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Charged Gravastar Model in Noncommutative Geometry under $f(T)$ Gravity

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Abstract. In this talk, I will discuss the properties of charged gravastars in torsion-based $f(T)$ gravity in the presence of noncommutative geometry. We have taken the interior from noncommutative motivated space-time, noting that why, from a physical point of view, such a choice is justified, then we have taken the thin shell as stiff matter and taken three different exterior metrics (Reissner-Nordstrom (R-N), Bardeen and Ayon-Beato-Garcia (ABG) metric) to construct the gravastar model. Also studied the physical properties like proper length, entropy, energy, and EoS for these models, and we have also used Israel junction conditions to study the effective pressure, energy density, and potential of the thin shell. Finally, we comment on the stability of such a thin shell and the deflection angle-caused by such a thin shell, which could, in principle, be tested by future radio telescopes like the Event Horizon Telescope (EHT).