

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Bistability of the naturally induced lactose utilization system of *Escherichia coli* JELENA STAJIC, MICHAEL WALL, Los Alamos National Laboratory — In the absence of the preferred sugar glucose, lactose utilization machinery in the bacterium *E. coli* is activated. The genetic circuit responsible for this response, lac operon, has been observed to exhibit bistability when induced by an artificial inducer, TMG. Here we investigate conditions under which bistability might be observed in response to lactose. The aim of our study is to establish whether the natural system exhibits bistability, as is often assumed despite the lack of experimental support.

Jelena Stajic
Los Alamos National Laboratory

Date submitted: 30 Nov 2005

Electronic form version 1.4