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Yoshino, Masafumi

On the solvability of nonlinear Goursat problems.

Proc. Japan Acad. Ser. A Math. Sci. **57** (1981), *no. 5*, 247–248.

The nonlinear analytic Cauchy-Goursat problem $\varepsilon D^{\beta}u = a(x, D^{\alpha}u)$, $u = O(x^{\beta})$, is studied in the neighborhood of the origin of $\mathbf{C}^d$, where $|\alpha| \leq \beta$, $\alpha \neq \beta$ and ε is a complex constant. A theorem is stated which supplements preceding results by L. Gårding [Acta Math. **114** (1965), 143–158; MR0176221 (31 #496)] and C. Wagschal [J. Math. Pures Appl. (9) **58** (1979), no. 3, 309–337; MR0544256 (82m:35024)]. The assumptions of that theorem are very special when $d \geq 3$.

Reviewed by *Jean Leray*