Contribution ID: **400** Type: **Poster**

The Baikal-GVD neutrino telescope as an instrument for studying Baikal water luminescence

Friday 16 July 2021 12:36 (12 minutes)

The next generation neutrino telescope Baikal-GVD is placed in open water of Lake Baikal. The aim of the experiment is the detection of high energy astrophysical neutrinos. In particular, the goal is the registration of the Cherenkov radiation emitted when charged particles are passing through the deep water in Lake Baikal. The detector is indeed a three-dimensional array of photo-sensors (optical modules - OMs) arranged in fully independent operational units called clusters.

Apart from Cherenkov radiation, also the background light is registered. The trigger system of a cluster is designed in such a way that signals from each OM in a time window of 5 micro-seconds are stored, if a trigger condition is fulfilled. In this way, we collect the data on count rates of pulses
collected by each particular OM. These are mainly associated with the luminescence of Baikal water and are registered almost continuously.

We will present time and spatial variations of the count rates data acquired by several clusters of the Baikal-GVD telescope. In addition, we will present some selected results on luminescence of water in Lake Baikal.

Keywords

Collaboration

other (fill field below)

other Collaboration

Baikal-GVD

Subcategory

Experimental Results

Primary author: DVORNICKY, Rastislav (JINR, Dubna)

Presenter: DVORNICKY, Rastislav (JINR, Dubna)

Session Classification: Discussion

Track Classification: Scientific Field: NU | Neutrinos & Muons