1040-05-84 **Tom A Bohman*** (tbohman@math.cmu.edu), Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA 15213. *Hamilton Cycles in Sparse Random Graphs.*

Suppose we randomly choose a graph on n vertices with cn edges where c is a constant and n tends to infinity. What is the probability that there is a Hamilton cycle? In this talk we will discuss a number of variations on this question and sketch a proof that the probability that the sparse random graph known as 3-out is Hamiltonian tends to 1 as n goes to infinity. (Received January 25, 2008)