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Inverse Problems for the Wave Equation: How to Recover a Potential from Boundary Measurements

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The question is here to recover a potential (depending only on the space variable) in a wave equation from boundary measurements of the flux of the solution on a sufficiently large part of the boundary during a sufficiently long time period. The method is here again related to global Carleman estimates which gives a stability result. The same method also gives observability inequalities for wave equations with potentials which are equivalent to exact controllability results for the adjoint problems.