1133-05-343 **Gexin Yu*** (gyu@wm.edu), Department of Mathematics, College of William and Mary, Williamsburg, VA , and **Xia Zhang**, Shangdong Normal University. *Packing of graphs without certain even cycles.* Preliminary report.

Two n-vertex graphs G_1 and G_2 pack if there exist injective mappings of their vertex sets into $[n]$, such that the images of the edge sets are disjoint. In the 1970s, Bollobás and Eldridge, and independently Catlin, conjectured that if $(\Delta_1 + 1)(\Delta_2 + 1) \leq n + 1$, then G_1 and G_2 pack, where Δ_1, Δ_2 are the maximum degrees of G_1, G_2, respectively. Towards this conjecture, we show that for each integer $k \geq 2$, if neither of G_1, G_2 contains a 4-cycle nor an even cycle with length between $2k$ and $4k$, and $n > \max\{\Delta_1\Delta_2 + 0.5(\Delta_1 + \Delta_2),\ (3k - 4.5)(\Delta_1^{1+\frac{1}{k}} + \Delta_2^{1+\frac{1}{k}}) + (6k - 5)(\Delta_1 + \Delta_2)\}$, then G_1 and G_2 pack. As a corollary, the BEC conjecture is true for graphs without 4-, 6-, 8-cycles and $\Delta_i \geq 330$, $i = 1, 2$, which slightly improves a result by Batenburg and Kang. (Received August 01, 2017)