1046-60-545   **Adina Oprisan*** (`aoprisan@uta.edu`), Department of Mathematics, The University of Texas at Arlington, Arlington, TX 76019, and **Andrzej Korzeniowski**, Department of Mathematics, The University of Texas at Arlington, Arlington, TX 76019. *Large deviations for Ergodic Processes in Split Spaces.*

We study a family of stochastic additive functionals of Markov processes with locally independent increments switched by jump Markov processes in an asymptotic split phase space. Based on an average approximation, we obtain a large deviation result for this stochastic evolutionary system using a weak convergence approach. Examples, including compound Poisson processes, illustrate cases in which the rate function is calculated in an explicit form. (Received September 07, 2008)