

Special Issue

Astroparticle Physics as Probes of the Symmetries and Asymmetries in the Fundamental Physics

Message from the Guest Editors

We like to think that nature is symmetrically exact, although it has experimentally proven to us that it is usually just approximately symmetrical or even asymmetric. The study of these symmetries and anti-symmetries belongs to the field of fundamental physics, whose objective is to reveal the properties of matter and the nature of space–time at its most fundamental level. The very origin of the universe, its content of matter and antimatter, the true nature of space–time, and clues to theories beyond the Standard Model of particles can lie in the search for a deep understanding of the symmetries and anti-symmetries of nature. Today, astroparticle laboratories are evolving to the next generation, leading to unprecedented opportunities to test fundamental physics; every step of each experiment shows a new path for fundamental studies. In this Special Issue, we call for a thorough overview of the role of astroparticle physics in fundamental physics, probes of fundamental symmetries with astroparticles, and scientific proposals for current and next astroparticle physics experiments in the years to come in the field.

Guest Editors

Dr. Humberto Martínez Huerta

Departamento de Física y Matemáticas, Universidad de Monterrey, Avenida Morones Prieto 4500, San Pedro Garza García 66238, NL, Mexico

Dr. J. Patrick Harding

Los Alamos National Laboratory, Los Alamos, NM 87545, USA

Deadline for manuscript submissions

closed (31 October 2023)



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.2



mdpi.com/si/137503

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)





Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.2



[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)



About the Journal

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

Editor-in-Chief

Prof. Dr. Sergei Odintsov
ICREA, 08010 Barcelona and Institute of Space Sciences (IEEC-CSIC),
C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1
(General Mathematics)