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**Dynamics of ultracold neutral plasma**<sup>1</sup> LEE COLLINS, T-04, Los Alamos National Laboratory, BYOUNGSEON JEON, Dept. Applied Science, UC.Davis/T-12, Los Alamos National Laboratory, JOEL KRESS, T-12, Los Alamos National Laboratory, NIELS GRONBECH-JENSEN, Dept. Applied Science, UC.Davis — For an ultracold neutral plasma produced by photoionzation of laser-cooled heavy particles, initial expansion behavior was studied with classical molecular dynamics. To investigate huge particle sets under open boundary condition, the TREE method has been implemented and Rydberg states of low quantum number were studied. We also examined the degree of ion correlation.

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