Stability of the area preserving mean curvature flow

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摘要：In this talk, we consider the long-time existence and convergence of the area preserving mean curvature flow of hypersurfaces in space forms under some initial integral pinching conditions. More precisely, we prove that the flow exists for all time and converges exponentially fast to a totally umbilical sphere if the integral of the traceless second fundamental form is sufficiently small. Moreover, we show that starting from a sufficiently large coordinate sphere, the area preserving mean curvature flow exists for all time and converges exponentially to a constant mean curvature surface in asymptotically Schwarzschild spaces. This work is joint with Dr. Yaoting Gui and Pf. Jun Sun.

个人简介：2021年博士毕业于中国科学技术大学，2023年中山大学博士后出站，现为合肥工业大学讲师。