Press Release

THEORY OF DYNAMIC INTERACTIONS

NEW SCIENTIFIC AND TECHNOLOGICAL ADVANCES

USE OF THIS THEORY IS PROPOSED ON THE INTERPRETATION OF RELATIVITY OF MOTION, BUT ALSO ITS APPLICATION IS SUGGESTED IN THE DESIGN OF NUCLEAR FUSION REACTORS OR ON THE INTERPRETATION OF ATMOSPHERIC PHENOMENA AS TORNADOES.

Dr. Barceló's papers cover in depth his "Theory of Dynamic Interactions" and its scientific and technological applications.

Three Specialized science publications, have published noteworthy papers, authored by Dr. Gabriel Barceló Rico-Avello and are available at these journals:

Journal
World Journal of Nuclear Science and Technology (WJNST)
Vol.4 No.4, October 2014

Paper Title ***DYNAMIC INTERACTION CONFINEMENT***

http://www.scirp.org/journal/PaperInformation.aspx?paperID=51026&
http://dx.doi.org/10.4236/wjnst.2014.44031

It is an interesting article on nuclear fusion, trying to explain an unexplained anomaly observed in the plasma circular movement of Tokamak nuclear reactors, under the assumptions of the Theory of Dynamic Interactions (TDI), developed by the author and not yet proved in the microscopic coupling processes. The initials sections are a clear short review of the current methods and their difficulties for achieving the nuclear fusion developed up to now.

The importance of developing new technologies to obtain energy by means of nuclear fusion procedures is beyond question. There are several different, technically possible

models for doing this, though to date none of these has been able to attain an industrial reactor with an end performance greater than unity. We still find ourselves at an initial phase, after many years, as a result of having failed as yet to come up with a commercially productive machine.

Nuclear fusion research has defined a Tokamak prototype reactor based on a fluid conductor, isolated materially in a physical container and confined by means of magnetic fields. In this fluid-plasma, which interacts with magnetic fields, fusion reactions are caused that release energy, while at the same time a quantity of movement and angular momentum is moved or “rotated” and transported.

However, turbulence is caused in these magnetic confinement fusion processes that reduces system efficiency and prevents the obtaining of sufficient net energy from the nuclear reactions.

The paper aims to propose new dynamic hypotheses to enhance our understanding of the behaviour of the plasma in the reactor. In doing so, the author proposes a thorough review of classical dynamics. After over thirty years studying rotational dynamics, the author proposes a new theory of dynamic interactions to better interpret nature in rotation. This new theory has been tested experimentally returning positive results, as ratified by third independent parties.

The author suggests that these new dynamic hypotheses, which we hold applicable to particle systems accelerated by rotation, be used in the interpretation and design of fusion reactors. This proposal could, in addition to magnetic confinement, achieve confinement by simultaneous and compatible dynamic interaction. Accordingly, the author is of the opinion that it would be possible to get better performance and results in the design of fusion reactors by way of simultaneous magnetic and dynamic interaction confinement.

The paper introduces a radical new physical hypothesis generalizing equation, which is proved experimentally by the author for macroscopic bodies in the specific physical process of simultaneous non-coaxial rotation coupling with translation processes in the microscopic physical state. It is assumed by the author that there must be also a similar macroscopic behaviour when a particle has an internal spin which is assimilated to an initial rotation state.

The author supports his hypothesis in the observed plasma spontaneous rotation phenomenon, which is not totally yet explained by the complex gyrokinetic theory.

Journal of Modern Physics (JMP)

JMP: Vol.5 No.17, November 2014

Paper Title
ON MOTION. ITS RELATIVITY AND THE EQUIVALENCE PRINCIPLE

http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=51422#.VHB0jzSG_To
http://dx.doi.org/10.4236/jmp.2014.517180

In this paper, the author tried to analyze the physical phenomenon of a rigid body subjected to multiple, non-coaxial rotations and deduce its laws of behaviour as well as the mathematical expression.

The Equivalence Principle put forward by Albert Einstein is currently undergoing comprehensive revision to determine its degree of accuracy. Notwithstanding, this principle refers to a very specific circumstance, as is free-fall, thus in opinion of the author, it cannot be generalised to any other movement in space.

This paper refers to the dynamic hypotheses of moving rigid bodies and a particular, structured theory that would establish how such bodies behave when subject to different actions that oblige them to make successive, non-coaxial spins. With respect to bodies subject to acceleration by rotation, we understand that there are indications to identify the prior dynamic state of the moving object and that examples of a violation of the aforementioned Equivalence Principle can be deduced thereof.

Based on the findings of this paper and the Theory of Dynamic Interactions put forward herein, the author suggests that an observer can identify the prior situation of absolute rest or absolute non-rotation of a body, thus leading to the conclusion that movement does not necessarily have to be a relative concept. The foregoing leads us to propose that the Equivalence Principle is fully valid for the situation put forward by Albert Einstein, but cannot be generalised to any dynamic situation.

Journal
Atmospheric and Climate Sciences (ACS)
ACS: Vol.4 No.5, December 2014

Paper Title

DYNAMIC INTERACTIONS IN THE ATMOSPHERE

http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=51584#.VHB4YTSG_To
http://dx.doi.org/10.4236/acs.2014.45073

Even today, with the great progress that has been made in the scientific, technological and computational fields, we are still stunned by the devastating effects brought about by atmospheric phenomena. This paper aims to propose new hypotheses in the field of dynamics to enhance our understanding of the behaviour of atmospheric disturbances caused by rotating winds.

The author believes that the criteria of classical dynamics that are applied to vortex systems in the atmosphere should be rigorously reviewed. The author propose to establish new hypotheses in the field of dynamics, in order to better interpret rotation in nature. These hypotheses have been structured into a new theory that has been tested experimentally by third parties, with positive results.

The author proposes to use the Theory of Dynamic Interactions (TDI) to interpret the behaviour of systems undergoing successive rotations around different axes - which we will refer to as non-coaxial rotations. The author hold that this theory applies to air masses and groups of particles in suspension that are accelerated by rotations. Accordingly, it should be used to interpret the behaviour of tornadoes, cyclones and hurricanes.

This proposal could enhance our understanding of these atmospheric phenomena and improve predictions about them.

Full documentation about this theory please visit:

http://www.advanceddynamics.net/
http://www.dinamicafundacion.com/

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