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*Bounds on the regularity of toric ideals of graphs.* Preliminary report.

Let  $G$  be a finite simple graph. We find a lower bound for the Castelnuovo-Mumford regularity for the toric ideal  $I_G$  associated to  $G$  in terms of the sizes and number of induced complete bipartite graphs in  $G$ . When  $G$  is a chordal bipartite graph, i.e., a bipartite graph with no induced cycles of length six or larger, we find an upper bound on the regularity of  $I_G$  in terms of the size of the bipartition of  $G$ . As a corollary, the regularity of the toric ideal of the complete bipartite graph  $K_{m,n}$  is the minimum of  $m$  and  $n$ . (Received January 19, 2016)