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Brief note

REPORT ON PLASMA BEHAVIOR OVER THE INTERSTELLAR MEDIUM

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The authors in compliance with investigations (Ghosh, 1997; 2001; Ghosh and Pop, 2002) prove that resonance exhibits a thermonuclear fusion reaction over the Sun in the presence of an applied inclined magnetic field when a forced oscillation is taken into account. The interstellar space is a great deal of controversy when a forced oscillation is applied to the Sun.

Key words: Hot Big Bang, forced oscillation, resonance, excitation frequency, shock.

1. Physical interpretation

A thermonuclear fusion reaction of the Sun under the influence of an applied inclined magnetic field has received wide attention to the interstellar space implying thereby a continuous glowing of ionized hydrogen due to large amplitude exerts its influence on resonant response so that a large velocity fluctuation is observed. The intensification of α-effect is associated with a large amplitude of the response of velocity field at resonance. The growing magnetic field can, at an appropriate level, release the constraint at the resonant level, which is the proliferation of a supercritical state with reference to strong ionizing radiation in the interstellar medium. Since irregular fluctuation builds up rapidly with a driving force the controlled thermonuclear fusion reaction of the Sun is an exploitation of the universe where the stars and planets are influenced by the external periodic driving force. An irregular change of galaxies is enhanced by the excitation frequency to release the constraint at resonant level and the trigger large velocity fluctuation implies to a chain reaction so that the hydrogen bomb blasting on the surface of the Sun is reliably exhibited. It is noticed that a hydrogen bomb blasting on the surface of the Sun was detected by the world astronomer on 29th October, 2003. Although a strong shock appears due to a stagnation over the interstellar medium and the mechanical resonance experiences thermonuclear flashes over the interstellar medium. Since the controlled thermonuclear fusion reaction lies under the influence of a pressure gradient there is a possibility of a blasting on the surface of the Earth at the resonant level. This implicates the situation of a Hot Big Bang in the universe under the influence of applied inclined magnetic field subject to a forced oscillation. The universe is growing extensively and it seems to be extended up to infinity due to large amplitude. Since irregular fluctuation builds up rapidly, a family of stars around the Sun consists of an irregular space-time interval and the distance between the stars becomes larger and larger, which is an extension of space age. The stars go far away from the interstellar medium due to an irregular change of galaxies. Obviously, the interstellar medium responds over the resonant level with strong ionizing radiation. The interstellar space is a great deal of controversy due to a strong shock that leads to the destruction of stars caused by a thermonuclear fusion reaction experiencing a blasting with *X*-ray emission. It is important to note that the light wave is transmitted from the Sun in the form of a radio wave as soon as the thermonuclear fusion reaction starts. A synchronized electromagnetic wave (*X*-ray photon) is emitted from the Sun. The radiation level in the upper atmosphere rises up continuously with the growth of a magnetic field at the resonant level. This situation indicates that the thermonuclear fusion reaction of the Sun affects the formation of galaxies

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and oceanic circulations. This discussion corresponds to the theory of an MHD rotating fluid in the presence of an inclined magnetic field (See Ghosh, 1997; 2001 and Ghosh and Pop, 2002).

A thermonuclear fusion reaction of the Sun exerts its influence of excitation frequency when a forced oscillation is considered. Ghosh (1997; 2001) studied the resonant condition $G^2 = \left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$ subject to $\omega > 1/2\left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$ when $\nabla \cdot J \neq 0$. On the other hand, Ghosh and Pop (2002) have investigated $G^2 = \left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$ which acts as a restoring force for low frequency of oscillation when $\nabla \cdot J \neq 0$.

The resonant condition $G^2 = \left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$ (see Ghosh, 1997; 2001 and Ghosh and Pop, 2002) can be obtained from $G^4 = \left(16K^4 - \mathrm{M}^4 \sin^4\theta - 4\omega^2\right) >< 0$ when $\omega T = 0$ (See condition (2b) in Ghosh, 2001) and the behavior therefore depends on whether the excitation frequency ω is greater or less than $1/2\left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$ i) If $\omega < 1/2\left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$, then resonance does not occur for low frequency of oscillation ii) If $\omega > 1/2\left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$, then resonance occurs for high frequency of oscillation. The condition (ii) is valid for high ionizing radiation in pursuance of large velocity fluctuations when a forced oscillation is taken into account. Moffatt (1978) has introduced the helicity generation of a wave due to the Lorentz force. He described the helical structure of waves influenced by the Lorentz force with reference to a resonant level when $\omega > 2K^2$. This representation is justified when the MHD flow is influenced by a transverse magnetic field $\left(\theta = 0^0\right)$. In this situation, the interplay of the hydromagnetic force and the Coriolis force [see the condition $G^2 = \left(16K^4 - \mathrm{M}^4 \sin^4\theta\right)^{1/2}$] acts as a dynamo for low frequency of oscillation when the hydromagnetic force and the Coriolis force are comparable in magnitude (see Ghosh and Pop, 2002). Therefore, the dynamo mechanism does not hold true at the resonant level. Hence, Interstellar medium is a turbulent model due to large velocity fluctuation at the resonant level. The trigger large velocity fluctuations at the resonant level become important to the study of interstellar medium with regard to strong ionizing radiation. In the presence of black body radiation, the universe is hanging with a series of black holes. The black hole is created by an irregular change of galaxies; the growth of a magnetic field is responsible for creating a black hole with *X*-ray emission and ultraviolet radiation. Eventually, the thermonuclear fusion reaction of the Sun leads to a Hot Big Bang model in the universe with regard to *X*-emission and ultraviolet radiation.

It is stated that the thermonuclear fusion reaction of the Sun leads to a synchronized electromagnetic wave (*X*-ray Photon) to receive radio signal from the Sun via a high frequency Earth observation satellite. Since ionizing intensity plays an important role in the atmosphere it seems to be dangerous to put a satellite in the parking zone. It is noticed that the television media and radio communication play an important role in communicating the radio frequency transmission line via Earth observation satellite to receive radio signal from the Sun at the resonant level.

Nomenclature

- J – current density vector
- K^2 – rotation parameter which is the reciprocal of the Ekman number
- M^2 – Hartmann number
- θ – angle of inclination of the applied magnetic field with the positive direction of the axis of rotation
- ω – excitation frequency
- ωT – angular frequency of oscillation

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