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We describe the hydrogen line polarimeter for measurements of stellar longitudinal magnetic field, attached to the 6-m optical telescope of Special Astrophysical Observatory (Russia). We used the instrument for a high time resolution search of a periodic rapid magnetic variability in γ Equ. We obtained a 3-hour series of 1720 measurements of B_e with the average time resolution 6.6 seconds. The power spectrum analysis shows the existence of a distinct period $P_1 = 6.696$ min. This period differs from the well-known photometric period of rapid variability $P_{phot} = 12.44$ min.
