The Theory of Spin

## The Theory of Spin

in planets and atoms



By

### Keith Dixon-Roche

with a little help from

Isaac Newton

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Published by CalQlata info@CalQlata.com

First published December 2019

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## Preface

Over three-hundred years ago; together with the help of Johannes Kepler & Galileo Galilei, Isaac Newton derived '*Principia*'; *the* definitive mathematical theory of universal orbits.

But it's more important than that: It is the origin for the story of our universe. However, it was missing one critical feature; *spin*. The purpose of this book is to fill this gap and complete Newton's story.

Together, orbits and spin provide us with the only true answer to '*life, the universe and everything*'; energy.

We can't blame Newton for omitting spin from his work, as it would have been impossible with the information and facilities available to him. It is a pity, however, that nobody since has taken the time to resolve it, because if they had, we would not now be deluged with such nonsense as 'global warming' and ' $CO_2$  pollution'.

These two theories (orbits and spin) not only tell us everything we need to know about our universe (from the atom to the Big-Bang), but also where we can find limitless clean energy. For example; one metre of the earth's crust contains enough clean energy for the human race for well over 1E+10 years, and it is free!

The distribution of inefficient and dirty energy sources has been the focus for politicians and industrialists to make their fortunes and impose their control over you and me. So, I decided that it was about time Newton's heroic work was completed, making energy available universally; and here it is:

Spin Theory is the mathematics that describe the energy driving angular motion in all matter, and it is induced by Newton's orbits.

Because it is now possible to define the Milky-Way's force-centre, I have given it the name 'Hades' for easier reference.

Keith Dixon-Roche 2019

#### The Theory of Spin



# **1** Introduction

Spin is the angular motion of a body about an axis passing through its centre of mass. Its energy is generated by orbits. This is a fundamental law of nature.

There are three mechanisms generating component energies that drive spin in all satellites.

These are described in Fig 1, in which the satellite is a planet, its forcecentre is a star and its sub-satellite is a moon:

 $\mathbf{E}_0$  is the spin energy induced in the satellite by the potential energy between it and its force-centre.

 ${\bf E}_1$  is the spin energy induced in the satellite by the angular spin energy in its force-centre.

**E**<sub>3</sub> is the spin energy induced in the satellite by the kinetic energy of is sub-satellite(s).

Total spin energy in a satellite is the sum of these component energies.

Differential spin rates are induced in a satellite's core and its mantle because potential energy acts at a satellite's core, and kinetic energy acts throughout its mass. This differential creates internal frictional heat.

The heat energy induced by spin builds up over time. Once it matches the satellite's radiated heat energy, the satellite's temperature will stabilise.

If the power (energy per unit time) generated by a satellite's [mass] population is sufficient, the satellite's crust will melt. This is what creates gas planets. Stars are gas planets, but with sufficient satellite population to achieve the temperature needed to create neutrons and therefore generate fissionable energy.

The reason spin is so important to our lives is that it generates the energy that enables life to exist. If there were no spin, stars and planets would be cold and dark, and there would be no neutrons, so no energy would be stored for the next *'Big-Bang'*; i.e. no universal period.

#### **Planetary Spin**

The kinetic energy in planets and stars is induced during a '*Big-Bang*' event. The difference between planetary kinetic (+ve) and potential (-ve) energy is responsible for generating angular motion in all celestial bodies. Whilst space remains empty, the orbits generated by celestial potential and kinetic energies will remain constant between '*Big-Bangs*' (perpetual motion).

#### Atomic spin

All satellites that orbit in circular paths around their force-centres, such as electrons and man-made satellites, *must* provide their own kinetic energy. The potential energy between a force-centre and a satellite in such an orbit is always twice the satellite's kinetic energy. The spin energy generated by a satellite is distributed between itself and its force-centre according to respective polar moment of inertia.

## 1.1 Goodricke & Algol

In 1784, John Goodricke discovered the [supposed] binary nature of the star originally named Algol. As one of the binary stars passed in front of the other, their combined brightness dimmed, revealing two important facts:

1) One of the stars was bright (hot) and the other was dark (cold)

2) Only the bright star was a force-centre for an orbital system

The heat generated by the *bright* star is due to its dedicated satellite population. The other darker star (or large planet) is actually in orbit around the bright-star but has no satellites of its own. In which case, the dark partner can generate no internal heat.

Once a star (force-centre) has acquired its satellites, it can trap a twin but it will not share its satellites.

This discovery also reinforces the fact that stars generate their own internal heat from their satellite population and the proton-electron pair behaviour in atoms.

## 1.2 Chicken & Egg

Which came first; spin or orbit?

What you see in most films and documentaries is that the sun starts spinning and the planets follow it around. This is of course 'back-to-front'.

In order to generate spin, you need an appropriate energy. Spin theory teaches us that if a sun, planet or moon sat alone in space it would not spin.

Spin was first induced in our sun by the rotational energy in its forcecentre (Hades;  $\approx$ 1E-15 radians per second), and it would have continued to spin at this rate had it not acquired satellites (planets) of its own. However, our sun actually rotates much faster than this; >2.865E-06 radians per second.

If angular kinetic energy in a force-centre induces orbital kinetic energy in its satellites, this transfer of energy would slow down the force-centre's rotation, which is obviously not the case. I.e. kinetic energy in planets must induce rotational kinetic energy in their star.

Therefore, our planets must have been orbiting long before our sun achieved rotation anywhere near its current rate.

The same argument applies to a spiral galaxy. Our sun got its initial spin from the spin energy in Hades, but Hades has no force-centre. Therefore, all of Hades's spin must have been induced by its orbiting satellites.

So, orbits came first!