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C. Y. Chan* (chan@louisiana.edu), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010. *A quenching criterion for a degenerate semilinear parabolic problem due to a concentrated nonlinear source.*

A criterion for the quenching of the solution for a degenerate semilinear parabolic first initial-boundary value problem with a concentrated nonlinear source situated at b is given. The locations of b for global existence of the solution and for the quenching of the solution are given. (Received January 23, 2008)