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Roberto Triggiani* (rt7u@virginia.edu), Mathematics Department, University of Virginia, Charlottesville, VA 22904. *Global uniqueness and stability in an inverse problem for a second order hyperbolic equation with non-homogeneous Neumann boundary term.*

We provide a global uniqueness and stability result in determining the damping coefficient of an inverse hyperbolic problem with non-homogeneous Neumann term, through the measurement of an additional Dirichlet boundary trace over an explicit portion of the boundary and over a close to optimal time. Key ingredients of the proof from past joint work of the author include: (i) sharp and very general Carleman estimates for second order hyperbolic equations; (iii) a correspondingly implied Continuous Observability Inequality; (ii) Sharp/optimal interior and boundary regularity theory of second order hyperbolic equations with Neumann boundary datum. This is joint work with Shitao Liu, Uva. (Received September 14, 2010)