

General Physics Notes (08172026):

Again, we are going to tackle many problems in physics: zeta calculus, connected diagrams and their Fourier transform, waves in Hilbert space filling curve and Huygens approaches, and now dark matter. I think we discussed dark matter as a non-linear effect of GR. We have to replace particle theories with more elegant rotational Yang-Mills. Maybe the structure of space is an observeon or interaction quantum which has prime polytope Platonic solid face symmetry to replace the Standard Model. More rotational Yang-Mills and less particle zoo.

$$v = \omega r \quad vt = l \quad l' = \gamma l \quad \rho' = \frac{m}{l'} \quad (1)$$

Here we have velocity v , angular galactic velocity ω , galactic radii r , time t , linear length of galactic arm l , gamma relativistic correction γ , mass density changed due to relativity ρ' , and mass m . I like to think that gravito-magnetism is the source of dark matter. It makes sense from results of Gravity Probe B. We also have to think that the union of gravity and geometry is general relativity, this amazing treatment of spacetime. There is definitely something there.

$$U = GMn \left(\frac{1}{l\sqrt{1 - \frac{\omega^2 r^2}{c^2}}} - \frac{1}{l} \right) \quad (2)$$

Maybe this is the dark matter correction term.