

## **A future prospect of development of STP simulation codes and its relationship to Peta-scale supercomputer**

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The purpose of this paper is to discuss a future prospect/direction of development of computer simulation codes for the Solar-Terrestrial and Planetary (STP) science. Owing to the rapid development of computer technology in the recent days, computer simulation has become an essential approach for in the STP science. Tera-scale computers become much more common in the near future, that will enable us to accelerate various new sciences. It is important to discuss how to use them and what they are used for. In this paper, current status and future prospect of MHD/fluid, particle, and Vlasov simulation codes are described. In Japan, a Peta-scale supercomputer is currently being developed in Kobe, and now is the time to discuss strategy of unique Peta-scale supercomputing projects.