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# Un étude numérique des réactions de fusion proton-bore

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Un étude numérique des réaction de fusion proton-bore : simulations interpreting and describing all involved physical processes. The main mechanism consists in producing energetic laser-driven protons inducing the generation of α-particles in a secondary boron target : pitcher-catcher geometry. The multiple code use is required : pedestal effects can be performed with 2D hydrodynamics codes (CHIC [ ]) ; Particle in Cell codes (SMILEI [ ]) computes laser matter interaction and so proton production. ; Monte-Carlo codes, such as FLUKA [ ], are needed to accurately model the nuclear reactions and transport of ions (alpha-particles), photons and neutrons.

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