# Wedge theorems for ancient mean curvature flows

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We show that so-called "wedge theorems" hold for all properly immersed, not necessarily compact, ancient solutions to the mean curvature flow in $\mathbb{R}^{n+1}$. Such nonlinear parabolic Liouville-type results add to a long story, generalizing recent results for self-translating solitons, which in turn imply the minimal surface case (Hoffman-Meeks, '90) that contains the classical cases of cones (Omori '67) and graphs (Nitsche, '65). As an application we classify the convex hulls of the spacetime tracks of all proper ancient flows, without any of the usual curvature assumptions. The proofs make use of a linear parabolic Omori-Yau maximum principle for (non-compact) ancient flows. This is joint work with F. Chini.