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Steven D. Taliaferro* (stalia@math.tamu.edu), Mathematics Department, Texas A&M University, College Station, TX 77843-3368. *Isolated Singularities of Nonlinear Parabolic Inequalities.*

We study $C^{2,1}$ nonnegative solutions $u(x, t)$ of the nonlinear parabolic inequalities

$$0 \leq u_t - \Delta u \leq u^\lambda$$

in a punctured neighborhood of the origin in $\mathbf{R}^n \times [0, \infty)$, when $n \geq 1$ and $\lambda > 0$.

We show that a necessary and sufficient condition on λ for such solutions u to satisfy an apriori bound near the origin is $\lambda \leq \frac{n+2}{n}$ and in this case the apriori bound on u is

$$u(x, t) = O(t^{-n/2}) \quad \text{as } (x, t) \rightarrow (0, 0), \quad t > 0.$$

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