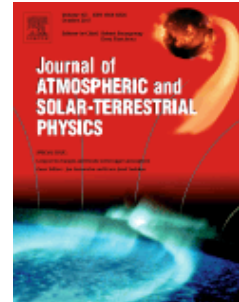




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ISSN: 1364-6826

DESCRIPTION

The Journal of Atmospheric and Solar-Terrestrial Physics (JASTP) is an international journal concerned with the inter-disciplinary science of the Earth's atmospheric and space environment, especially the highly varied and highly variable physical phenomena that occur in this natural laboratory and the processes that couple them.

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Cancer Research UK, 1975. Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> (accessed 13 March 2003).

Reference to a dataset:

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

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