



CP Violation in the Universe

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Message from the Guest Editors

In 1964 the CP violation was first observed in decays of neutral kaons, but not in enough amount to explain the observed BAU, but at least allowed to show that matter and anti-matter are intrinsically different. This CP-violating phenomenon was explained in the context of the Standard Model (SM), including the existence of a third generation of quarks, not seen up to that moment.

As is well known, the Standard Model must be incomplete and extra sources of CP violation must exist to explain BAU after the Big Bang. Therefore, several extensions of the SM have been proposed, and most of them contain additional sources of CP violation. Then, if any of these extensions is correct, the first proof of physics beyond the SM may come from searches of CP violation.

Research articles/review articles on experimental results as well as new phenomenological/theoretical ideas are welcome to be part of this Special Issue.

Keywords

- Standard Model
- Baryon asymmetry of the Universe (BAU)
- Baryogenesis and Leptogenesis
- CP Violations in Meson Physics/Baryon Physics
- Neutrino Physics
- Physics Beyond the Standard Model





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Message from the Editor-in-Chief

The multidisciplinary *Universe* journal is aiming to follow and, hopefully, to lead to the largest extent as possible the ever-self renovating threads which weave mathematical theories with our understanding of the magnificent natural world. On behalf of all the distinguished members of the editorial board, I extend my welcome to this new journal and look forward to hearing from the interested contributors and learning about their valuable research.

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