

# Vectorized Particle Simulation using LISTVEC compile-directive on SX super-computer

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PIC (Particle-In-Cell) method is frequently used for space plasma particle simulations. In this method, the field components (i.e. current, electric/magnetic field) are defined on grids and plasma particles are randomly distributed in space. To obtain the current, we need to calculate the velocity moment of the particles. The calculation is hard to perform on vector-type computers. Here, we introduce a new method where LISTVEC compile-directive on SX super-computer is used. We compare it with the conventional robust method.