

/opt/indico/archive/2016/C8/40222322483

_logo_small.jpg

Contribution ID : 26

Type : **Poster**

The detector on the basis of drift chambers for inclined muon bundle investigations

Tuesday, 28 February 2017 17:00 (1:00)

Content

The large-scale coordinate-tracking detector TREK for registration of inclined EAS is being developed in MEPhI. The use of large drift chambers ($4000 \times 508 \times 112 \text{ mm}^3$) developed in IHEP for experiments at the neutrino channel of U-70 accelerator will allow to create a unique large-scale detector of 270 m^2 area for registration of multi-particle events at large zenith angles generated by ultrahigh-energy cosmic ray particles. The key advantages of these chambers are a large effective area (1.85 m^2), a good coordinate and angular resolution with a small number of measuring channels. Detector will be operated as a part of the experimental complex NEVOD, in particular, jointly with Cherenkov water detector (CWD) with volume of 2000 m^3 and coordinate detector DECOR. The first part of the detector named Coordinate-Tracking Unit based on the Drift Chambers (CTUDC) representing two coordinate planes of 8 drift chambers in each has been developed and mounted on the opposite sides of the CWD. It has the same principle of joint operation with NEVOD-DECOR triggering system so the main features of the TREK detector will be examined. Results of an examination of drift chambers and their electronics with new test benches, a calibration of the CTUDC and the first results of its joint operation with NEVOD-DECOR complex are presented.

Summary

Primary author(s) : Mr. ZADEBA, Egor (MEPhI)

Co-author(s) : Mr. AMPILOGOV, Nikolay (MEPhI); Mr. VOLKOV, Nikolay (MEPhI); Mr. VOROBYEV, Vladislav (MEPhI); Dr. YASHIN, Igor (MEPhI); Dr. BARBASHINA, Natalya (MEPhI); Dr. BORISOV, Anatoly (IHEP); Dr. KOKOULIN, Rostislav (MEPhI); Dr. KOZHIN, Anatoly (Institute for High Energy Physics, 142281, Protvino, Moscow reg., Russian Federation); Dr. KOMPANIETS, Konstantin (MEPhI); Dr. FAKHRUTDINOV, Rinat (IHEP); Mr. OVECHKIN, Alexander (MEPhI); Dr. PETRUKHIN, Anatoly (MEPhI)

Presenter(s) : Mr. ZADEBA, Egor (MEPhI)

Session Classification : Posters

Track Classification : Instrumentation for Astroparticle and Neutrino physics