

Observation problems posed for the Klein-Gordon equation

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We study several observation problems posed for the Klein-Gordon equation. These problems are similar to some question of control theory, where one search the initial state of the equation with the help of the later state of the system. We examine the cases, when we know the partial state of the system in two distinct time instants, and we construate the initial functions with the help of Fourier expansions under some suitable conditions.