

Meeting: 1000, Albuquerque, New Mexico, SS 12A, Special Session on Regularity in PDEs and Harmonic Analysis

1000-35-182 **Alexander M. Meadows*** (meadows@math.cornell.edu). *Tornados and continuity for $\Delta u = u^{-\alpha}$ and related equations.* Preliminary report.

We study positive solutions of the equation $\Delta u = f(u)$ on domains of \mathbf{R}^n , where $f(u)$ is like $u^{-\alpha}$ near zero. The main result is interior continuity of solutions when $n = 2$ and $0 < \alpha < 1$. (Received August 24, 2004)