



Contribution ID : 246

Type : **Poster**

Radiation damage of SiC detectors irradiated with Xe ions and neutrons

Thursday, 1 December 2022 13:00 (15)

The characteristics of detectors made of silicon carbide (SiC) irradiated with various integral fluxes of both Xe ions with an energy of 165 MeV and fast neutrons were studied. With the help of alpha-particles, it was found that the energy resolution of SiC detectors irradiated with the maximum fluxes of heavy ions ($F_{max} = 2.3 \times 10^9$ ion/cm²) and neutrons ($F_{max} = 3.4 \times 10^{15}$ n/cm²) deteriorates by an order of magnitude. It was shown that the efficiency of detector charge collection decreases to 2 and 50%, respectively, upon irradiation with Xe ions and neutrons.

Primary author(s) : Dr. EVSEEV, Sergey (JINR); Prof. GUROV, Yuri (JINR, NRNU MEPHI); Mr. DOVBENKO, Maxim (JINR); Dr. ZAMYATIN, Nikolay (JINR); Mr. KOPYLOV, Yuri (JINR); Mr. ROZOV, Sergey (JINR); Dr. SANDUKOVSKY, Vyacheslav (JINR); Dr. HRUBCIN, Ladislav (IEE SAS); Dr. ZAT'KO, Bogomir (IEE SAS)

Presenter(s) : Dr. EVSEEV, Sergey (JINR)

Session Classification : Poster Session

Track Classification : Facilities and advanced detector technologies