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Type: **Poster Presentation**

## Probing quantum gravity through strong gravitational lensing

*Tuesday, 4 July 2017 17:10 (1h 50m)*

We report the use of Einstein rings to reveal the quantized and dynamical states of space-time in a region of impressed gravitational field as predicted by the Nexus Paradigm of quantum gravity. This in turn reveals the orbital speeds of objects found therein and the radius of curvature of the quantized space-time. Similarities between the Nexus graviton and the singular isothermal sphere (SIS) in the Cold Dark Matter (CDM) paradigm are highlighted. However unlike the singular isothermal sphere, the Nexus graviton does not contain singularities or divergent integrals. This solves the core cusp problem. In this work, data from a sample of fifteen Einstein rings published on the Cfa-Arizona Space Telescope Lens Survey (CASTLES) website is used to probe the quantized properties of space-time.

**Apply to be considered for a student award (Yes / No)?**

yes

**Level for award (Hons, MSc, PhD, N/A)?**

MSc

**Main supervisor (name and email) and his / her institution**

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**Would you like to submit a short paper for the Conference Proceedings (Yes / No)?**

Yes

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