Special Issue

Nuclear Astrophysics in the Era of High Precision Astronomy

Message from the Guest Editor

In the 21st century the astronomical observations and the astrophysical models have reached unprecedented precision. On the observation side it is enough to mention gamma-ray astronomy, the precise abundance determination of metal poor stars, high resolution measurement of the cosmic microwave background, isotopic abundances in meteorites, or the detection of gravitational waves. While, Astrophysical model benefits from the largely increased computational power. Stellar evolution can now be modelled in great detail. Nuclear astrophysics, the nuclear science of stars, must keep pace with such a fast development. Nuclear reactions play a central role in the life of stars, providing their energy and synthesizing the chemical elements. Often these nuclear reactions are not known with sufficient precision, so nuclear physics represents one of the largest uncertainty in astrophysical models. Studying the astrophysically relevant nuclear reactions is thus highly needed. The aim of this special issue is to collect papers from various subfields of nuclear astrophysics which will show how experimental and theoretical nuclear physics can answer to call of the 21st century astrophysics.

Guest Editor

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closed (31 December 2022)

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About the Journal

Message from the Editor-in-Chief

The multidisciplinary journal *Universe* 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 Advisory and Editorial Boards, I extend my welcome to this journal and look forward to hearing from the interested contributors and learning about their valuable research.

Editor-in-Chief

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