

Abstract Submitted  
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**Cutoff-Free Propagation of Torsional Waves Along Solar Magnetic Flux Tubes**<sup>1</sup> SWATI ROUTH, ZDZISLAW MUSIELAK, University of Texas at Arlington, REINER HAMMER, Kiepenheuer-Institut für Sonnenphysik — Solar magnetic flux tubes support three fundamental modes, namely, longitudinal, transverse and torsional tube waves. Previous studies showed that cutoff frequencies exist for both longitudinal and transverse tube waves, however, for torsional tube waves contradictory results regarding the existence of a cutoff frequency were obtained. The main purpose of this paper is to show that the propagation of torsional waves along thin magnetic flux tubes embedded in the solar atmosphere is not affected by any cutoff frequency and that this result is independent of coordinate systems used in the previous studies. Implications of this cutoff-free torsional tube wave propagation on the heating of different parts of the solar atmosphere will also be discussed.

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