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**Ao Sun\*** ([aosun@mit.edu](mailto:aosun@mit.edu)), 77 Massachusetts Avenue, Department of Mathematics, Cambridge, MA 02139. *Local Entropy and Generic Multiplicity One Singularities of Mean Curvature Flow of Surfaces.*

One of the central topics in mean curvature flow is understanding the singularities. In 1995, Ilmanen conjectured that the first singularity appeared in a smooth mean curvature flow of surfaces must have multiplicity one. Following the theory of generic mean curvature flow developed by Colding-Minicozzi, we prove that a closed singularity with high multiplicity is not generic, in the sense that we may perturb the flow so that this singularity with high multiplicity can never show up. One of the main techniques is the local entropy, which is an extension of the entropy used by Colding-Minicozzi to study the generic mean curvature flow. (Received August 14, 2019)