1133-05-180 **Lina Li** and **Theodore Molla*** (tnmolla@gmail.com). *Triangle-factors in regular tournaments.* Preliminary report.

A *tournament* is an orientation of the complete graph. We say that a tournament G on n vertices is *regular* if the indegree and outdegree of every vertex is $(n-1)/2$. A *triangle-factor* of G is a collection of $n/3$ vertex-disjoint cyclic triangles. We prove that when n is odd, divisible by 3, and sufficiently large every regular tournament on n vertices contains a triangle-factor. For large tournaments, this resolves a conjecture made independently by Cuckler and Yuster. This result is best possible, because for every n congruent to 3 modulo 18, there exists a tournament on n vertices that does not contain a triangle-factor in which the indegree and outdegree of every vertex is either $(n-3)/2$, $(n-1)/2$, or $(n+1)/2$. We will discuss the proof of this theorem and some related work and conjectures. (Received July 25, 2017)