Hypergeometric tests - Dr. Sam Vaknin's suggestion from 2013

A suggestion from Dr. Sam Vaknin regarding the possible solutions if the equations of the Geometric Chronon Field Theory were that they are related to Hypergeometric functions. He offered a book back in 2013, Theory of Hypergeometric Functions, Kazuhiko Aomoto, Michitake Kita, Sringer Monographs in Mathematics, ISSN 1439-7382, ISBN 978-4-431-53912-4 e-ISBN 978-4-431-53938-4, DOI: 10.1007/978-4-431-53912-4, Springer Tokyo, Dordrecht, Heidelberg, London, New York. His idea was lately checked regarding the stable roots of third order polynomials of gravity and anti-gravity area ratio loss and gain

The stable field strength coefficients were defined as $\xi = \frac{193}{192} = 1 + \frac{1}{192}$ for negative charge and $\xi = \frac{63}{64} = 1 - \frac{1}{64} = 1 - \frac{3}{192}$ for negative charge. The summation of the two deltas $+\frac{1}{192} - \frac{1}{64}$ to 1 yields the field strength coefficient $\xi = 1 + \frac{1}{192} - \frac{1}{64} = 1 + \frac{1}{192} - \frac{3}{192} = 1 - \frac{1}{96} = \frac{95}{96}$. The question is what do these values $\frac{1}{192}$ and $\frac{3}{192}$ teach us about any possible grad theory of particle physics? 1,3 and 192 with 192 in the denominator should hint us about such a theory. As we saw in (40) a key number in the calculation of the positive perturbation over ξ was

$s = 0.5/(1 - g_2)^4 \cong 607276.5368006824282929301261901855468 75$, see (40).

Can this number be a result of the Gauss hypergeometric function 2F1?

The question is if ${}_2\mathrm{f}_1(\mathrm{a},\mathrm{b},\mathrm{c},\mathrm{z}) = \sum_{k=0}^{\infty} \frac{(a)_n(\mathrm{b})_n}{(c)_n}\frac{z^n}{n!}$, such that $(q)_n = \begin{cases} 1 & n = 0 \\ q(q+1)(q+2)\ldots(q+n-1) & n \geq 1 \end{cases}$.

If Dr. Sam Vaknin was right, we may be able to find a meaningful z that solves

$${}_2\mathrm{f}_1(-3,1,192,\mathrm{z}) = 1 - 2(1 - g_2)^4$$

This is exactly what was done numerically. The result was very surprising, and it is very unlikely that it is a fluke of chance:

$$z \cong \frac{2}{(137.03627140261694705714035080 74)^2}$$

The relative error of $137.036271402616947057140350807 4$ from the assessment 137.0359990368270075578… in (40) is about

$$\frac{137.0359990368270075578 - 137.0359990368270075578\ldots}{137.0359990368270075578\ldots} \cong 503132.1997830774052999913692^{-1}$$

Also quite near the higher value 137.03599902990990… after (41).

It is quite compelling to say that Dr. Sam Vaknin was right already back then in 2013.

Here is the code in Python:

```python
import numpy as NP
from scipy.special import hyp2f1 as SCIPY_SPECIAL_hyp2f1

a = 137.035999036827007557803881354629993438720703
q = 607276.536800682428292930126190185546875

#s = NP.power(q * 2, 0.25)
s = NP.sqrt(NP.sqrt(q * 2))
s = NP.sqrt(s * s * s * 0.25)

print(f's={s:.42f}')

# Was a numerical analysis output:
w = 137.036271402616947057140350807 4
u = 1/(w/a - 1)

print(f'u={u:.42f}')

r = SCIPY_SPECIAL_hyp2f1(-3, 1, 192, 2/(w ** 2))
r = 1/(1-r)
r /= 607276.536800682428292930126190185546875
r = 1/(1-r)
r /= s
print(f'r={r:.42f}')


r = SCIPY_SPECIAL_hyp2f1(-3, 1, 192,
2/137.035999036827007557803881354629993438720703 ** 2)
r = 1/(1-r)
r /= 607276.536800682428292930126190185546875
r = 1/(1-r)
print(f'r={r:.42f}')
```