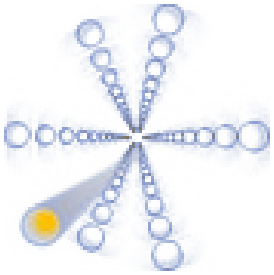

Contribution ID: **30** Type: **Oral**

Channeling Effect in Polycrystalline Deuterium-Saturated CVD Diamond Target Bombarded by Deuterium Ion Beam

Wednesday, 8 October 2014 10:45 (15 minutes)

At the ion accelerator HELIS [1-4] at the LPI, the neutron yield is investigated in DD reactions within a polycrystalline deuterium-saturated CVD diamond, during an irradiation of its surface by a deuterium ion beam with the energy less than 30 keV. The measurements of the neutron flux in the beam direction are performed in dependence on the target angle, β, with respect to the beam axis. These measurements are performed using a multichannel detector based on He3 counters. A significant anisotropy in neutron yield is observed, it was higher by a factor of 3 at β=0 compared to that at β = ±45. The possible reasons for the anisotropy, including ion channeling, are discussed.

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