

Magnetic field variations of the white dwarf PG1658+441

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Abstract. Zeeman polarimetric observations of the magnetic white dwarf PG1658+441 are presented. The mean longitudinal magnetic field is 668 ± 16 kG. Geometrical parameters of the magnetic dipole model are restricted. The angle between the magnetic axis and the line of sight is 44 ± 9 degrees. A possibility of complete determination of all dipole parameters on the basis of observations of the transverse magnetic field in the spectral line of π -components is discussed. The results of the first such observations are presented. The observations of 1991 show a confident variability of the longitudinal magnetic field on time scales of about 30 minutes and a period of 2.5 hours. Later observations did not show any variability of the magnetic field. This behaviour is discussed in a model of a few magnetic spots at different latitudes on the white dwarf surface.