



ID de Contribution: 195

Type: **Talk**

Pairing dynamics in nuclear collisions

jeudi 23 mars 2023 14:00 (30 minutes)

I will present the results of nuclear collisions involving medium mass or heavy nuclei, obtained within time-dependent density functional theory (TDDFT) extended to superfluid systems. I will discuss the possible manifestations of pairing dynamics in nuclear collisions, at the vicinity of the Coulomb barrier. These include the mechanism for the increase of the barrier for capture generated by solitonic excitation appearing as a result of pairing phase distortion. Moreover, I will discuss pairing instability occurring in di-nuclear system formed by merging magic nuclei which lead to significant enhancement of pairing correlations.

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