrino induced secondary particles will be detected by an array of optical modules consisting in high pressure resistant glass vessels with photomultipliers inside, called Digital Optical Modules. This vessel is composed of 31 small 3 inch Photomultipliers distributed around the glass sphere, which collects the Cherenkov light and transform it into electronic signals. The electronic signals are discretized and time stamped by 31 Time to Digital Converter channels embedded on a Field Programmable Gate Array. Once acquired, they are sent on-shore by the White Rabbit protocol, that also allows 1-ns syncronization with the on-shore station, for their final treatment by the Data Acquisition System. In the present article it is described in detail all the Digital Optical Module electronics.

Primary author: REAL, Diego (IFIC)

Presenter: REAL, Diego (IFIC)

Session Classification: Parallel Session E