Title: Production of a New Tool for Debris Formation Models

Authors: Stephen Armstrong, D. Curreli

Sorting Category:

02.06 Modeling and simulation: computational methods

Abstract:

A main problem in the creating debris formation models is the *lack of fundamental data describing particle-particle and particle-cluster interactions*, such as interatomic potentials, differential scattering cross-sections and total cross-sections. Calculation of the classical differential scattering cross section by hand is limited to potentials with analytical solutions. Thus, a numerical implementation is necessary to solve potentials related to debris formation models.

We are constructing a new software tool for the solution of the semi-classical scattering problem, applicable to particle-particle and particle-cluster interactions, which play a fundamental role in modeling debris formation during plasma condensation.