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Ahmet Ozkan Ozer* (oozer@iastate.edu), 403 Carver Hall, Iowa State University, Ames, IA 50011. *Exact Controllability of a Rayleigh beam with a single boundary control.*

We consider the boundary controllability problem for a Rayleigh beam. We obtain exact controllability with a single boundary control in the optimal control time. Our result improves earlier results in the literature which require either additional controllers (e.g. two controls at one end or one control at each ends), or an additional uniqueness assumption. Our approach combines the multiplier method with results from nonharmonic Fourier series due to Haraux and Komornik. (Received September 21, 2010)