

R008-04

Zoom meeting D : 11/3 AM1 (9:00-10:30)

10:00-10:15

Multi-step Boris integrator for non-relativistic E-cross-B drift

#Takayuki Umeda

ISEE, Nagoya Univ.

In the present study, we show that the original (two-step) Boris scheme is the unique solution that satisfies the energy conservation law exactly for the non-relativistic E-cross-B drift. We also show that the original Boris scheme does not satisfy the energy conservation law exactly for the relativistic E-cross-B drift. We propose a new multi-step scheme for the non-relativistic E-cross-B drift with higher accuracy.