

Search for and study of photometric variability in magnetic white dwarfs

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Abstract

© 2017, Pleiades Publishing, Ltd. We report the results of photometric observations of a number of magnetic white dwarfs in order to search for photometric variability in these stars. These V-band observations revealed significant variability in the classical highly magnetized white dwarf GRW+70°8247 with a likely period from several days to several dozen days and a half-amplitude of about 0.04. Our observations also revealed the variability of the well-known white dwarf GD229. The half amplitude of its photometric variability is equal to about 0.005, and the likely period of this degenerate star lies in the 10–20 day interval. This variability is most likely due to the rotation of the stars considered. We also discuss the peculiarities of the photometric variability in a number of other white dwarfs. We present the updated “magnetic field–rotation period” diagram for the white dwarfs.

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Keywords

planetary systems, stars: magnetic field, white dwarfs

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