Steve M Hudson* (hudsons@fiu.edu), Mathematics Dept, FIU, University Park Campus, Miami, FL 33199, and Laura De Carli, Mathematics Dept, FIU, Miami, FL 33199. Level curves of harmonic functions. Preliminary report.

Let u be harmonic on a neighborhood of the unit ball $B_1(0) \subset R^2$, and let Z be the set where u = 0. If Z crosses the unit circle in exactly two points, then the curvature of Z at a point $x \in B_1(0)$ is bounded in terms of |x|. Some related results and conjectures will be presented. (Received January 09, 2007)