Special Issue

Ultra-High-Energy Cosmic Rays

Message from the Guest Editor

Ultra-high-energy cosmic rays (UHECRs) are particles from the Universe with energies above 1 EeV (1018 eV) and extending up to beyond 100 EeV. Thus such high energy particles are important probes to study the acceleration physics, particle physics, and new physics beyond the standard model. However, how and where those particles are accelerated to such high energies still remains a mystery, ever since they were discovered 60 years ago. Since UHECRs are deflected by the magnetic field during their propagation to Earth, directions of the observed UHECRs is offset from directions of sources, which make it challenging to locate their sources. Decades of experimental and theoretical work have been dedicated to solving this mystery. The world largest UHECR observatories, the Pierre Auger Observatory (PAO) and the Telescope Array (TA) experiments, have been measuring the spectrum, composition and anisotropy of UHECRs for more than a decade, providing us more and more information to uncover the origin and the acceleration mechanism of UHECRs. We are surely in an exciting era of being closer to the answer of the riddle.

Guest Editor

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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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