

## **Recovering the fundamental plane of elliptical galaxies in the framework of nonlocal gravity model**

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In this study we recovered fundamental plane (FP) of elliptical galaxies in the framework of nonlocal gravity without using dark matter hypothesis. Also, we investigated the relation between the parameters of the FP equation and the parameters of nonlocal gravity model. We compared theoretical predictions for circular velocity in nonlocal gravity with the corresponding values from a large sample of observed elliptical galaxies. From this sample, we use surface brightnesses, effective radius and velocity dispersion in our investigation. We show that nonlocal modified gravity can reproduce the stellar dynamics in elliptical galaxies and that it fits the observations very well.