

**Alinhac, Serge****Blowup of small data solutions for a quasilinear wave equation in two space dimensions.**(English) [Zbl 1080.35043](#)[Ann. Math. \(2\)](#) 149, No. 1, 97-127 (1999).

Summary: For the quasilinear wave equation  $\partial_t^2 u - \Delta u = u_t u_{tt}$ , we analyze the long-time behavior of classical solutions with small (not rotationally invariant) data. We give a complete asymptotic expansion of the lifespan and describe the solution close to the blow-up point. It turns out that this solution is a “blow-up solution of cusp type,” according to the terminology of the author.

**MSC:**[35L70](#) Second-order nonlinear hyperbolic equations[35B05](#) Oscillation, zeros of solutions, mean value theorems, etc. in context of PDEsCited in **2** ReviewsCited in **46** Documents**Keywords:**[Cauchy problem](#); [Hörmander's conjecture](#)**Full Text:** [DOI](#) [arXiv](#) [EuDML](#) [Link](#)