1022-35-109 **Qi S. Zhang***, Math. Dept. UC Riverside, Riverside, CA 92521. *A regularity result for the heat equation with oscillatory, singular potentials.*

We derive some regularity result for the solutions of the heat equation with oscillatory, singular potentials, which serves as a model for the vortex stretching term in fluid dynamics. (Received September 11, 2006)