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Gravitational Waves as a New Probe for Astronomy and Fundamental Physics

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Message from the Collection Editor

Pioneering detection of GRAVITATIONAL WAVES (GW) from tens of merging stellar mass objects by the LIGO and Virgo observatories has opened up a new era in understanding the universe and provided a new far-reaching tool for exploring matter and cosmos in the most extreme conditions. So far, these observations have brought surprises, such as $\sim 2.5M_{\odot} < M < \sim 5M_{\odot}$, found through their GW are not predicted by theories and are not observed in electromagnetic bands, which proves that more theoretical and observational investigations are necessary.

This special issue's aim is to gather a collection of contributions—theoretical, observational or methodology, original research or review—which highlight the current state-of-the-art research in observation and modelling of gravitational waves sources. Investigation of accompanying electromagnetic and particle emissions is specially appreciated.



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Topical Collection



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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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