ON SOME CLASSES OF INVERSE PROBLEMS OF RECOVERING A SOURCE FUNCTION

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In the article we examine the question on solvability, uniqueness, and some qualitative properties of solutions to inverse problems of recovering point sources (the right-hand sides of a special form) in a one-dimensional parabolic equation. The values of a solution at some collection of points are taken as the overdetermination conditions. Examples are exposed that show that the uniqueness fails without additional conditions on the mutual disposition of sources and measurement points.

Key words and phrases: second order parabolic equation, inverse problem, initial-boundary value problem, well-posedness, unconditional solvability, existence, uniqueness.

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