Abstract Submitted for the APR06 Meeting of The American Physical Society

Electron scattering on halo nuclei¹ CARLOS BERTULANI, University of Arizona — The inelastic scattering of electrons on weakly-bound nuclei is studied with a model based on the long range of the bound state wavefunction and on the effective-range expansion for the continuum wavefunctions. Three mechanisms have been considered: (a) dissociation of halo nuclei by high energy electrons, (b) dissociation by electrons present target, and (c) Coulomb dissociation. It is shown that the properties of halo nuclei can be studied in electron-radioactive colliders using the electro-disintegration process. A comparison with fixed-target experiments is also performed.

¹This research was supported in part by the Department of Energy under Grant No. DE-FG02-04ER41338.

Carlos Bertulani University of Arizona

Date submitted: 18 Jan 2006

Electronic form version 1.4