Chun-Hung Liu and Jie Ma* (jiema@ustc.edu.cn). A conjecture of Thomassen on cycles with length condition.

It is proved that every graph of minimum degree at least $k+1$ contains at least $(k-1)/2$ cycles with consecutive even lengths. This implies, among other results, a conjecture of Thomassen for all even integers $k$ that every graph of minimum degree at least $k+1$ contains cycles of length $2m$ modulo $k$ for any integer $m$. For odd integers $k$, we provide the best known result that the bound $k+4$ will suffice. (Received February 20, 2015)