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Three-Dimensional Spinning of Macro Bodies (Fragment of Fragments)

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Abstract: *In this paper in accordance with pseudo-Heracletean dynamics on double surface three-dimensional spinning is proposed as an explanation for the practically unit spin g-factor of ordinary physical bodies.*

Keywords: *Single- and three-dimensional spinning, pseudo-Heracletean dynamics on double surface, inverse spin and spin g-factor, path-translation and rotation-translation ratio, Compton wavelength, electron, proton, neutron, muon and tau.*

1. Theoretical Background

According to pseudo-Heracletean dynamics on double surface [1] the particle inverse spin, denoted $spin^{-1}$, is defined as the path-translation ratio $\frac{s}{n}$ on the particle's circumference concluded curved motion [2]:

$$spin^{-1} = \frac{s}{n} = 2 - \frac{1}{\sqrt{1 + \frac{\pi^2}{n^2}}}. \tag{1}$$

Here $spin^{-1}$ is dimensionless number in the range $(1,2)$ and path s, translation n and rotation π is expressed in Compton wavelengths of the spinning particle [2].

Further, according to the same dynamics [1] the next relation between $spin^{-1}$ and spin g-factor, denoted g_f, is proposed [2]:

$$spin^{-1} = \frac{2}{g_f} + 1. \tag{2}$$

Let us also recall the spin g-factor to mass-radius product relation [3]:

$$\frac{mrc}{h} \approx \sqrt{\frac{1}{\left(\frac{1}{2-\left(1+\frac{2}{g_{factor}}\right)}\right)^2 - 1}}\ x\ \left(\frac{1}{2} + \frac{1}{g_{factor}}\right). \tag{3}$$

The equation (3) defines g_{factor} in the range $(1,\infty)$ and consequently the equation (2) defines $spin^{-1}$ in the range $(1,3)$. The known as well as predicted values of spin g-factor and $spin^{-1}$ of elementary particles such as electron, proton, neutron, muon and tau [2] satisfy the equation (1). But contrarily the value of $spin^{-1} \approx 3$ belonging to chemical elements and all other heavier and greater physical bodies [3] does not do it. Such value of $spin^{-1}$ is calculated inserting the unit value of spin g-factor of ordinary macro bodies [3], i.e. $g_f = \left(\frac{3}{4}\frac{h}{mrc}\right)^2 + 1 \approx 1$, in the equation (2). The found discrepancy: $spin^{-1} > 2$ demands some explanation.

2. Single- and Multi-Dimensional Spinning

The value $spin^{-1} > 2$ can be explained by the fact that macro bodies execute their spin in more than one dimension. For the spinning in a dimensions the next formula for $spin^{-1}$ is expressed:

$$spin^{-1}(a) = a\,x\left(2-\frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}\right). \tag{4}$$

At single-dimensional spinning where $a = 1$ the original formula for $spin^{-1}$ provided on only one double surface (1) is given again:

$$spin^{-1}(a=1) = 2-\frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}. \tag{5}$$

For macro bodies spinning around in three dimensions $(a = 3)$ the next approximate relation is expressed:

$$spin^{-1}(a=3) \approx\ 2+\frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}. \tag{6}$$

Indeed, since macro bodies possess a negligible rotation-translation ratio $\frac{\pi}{n} \approx 0$ holds:

$$a = \frac{2+\frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}}{2-\frac{1}{\sqrt{1+\frac{\pi^2}{n^2}}}} \approx \frac{2+1}{1} = 3. \tag{7}$$

Then using the equation (6) the next $spin^{-1}$ is calculated:

$$spin^{-1}(a=3) \approx 3. \tag{8}$$

And applying the equation (2) approximately unit spin g-factor $g_f \approx 1$ of ordinary physical bodies is confirmed:

$$spin^{-1}(g_f \approx 1) \approx 3. \tag{9}$$

3. CONCLUSIONS

Three-dimensional spinning of macro bodies is difficult to measure since the observer spins in three dimensions, too. But nevertheless respecting pseudo-Heracletean dynamics on double surface the concerned spinning can explain the proposed practically unit spin g-factor of all ordinary physical bodies: chemical elements as well as chemically or physically composed heavier and larger macro bodies.

4. THE ADDENDUM

Following the just now presented theory the spinning in one dimension is another option for enough heavy or large physical bodies with $\frac{mrc}{h} \approx \infty$. And the spinning in two dimensions is possible for very light or small physical bodies with $\frac{mrc}{h} \approx 0$. Both conclusions are given with the help of the equations (2), (4) at the negligible rotation-translation ratio $\frac{\pi}{n} \approx 0$ and applying the spin g-factor to mass-radius product relation (3), [3]:

$$spin^{-1}(a=1) \approx\ 1 \rightarrow spin^{-1}(g_f \approx \infty) \approx 1 \rightarrow \frac{mrc}{h}\,(g_f \approx \infty) \approx \infty. \tag{10}$$

And:

$$spin^{-1}(a=2) \approx\ 2 \rightarrow spin^{-1}(g_f \approx 2) \approx 2 \rightarrow \frac{mrc}{h}\,(g_f \approx 2) \approx 0. \tag{11}$$

On the other hand the spinning in more than three dimensions possesses $spin^{-1} > 3$. So it cannot be justified by the spin g-factor to mass-radius relation (3), [3] being defined only in the $spin^{-1}$ range (1,3). Of course as long as imaginary values of mass or size is not the subject of interest. Thus:

$$spin^{-1}(a>3) >\ 3 \rightarrow spin^{-1}(g_f < 1) > 3 \rightarrow \frac{mrc}{h}\,(g_f < 1) \notin \Re. \tag{12}$$

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The editor's commitment to open accessed knowledge - while giving creative freedom to the researcher - is well recognised.

DEDICATION

This fragment is dedicated to Janez Krstnik (John the Baptist) - my wife's and my own patron saint.

REFERENCES

[1] Špringer J. Pseudo-Heracletean Dynamics on Double Surface (Sightseeing Fragments). International Journal of Advanced Research in Physical Science (IJARPS), Volume 2, Issue 12, December 2015, 34-36

[2] Špringer J. Particle Radius versus Spin G-Factor (Empirical and Pharmaceutical Approach). International Journal of Advanced Research in Physical Science (IJARPS), Volume 3, Issue 2, February 2016, 1-3

[3] Špringer J. Spin G-Factor of Physical Bodies (Co-function Extrapolation). International Journal of Advanced Research in Physical Science (IJARPS), Volume 3, Issue 4, April 2016, 9-12

AUTHOR'S BIOGRAPHY

Janez Špringer, is only a curious man passionately collecting fragments in the field of science. God bless the field and be merciful with the collector.