TORTION INFLUENCE ON THE MAGNETIC FIELD OF ROTATING NEUTRON STARS

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ABSTRACT. Using the axisymmetric tortion tensor given by J.Nitsh in U_4 gravitational gauge theory. Applying G.S.Yang and L.F.Luo's magnetic field model of neutron stars, i.e. magnetic field is originated from long-arranged neutron spin. Precession of spin coupled with tortion has been studied,indicating an influence on the magnetic field. The results show that the initial magnetic filed B made of long-arranged spin magnetic moment is at an angle of α with rotating axis, if $|\frac{\pi}{2} - \alpha| > 0.1$ radians, B makes a so small angle to the rotating axis at time 10^8 sec. that no pulses could be radiated from the neutron stars. Only when $|\frac{\pi}{2} - \alpha| < 0.1$ radians, the pulse radiation could be done. Based on the assumption that the orientation of the initial magnetic fields is isotropic,we can get then that only about ten percent of the rotating neutron stars radiate pulses.

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