

Abstract Submitted
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Elastic Signature of the High-Spin to Low-Spin Transition in Magnesiowüstite¹ CESAR DA SILVA, RENATA WENTZCOVITCH, CEMS and MSI, University of Minnesota, Minneapolis, USA, TAKU TSUCHIYA, Geodynamics Research Center, Ehime University, Matsuyama, Japan — It has been reported that the high to low-spin spin transition in ferrous iron in magnesiowüstite (Mw) under pressure is accompanied by considerable volume reduction and changes in elastic properties. Using an LDA+U method with consistently calculated U, we investigate the elastic signature of this transition. We confirm that there is large contrast in elasticity across this transition. However, this contrast is temperature sensitive. We address the geophysical signature of this phenomenon.

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