Chaos Control of 4-D Chaotic Systems using Recursive Back-stepping Nonlinear Controller JOHN LAOYE, UCHECHUKWU VINCENT, SEMIU KAREEM, Department of Physics, Olabisi Onabanjo University, PMB 2002, Ago - Iwoye, Nigeria, NONLINEAR AND STATISTICAL PHYSICS RESEARCH GROUP TEAM — This paper examines chaos control of two four dimensional chaotic systems namely: the Lorenz-Stenflo (LS) system that models low-frequency short-wavelength gravity waves and a new four-dimensional chaotic system (Qi systems), containing three cross products. The control analysis is based on recursive backstepping design technique and it is shown to be effective for the 4-D systems considered. Numerical simulations are also presented. PACS: 05.45.Pq; 05.45.Gg; 05.45.Ac Keywords: Chaos control; Lorenz-Stenflo System; Qi System; Backstepping design

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