# An inverse problem for the wave equation with one time-dependent partial boundary measurement

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We establish geometrical conditions in order to solve an inverse problem of retrieving a stationary potential for the wave equation with Dirichlet data from a single time-dependent Neumann boundary measurement on a suitable part of the boundary. We prove the uniqueness and the stability results for this problem when a Neumann measurement only located on a part of the boundary satisfying a rotated exit condition. The strategy consist in introducing an angle type dependence in the weight functions used to obtain global Carleman estimates for the wave equation and combination of several of these estimates and then apply it to the inverse problem. Other similar weights variants are discussed.