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Saturn Exhibits Spin-Induced Magnetism

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Abstract. Planetary orbital theory tells us that if an object at the Earth's surface possesses a horizontal speed of 8km/sec, it should be weightless. It therefore follows that if we spin a disc to an angular velocity such that large amounts of its mass possess horizontal speeds in excess of 8km/sec, that disc should levitate. There is as yet no experimental evidence to suggest that centrifugal force in any way undermines the force of gravity on a free falling spinning object that is undergoing only vertical motion as a whole. The absence of spin based levitation may be explained by the rotationally elastic sponge effect of the electron-positron sea which absorbs all large scale vorticity.

The corollary of this is that if large scale vorticity is absorbed into the fine-grain of the electron-positron sea, then we should expect this effect to manifest itself as a magnetic field. In looking for evidence that large scale spinning objects generate a magnetic field we turn our attention to the planet Saturn. Saturn's magnetic axis, its rotation axis and the rotation axis of its rings all coincide exactly. Even if we don't find such a perfect alignment with the other planets, the case of Saturn alone should leave us in no doubt that planetary magnetic fields are primarily caused by the rotation of the planet.

Gyroscopes

I. Gyroscopes can defy gravity providing that they are on a pivot. This gravity defying effect can be attributed to a torque that is caused by the Coriolis force. See ‘Gravitational induction and the Gyroscopic Force’ at,

http://www.wbabin.net/science/tombe5.pdf

As soon as we remove the pivot from a gyroscope, it will fall freely to the ground like any other object, and its spin will do absolutely nothing to stall the fall.

There is no experimental evidence to suggest that spin will in anyway undermine the force of gravity on a free falling object. Yet according to classical orbital theory it should. A satellite orbits the Earth with a tangential speed appropriate to its height above the ground. This appropriate speed gets less as the satellite goes higher. At the surface of the Earth, the horizontal speed needed to make an object weightless is 8km/sec. The direction of this speed doesn’t matter so long as it is horizontal. So if we spin a disc to a high enough angular speed such as to give a horizontal speed in excess of 8km/sec to the larger part of its mass, then that disc should levitate [1].

If that doesn’t happen then we need to enquire as to why not.

The Keplerian Rotationally Elastic Sponge

II. It has been discussed in earlier articles how the electron-positron sea should act as a rotationally elastic sponge that will soak up large scale vorticity. It was further discussed in ‘Turbulence, Vorticity and the Coriolis Force’ at,

http://www.wbabin.net/science/tombe30.pdf

how this absorption may not always be perfect especially as we move down into the atomic and molecular scale. The particles of Saturn’s rings with their differential orbital speeds are believed to conform exactly to Kepler’s laws and so at that scale the absorption is probably near enough

to total. We have not however got close enough as of yet to Saturn's rings to totally rule out the action of tangential (rotational) forces such as the Coriolis force.

The Barnett Effect

III. In ferromagnetic materials, in which the concentration of aether vortices is higher than in any other materials, a small but definite magnetic field was indeed detected in 1915 by S. J. Barnett. Barnett detected this effect when he spun ferromagnetic materials to angular speeds of around 3,000rpm [2].

This of course is the corollary of the rotationally elastic sponge. If the electron-positron sea absorbs large scale vorticity, then the vorticity will become manifest as fine-grain vorticity in the form of a magnetic field.

The planet Saturn is the perfect example of this effect. Saturn and its rings both rotate on an axis which is exactly coincident with its magnetic field axis. Saturn is a liquid planet which is large enough and spins fast enough to prove the point.

Magnetic Reversals

IV. The magnetic fields of the other planets are not so exactly aligned with the rotational axes although they are usually quite close. The Earth's magnetic field, although only at a relatively small inclination from its rotational axis, has a polarity which is totally opposite to that of Saturn. On Saturn, a compass needle would point to the south. In addition to this, the Earth's magnetic field wanders and is even known to have performed numerous reversals over the ages.

Matters such as these have never been satisfactorily explained. The wandering magnetic poles and magnetic reversals suggest some kind of liquid activity deeper inside the planet. We could be dealing with differential rotation, ferromagnetism or both. Until such times as we can get a closer look inside the centre of the Earth, we will be left guessing.

Flying Saucers and Prodigious Angular Velocities

V. Although spin based levitation has been ruled out due to the rotationally elastic sponge effect of the electron-positron sea, the induced magnetic field itself may theoretically produce levitation.

However, even the strongest ferromagnets known will only levitate above another ferromagnet. Even so, the interaction between all large objects involves centrifugal repulsion at the shear lines where the gravitational field lines spread outwards from each other. See ‘Aether causes anti-Friction in the Planetary Orbits’ at,

http://www.wbabin.net/science/tombe21.pdf

There should therefore be some prodigious angular speed at which the electron-positron dipoles are induced to spin fast enough at the shear lines to cause levitation.

The Barnett effect occurs at 3,000rpm and only results in a very weak magnetic field. To obtain spin induced levitation, we would need to create angular speeds in a ferromagnetic material that are high enough to induce a magnetic field many orders of magnitude higher that the strongest known ferromagnets.

References

[1] This effect can be maximized by spinning the disc with its rotation axis perpendicular to the ground.

[2] Barnett S. J., *"Magnetization by Rotation"* Physical Review 6/4 (1915) 239 - 270