Abstract Submitted for the DPP12 Meeting of The American Physical Society

High energy electron behaviors in Langmuir solitons¹ Y. NISHIMURA, Y.H. CHEN, C.Z. CHENG, National Cheng Kung University — Effects of non-thermal high-energy electrons on Langmuir wave-particle interaction is studied by an initial value approach. A Vlasov-Poisson simulation is employed based on the splitting scheme.² The interaction between high frequency Langmuir waves and low frequency ion acoustic waves gives rise to Langmuir soliton.³ Formation of high energy electrons by the Langmuir solitons is investigated.

¹Work supported by Taiwan National Science Council (NSC) 100-2112-M-006-021-MY3.

²C.Z.Cheng and G.Knorr, J. Comput. Phys. **22**, 330 (1976). ³V.E.Zhaharov, Sov. Phys. JETP **35**, 908 (1972).

> Y. Nishimura National Cheng Kung University

Date submitted: 10 Sep 2012

Electronic form version 1.4