



Editorial: White Dwarfs in the Age of the Great Collaborations

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Editorial on the Research Topic

White Dwarfs in the Age of the Great Collaborations

The white dwarf stars have gained unprecedented interest in the recent years, largely due to theoretical developments in the modeling of their formation and evolution, but mainly due to the advent of large scientific collaborations, in some cases involving observations from the ground, and in other cases including space telescopes. As a matter of fact, photometric and spectroscopic surveys such as the Sloan Digital Sky Survey (SDSS), the Extremely Low Mass (ELM) Survey, the astrometric Gaia mission and the Hubble Space Telescope, have promoted a major revolution in the research of white dwarfs. In the area of stellar variability, the study of white dwarf pulsators in all their flavors has been greatly boosted from space telescopes, such as the already completed Kepler/K2 mission, the ongoing TESS and Cheops missions, and the future PLATO mission, which will be operational in the upcoming years. Space missions have the capability of observing variable white dwarfs during timescales of months in a continuous fashion, allowing the finding of new frequencies of oscillation of already known pulsating white dwarfs, and the discovery of new pulsating objects of this kind.

This brief Research Topic contains articles written by leading researchers in the areas of white dwarf atmospheres, theoretical and observational asteroseismological methods of white dwarfs, applications of white dwarfs as new-physics laboratories, and the particular study of accreting pulsating white dwarfs. We are satisfied with the topics covered, and we are grateful to the authors for their valuable contributions. We hope that these articles will be of great use to researchers in these areas, as well as to researchers in other areas of astrophysics who wish to acquire a brief update on the state-of-the-art in connection with the origin, evolution, internal structure, properties of atmospheres, and gravity-mode pulsations of white dwarfs.

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