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Weakened Localization for Quasilinear Parabolic Equations

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The poster is devoted to propagation of solutions' supports of initial-boundary problem with arbitrary boundary regimes $f(t, x)$ (strongly or weakly degenerate or nondegenerate as $t \rightarrow 0$) for a wide class quasilinear parabolic equations with a potential $g(t, x)$. We establish a weakened localization of solutions for an arbitrary $g(t, x)$ which degenerates only on the initial plane. Our approach uses appropriate local integral a priori estimates for solutions in a neighbourhood of the initial plane $t = 0$ and is related to combining ideas and constructions from the method of local energy estimates (this method was developed and used in [1], [2], [3], [4], [5]) and a priori estimates of Saint-Venant's principle type (this second approach was offered by G.A. Iosif'jan and O.A. Oleinik [6]).

The talk is based on a joint project with A. E. Shishkov.

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- [4] R. Kersner, A. Shishkov, *J. Math. Anal. Appl.* **198:3**, (1996), p. 729–750.
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