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## **On the Possibility of Alpha-Particle Confinement Study in ITER by NPA Measurements of Knock-on Ion Tails**

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One of the issues of the neutral particle diagnostics on ITER is to measure the distribution functions of the fast deuterium (D) and tritium (T) ions in MeV energy range. High energy tails in D,T-ion energy distributions (so-called knock-on ions) appear as a result of the close elastic collisions between the thermal fuel ions and the fusion alpha particles. The knock-on ion density depends directly on the density and energy distribution of the alpha particles. Therefore measurements of the neutralized knock-on D,T-ion fluxes escaping the plasma volume can provide information on the alpha particle confinement in DT-plasma. This report presents results of the numerical simulation for the neutralized fast D,T-ion fluxes in case of ITER fusion plasma and considers measurements of these fluxes in respect to neutral particle diagnostics and its capabilities on ITER.

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