



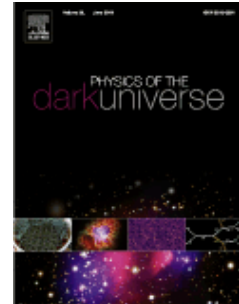
# PHYSICS OF THE DARK UNIVERSE

Frontiers in Particle Astrophysics and Cosmology

## AUTHOR INFORMATION PACK

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### DESCRIPTION

*Physics of the Dark Universe* is an innovative online-only journal that offers rapid publication of peer-reviewed, original research articles considered of high scientific impact.

The journal is focused on the understanding of Dark Matter, Dark Energy, Early Universe, gravitational waves and neutrinos, covering all theoretical, experimental and phenomenological aspects.

*Physics of the Dark Universe* encourages the submission of articles on the following subjects in this field:

**Dark Matter:** Nature of particle Dark Matter Direct searches Indirect searches Collider searches, including for example the Large Hadron Collider New and existing models (e.g. SUSY, extra dimensions, axions, etc) Low mass WIMP searches

**Dark Energy:** Observations and experimental results Forecast and design of new experiments Models and theoretical properties of vacuum energy, quintessence, modified gravity, and in general of Dark Energy, cosmic acceleration and its alternative explanations

**Early Universe:** Models and observational tests of Inflation

**Dark Messengers:** Gravitational waves in cosmology Cosmic neutrino background

In addition to submission of scientific papers in the usual formats, we encourage the submission of innovative articles, in the following forms:

Design Studies and Concept papers for new experiments or describing ideas for new experiments. In particular, experimental set up of the next generation of very large Dark Matter direct and indirect detectors, new underground laboratories for the study of Dark Matter, and new ground based or space based experiments on Dark Energy are particularly welcome. These articles can be longer than regular articles, describing the experiment while focusing on its scientific goals. Software Description and Manuals can be published, if the software is proved to have scientific interest in the understanding of Dark Matter and Dark Energy. The paper can be enriched with (part of) the code itself, or the software and code can be separately published in the Open Access journal SoftwareX (<http://www.journals.elsevier.com/softwarex/>), which hosts software in a curated GitHub Repository.

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#### **Types of articles**

In addition to standard scientific articles, *Physics of the Dark Universe* will welcome innovative articles, among which:

#### *Methodological papers*

Methodological papers are summaries of projects or theoretical issues that reflect the interests, experience and expertise of the author. These papers generally serve the purpose of providing in-depth discussion of a topic that the writer has a strong position on, usually corroborated by a practical proposal on how to address this issue. Descriptions of new experiments, new software or new theoretical models that can help to shed light on the understanding of Dark Matter and Dark Energy are welcome.

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The software will be properly versioned, together with the documentation. A new submission can only be accepted if the modifications to the software are substantial for the scientific achievement of the program.

The articles should provide sufficient information to the reader in order to understand how to install the software, how to configure it and how to use it. The scientific interest in using this program should be clear, as well as its application.

The computer program described must contribute to the understanding of Dark Matter and Dark Energy, either for analysis, technical or statistical approaches.

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## PREPARATION

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[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

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[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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