

## 非定常準垂直衝撃波における非熱的電子の振る舞い

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## Behaviours of Nonthermal Electrons in Nonstationary Quasiperpendicular Shocks

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Behaviours of non-thermal electrons produced in high Mach number nonstationary shocks are investigated by means of one-dimensional full particle-in-cell simulation. It is revealed that high energy electrons are intermittently produced in a nonstationary self-reforming shock. Downward propagating isolated field aligned electron beams, upward propagating bursty reflected electrons, and associated substructures are found. Detailed mechanisms of some of their energizing processes are discussed by analyzing their orbits.