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Long time existence of the symplectic mean curvature flow

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Let (M, \bar{g}) be a Kähler surface with a constant holomorphic sectional curvature $k > 0$, and Σ an immersed symplectic surface in M . Suppose Σ evolves along the mean curvature flow in M . In this paper, we show that the symplectic mean curvature flow exists for long time and converges to a holomorphic curve if the initial surface satisfies $|A|^2 \leq \frac{2}{3}|H|^2 + \frac{1}{2}k$ and $|\cos \alpha| \geq \frac{\sqrt{30}}{6}$ or $|A|^2 \leq \frac{2}{3}|H|^2 + \frac{4}{5}k \cos \alpha$ and $|\cos \alpha| \geq \frac{251}{265}$.

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