

Study of Fundamental Plasma Processes with Particle Simulations utilizing Physical Random Numbers

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As part of the progress in the region of semiconductor technologies and statistics, physical random number generators are becoming one of the usable technologies for studying the fundamental plasma processes via plasma particle simulations. The physical random numbers are generated with completely different method from that of pseudo random numbers. As a result of the generation mechanism, the physical random numbers have basically no revolutionariness. By using this feature, new method is proposed for studying plasma fundamental processes by combining the plasma particle simulations and statistical analyzing technique. We will show comparisons of the results from plasma particle simulations with physical random numbers and pseudo random numbers.

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