1073-05-228 **Florian Pfender**, **Kevin G Milans*** (`milans@math.sc.edu`), **Dieter Rautenbach**, **Friedrich Regen** and **Douglas B West**. *Cycle Spectra of Hamiltonian Graphs.* Preliminary report.

The *cycle spectrum* of a graph G is the set of lengths of cycles in G. Let $s(G)$ denote the size of the cycle spectrum of G. We show that if G is a graph with a spanning cycle and p chords, then $s(G) \geq \sqrt{p} - \frac{1}{2}\ln p - 2$. The result is asymptotically sharp when G is the complete bipartite graph $K_{n,n}$ and $p = n^2 - 2n$, since then $s(G) = \sqrt{p+1}$. (Received August 02, 2011)