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Vlasiator: Space environment simulations in 6D

This talk presents the world's most accurate space environment simulation Vlasiator. Space is notoriously difficult to measure, and at best we can have simultaneous observations from a handful of positions. On the other hand, processes in space are vast: By looking at a variation in one position, the observer is never sure whether the variation was born there or whether it is due to a change faraway. That's why we need simulations of the entire near-Earth space, however, again: space is big. To cover the whole space with an accurate plasma description was deemed impossible, but is now **entirely** feasible thanks to pre-exascale supercomputers and parallel technologies. The talk covers this topic: How to model near-Earth space accurately? Applications vary from space weather to fundamental science.



VLASIATOR

Tuesday, 25.1.2022, at 17:15 h online

<https://zoom.us/j/97994494878?pwd=bWNGREorRnFlbEU2TD AvaWRveW82QT09>