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Hong-Jian Lai* (hjlai@math.wvu.edu), Department of Mathematics, West Virginia University, Morgantown, WV 26506-6310, Yehong Shao (shaoy@ohio.edu), Arts and Sciences, Ohio University Southern, Ironton, OH 45638, and Mingquan Zhan (Mingquan.Zhan@millersville.edu), Department of Mathematics, Millersville University, 17551 Millersville, PA, Algeria. Vertex-disjoint chorded cycles in graphs. Preliminary report.

Let s, k be nonnegative integers. Bialostocki, Finkel, and Gyárfás conjectured that if G is a graph with $|V(G)| \ge 3s + 4k$ and $\delta(G) \ge 2s + 3k$. Then G contains a collection of s cycles and k chorded cycles, all vertex disjoint. We prove that if for every pair of non adjacent vertices u and v of G, $d(u) + d(v) \ge 4s + 6k - 1$, then G contains a vertex disjoint collection of s cycles and k chorded cycles. Our result implies the validity of the abovementioned conjecture. (Received August 14, 2007)