

Abstract Submitted
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Fast ion diagnostics for the C-2 experiment SERGEY KOREPANOV, RYAN CLARY, ARTEM SMIRNOV, SEAN DETTRICK, Tri Alpha Energy, SERGEY MURAKHTIN, SERGEY POLOSATKIN, Budker Institute of Nuclear Physics — One of the goals of the C-2 experiment [1] is to explore FRC sustainment and current drive from neutral beam injection. Studies of the relaxation and confinement of hot anisotropic ions created by the neutral beams are considered to be key elements of the experimental research program. To realize this approach a set of diagnostics for the measurement of local parameters of fast ions has been developed. In particular, this set includes diagnostics to measure the local energy (neutral particle analyzer, LiNb₃-based pyro-bolometers) and the angular distribution function (silicone-based neutral particle bolometers). For numerical studies of fast ion dynamics a Monte Carlo code has been elaborated.

[1] M. W. Binderbauer *et al*, Phys. Rev. Lett., 105 , 045003 (2010).

Sergey Korepanov
Tri Alpha Energy

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