

**EXCITON MECHANISM OF PLASMA PHASE
TRANSITION: DIFFERENCES BETWEEN
DENSE FLUID H₂ AND DENSE FLUID N₂**

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Our previous first-principles molecular dynamics calculations revealed that the mechanism of the plasma phase transition in dense fluid hydrogen can be described and formation of excitons. These excitons are excitations of electronic subsystem that are spatially localized and have a finite lifetime. It is the dissociation of excitons that is detected experimentally as a threshold phenomenon [1-3].

In this talk we analyse this excitonic mechanism in dense fluid nitrogen and discuss the differences between these two dense molecular fluids.

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