

L. E. Payne and G. A. Philippin, **On the spatial decay of solutions to a quasi-linear parabolic initial-boundary value problem and their derivatives**, *SIAM J. Math. Anal.*, 32 (2000), no. 2, 291–303.

Abstract

In this paper, we study the spatial decay of the solution of a quasi-linear heat equation in a long cylindrical region if the far end and the lateral surface are held at a zero temperature and a nonzero temperature is applied at the near end. Our result follows from the maximum principle applied to an auxiliary function Φ defined on the solution u and its derivatives.