

On a Possible Interpretation of Short and Long Periodic Variations of the Effective Magnetic Field Strength of Magnetic Stars by Gyroscopic Motions

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Long time observations give evidence of secular variations of the effective magnetic fields for some Ap-stars. These secular variations are interpreted by a precessional action of the star. The precession of the rotationally flattened star is assumed to be caused by the orbital motion of a satellite where the axis of the orbit is inclined to the axis of rotation of the star.

In consequence of the rhythmic action of the torque moment the star carries out nutations which in the case of resonance between orbital motion and rotation of the star might achieve appreciable amplitudes.

Thus, short time and long time variations can be reduced to the same physical origin.

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Soobchsheniya Specialnoj Astrofizicheskoy Observatorii, No.32, p.32

Remark of the author in 2011:

The documentation of the conference is contained in a booklet in form of abstracts of the lectures, which are reproduced here faithfully word-for-word.

The lecture at the conference was given by Dr. Ewald Gerth (in Russian).

The first publication was four years later in *Astronomische Nachrichten*:

<http://adsabs.harvard.edu/full/1984AN....305..329G>

or

www.ewald-gerth.de/61.pdf