Selalib

Selalib (SemiLagrangian Library) is a collection of modules conceived to aid in the development of plasma physics simulations, particularly in the study of turbulence in fusion plasmas. Selalib offers basic capabilities from general and mathematical utilities and modules to aid in parallelization, up to pre-packaged simulations.

Technological barrier: unavailability of basic software building blocks for simulations using the semilagrangian method. Need to include software engineering practices in an academic research environment.

Possible fields of application: high-level modules in the library are specialized for plasma physics. Low-levels are usable in parallel computing applications.

Language, environment: Fortran 2003

Keywords: plasma physics, semilagrangian method, parallel computing, plasma turbulence

License: open source (Cecill-B), not released yet.

Academic partners: University of Strasbourg, Max Planck Insitute - Garching.

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