

Abstract Submitted
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Varying-G Cosmology with Type Ia Supernovae RUTGER DUNGAN, HARRISON PROSPER, Florida State University — The observation that Type Ia supernovae (SNe Ia) are fainter than expected given their red shifts has led to the conclusion that the expansion of the universe is accelerating. The widely accepted hypothesis is that this acceleration is caused by a cosmological constant or, more generally, some dark energy field that pervades the universe. This hypothesis presents a challenge to physics so severe that one is motivated to explore alternative explanations. We explore whether the data from Type Ia supernovae can be explained with an idea that is almost as old as that of the cosmological constant, namely, that the strength of gravity varies on a cosmic timescale.

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