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H_0 Tension: Observational Status, Theoretical Models, and the Road Ahead

Guest Editor:

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Deadline for manuscript
submissions:

closed (31 July 2021)

Message from the Guest Editor

Dear Colleagues,

The discrepancy in the value of the Hubble parameter H_0 as obtained from Planck Cosmic Microwave Background (CMB)–Baryon Acoustic Oscillation (BAO) data ($H_0 = 67.4 \pm 0.5 \text{ km s}^{-1} \text{ Mpc}^{-1}$) and various independent local measurements ($H_0 = 74.03 \pm 1.42 \text{ km s}^{-1} \text{ Mpc}^{-1}$) has reached a level close to 6σ and constitutes a major issue for modern cosmology, challenging the validity of the standard Λ CDM model. Replacing the Cepheid-based local distance ladder calibration by a Tip of the Red Giant Branch-calibration for Type Ia SNe has led to an intermediate value of H_0 , which is about 1.2σ away from the Planck/CMB value and 1.7σ , 1.3σ , 1.2σ from SH0ES, H0LiCOW, and Megamaser Cosmology Project, respectively.

We invite short or longer contributions from the leaders of this research subject on both the observational and the theoretical aspects. For more information, please visit: mdpi.com/si/50114.

Prof. Dr. Leandros Perivolaropoulos

Guest Editor



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Special Issue



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Editor-in-Chief

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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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