1046-37-1256   **John E. Franke*** (`franke@math.ncsu.edu`), Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695, and **Abdul-Aziz Yakubu**. *S-I-S Epidemic Models with Disease Induced Mortality in Periodic Environments.* Preliminary report.

In constant environments the disease dynamics of simple discrete-time epidemic models without disease induced mortality are driven by the demographic dynamics. In periodic environments we show that the demographic dynamics do not always drive the disease dynamics. The introduction of the disease induced mortality gives a model where the disease-free dynamics do not drive the disease dynamics. An S-I-S model is developed to study the combined effects of disease induced mortality and periodic environments. (Received September 15, 2008)