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**Kevin Sonnanburg\*** (ksonnanb@vols.utk.edu). *A Liouville Theorem for Ancient Mean Curvature Flows.*

Under mean curvature flow, each point of a hypersurface moves with velocity equal to its mean curvature vector. An embedded, compact hypersurface must develop a singularity in finite time. Ancient solutions often arise in the study of parabolic blow-ups at singularities.

If we can categorize ancient solutions, we can better understand these blow-up limits. We give a Liouville-type theorem restricting a certain class of ancient, two-dimensional mean curvature flows to just spheres or cylinders. (Received September 25, 2017)