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Ao Sun* (aosun@mit.edu), 77 Massachusetts Avenue, Cambridge, MA 02139. *Construction and Codimension Bounds of Higher Codimensional Ancient Mean Curvature Flow.*

We construct a new family of higher codimensional ancient mean curvature flows. In particular, this construction provides non-planar ancient curve shortening flows. This construction motivates the study of higher codimensional mean curvature flows from the tangent flow at $-\infty$. In a recent work by Colding-Minicozzi, they show that if the tangent flow of an ancient mean curvature flow at $-\infty$ is a cylinder, then the ancient mean curvature flow has codimension bound 1. Follow the ideas of Colding-Minicozzi, we generalize the codimension bounds to ancient mean curvature flow with much general tangent flow at $-\infty$. This is joint work with Douglas Stryker. (Received August 19, 2019)