

Abstract Submitted
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High energy axial ion beam generated by deuterium gas-puff Z-pinch at the current level of 3 MA¹ K. REZAC, D. KLIR, P. KUBES, J. CIKHARDT, B. BATOBOLOTOVA, J. KRAVARIK, FEE CTU in Prague, H. ORCIKOVA, K. TUREK, NPI AS CR, A. SHISHLOV, A. LABETSKY, V. KOKSHENEV, N. RATAKHIN, IHCE in Tomsk, GIT-12 TEAM — The contribution presents results from Z-pinch experiments with a plasma shell on deuterium gas-puff (with deuterium linear mass of about 100 $\mu\text{g}/\text{cm}$) carried out on the GIT-12 generator at IHCE in Tomsk at the current level slightly below 3 MA. The first purpose of experiments was to study the influence of different parameters on the production of neutrons. Neutron yield up to 5×10^{12} neutrons/shot was measured in the shot with LiF catcher. The second purpose was the examination of high-energy ions generated on the Z-pinch axis using RCF and CR-39. Very interesting results were provided by ion pinhole camera, where the influence of magnetic field on the ion beam could be studied. One of the conclusions is that the ions with energy below 10 MeV were significantly deflected by magnetic field.

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