

SOLAR DYNAMO , A DYNAMIC MODEL OF SUN

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In my book “modified Hawking field” I give the solution for solar rotation by an electrodynamic way. Only 46 functions and 4 parameters can describe the core of Sun , rotation , temperature , currents and magnetic fields of core and surface of Sun. Basic analysis exist in my paper “electromagnetic interaction of gravity” GSJ 2006 . First 46 functions have the appropriate parameters. The analysis is in agreement with standard model of gravity at supermassive bodies like stars.

The solution is in pages 55-56.

It is predicted Sun's intensity of current 2×10^7 .Ampere and by dimensional application with some approximation arises magnetic field 70×10^{-4} .Tesla = 70 Gauss (it depends on shape of currents) , pages 55-56. Hypothesis of Alfvén-Carlqvist(1967) also Stepanov-Zaitsev(Plasma theory). 70 Gauss is 14 times more than the magnetic field of Sun's surface .The analogy is close to solar rotation , so we have the hope to predict the state of cores of stars .

If we consider that current is a cycle with radius the radius of core : $1/5$ of radius of Sun then the intensity of magnetic field is 46 Gauss .At surface that intensity will be 10 times less or 4.6 Gauss.

Number 10 is the analogy of solar rotation between core and surface .Period is inversely proportional of intensity of magnetic field(force Laplace could be centripetal force).