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## Testing Modified Gravity theories with marked statistics

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In the last two decades, Modified Gravity (MG) models have been proposed to explain the accelerated expansion of the Universe. However, one of the main difficulties these theories face is that they must reduce to General Relativity (GR) at sufficiently high energy densities, as those found in the solar system. To achieve this, MG usually employs the so-called screening mechanisms: non-linear effects that lead them to GR in the appropriate limits. For this reason, low-energy regions where the screenings do not operate efficiently, such as cosmic voids, are identified as ideal laboratories for testing GR. Hence, the use of marked statistics that up-weight low energy densities are proposed for being implemented with data from future galaxy surveys. In this talk, we show how to construct theoretical templates for such statistics and test their accuracy with the use of N-body simulations.

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