Special Issue

Lorentz Violation in Astroparticles and Gravitational Waves

Message from the Guest Editor

Extensive searches for violations of CPT and Lorentz invariance have been carried out over the past two decades resulting in a considerable compilation of tight constraints on deviations from these fundamental symmetries. The Standard-Model Extension (SME) that provides a comprehensive, effective field theory framework for Lorentz violation has played a pivotal role in these endeavors. The bounds obtained are remarkable and make the Standard Model and General Relativity the theories best tested by experiment. The current issue of the journal entitled "Galaxies" is focused on searches for Lorentz violation in astroparticles as well as gravitational waves that are detected on Earth. There is still room for searches for Lorentz violation in astroparticles to be carried out in the minimal and nonminimal SME, in particular. Furthermore, we intend to stimulate scientific research on the currently hot topic of gravitational waves in the context of Lorentz violation. Authors are encouraged to work in the language of the SME, but it is not mandatory to do so.

Guest Editor

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About the Journal

Message from the Editorial Board

Galaxies provides an advanced forum for studies related to astronomy, astrophysics, and cosmology, including all of their subfields. Different formats, such as specialized research articles, reviews, communications and technical notes are welcomed. Manuscripts containing original and creative research proposals and ideas are especially appreciated.

We encourage scientists to publish their astronomical observations and theoretical results in as much detail as possible. There is no restriction on the paper length and full experimental and methodological details, as applicable, should be provided. All papers will be peer reviewed promptly. On behalf of the distinguished members of the editorial board, I extend my welcome to all researchers working on these subjects to contribute to *Galaxies*.

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