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Louis DeBiasio, Ryan Martin and **Theodore Molla*** (molla@usf.edu). *Powers of Hamiltonian cycles in multipartite graphs.*

The minimum proportional degree of a multipartite graph is the minimum over all vertices v and all parts U not containing v of the number of neighbors of v in U divided by the order of U . In 1963 Moon and Moser proved that every balanced bipartite graph with minimum proportional degree greater than $1/2$ contains a Hamiltonian cycle. In this talk, we will discuss the following related result: For every positive integer r and $\gamma > 0$ there exists n_0 such that if a multipartite graph on $n \geq n_0$ vertices has minimum proportional degree at least $1 - 1/r + \gamma$ and no part has order greater than n/r , then there exists a cyclic ordering of the vertices in which every set of r consecutive vertices is a clique. (Received January 19, 2020)