1023-58-339 **konrad groh*** (groh@math.uni-hannover.de), Institut fuer Differentialgeometrie, Leibniz Universitaet Hannover, Welfengarten 1, 30167 Hannover, Germany. *Singularities of equivariant lagrangian mean curvature flow.*

A smooth family of immersion $F_t \colon L \to (M,g)$ satisfies the *mean curvature flow equation* if

$$\frac{d}{dt}F = \overrightarrow{H}, \quad F(\cdot,0) = F_0,$$

where $\overrightarrow{H}$ is the mean curvature vector. It is of great interest to understand the singular behavior of this flow. We study the mean curvature flow of *equivariant lagrangian submanifolds* in $\mathbf{C}^n$: Suppose that $z_0 \colon S^1 \to \mathbf{C}\backslash\{0\}$ is a closed immersed curve with $z_0 = u_0 + \imath v_0$, and $G \colon S^{n-1} \to \mathbf{R}^n$ is the standard embedding of the sphere of radius one. Then the equivariant lagrangian submanifold $F_0 \colon S^1 \times S^{n-1} \to \mathbf{C}^n$ is given by $F_0(\phi, x) = (u_0(\phi)G(x), v_0(\phi)G(x))$. Since the mean curvature flow is isotropic, it will be determined by the flow of the corresponding profile curves. We focus on curves which do not contain the origin. We will prove that under natural conditions on z_0 the curves shrink to a point $p_0 \in \mathbf{C}\backslash\{0\}$. This implies that the Lagrangian submanifolds converge to $||p_0||S^{n-1}$. Under further restrictions a type I singularity occurs - a subsequence of the rescaled Lagrangian submanifolds converges smoothly to the flat cylinder. (Received September 07, 2006)