A Quantized Metric As an Alternative to Dark Matter

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The cosmological spherical symmetry background metric coefficient \( g_{44} \equiv g_{00} = 1-2GM/c^2r \) should be inserted into a Dirac equation \( \Sigma_\mu (\sqrt{g_{\mu\nu}} \gamma^\nu \partial_\psi / \partial x_\mu) - \omega \psi = 0 \) (1, Maker) to make it generally covariant. The spin of this cosmological Dirac object is nearly unobservable due to inertial frame dragging and has rotational \( L(L+1) \Delta \varepsilon \) and oscillatory \( \varepsilon \) interactions with external objects at distance away \( r \gg 10^{10} \) LY. The inside and outside frequencies \( \omega \) match at the boundary allowing the outside metric eigenvalues to propagate inside. To include the correct 3 lepton masses in this Dirac equation we must use ansatz \( g_{00} = e^{i(2\varepsilon + \Delta \varepsilon)} \) with \( \varepsilon = .06, \Delta \varepsilon = .00058 \). For local metric effects our ansatz is \( g_{00} = e^{i \Delta \varepsilon} \). Here the metric coefficient \( g_{00} \) levels off to the quantized value \( e^{i \Delta \varepsilon} \) in the galaxy halo: \( g_{00} = 1 - 2GM/rc^2 \to \text{rel}(e^{i \Delta \varepsilon}) = \cos(\Delta \varepsilon) = 1 - (\Delta \varepsilon)^2/2 \to (\Delta \varepsilon)^2/2 = 2GM/rc^2 \) for this circular motion \( v^2/r = GM/r^2 = c^2(\Delta \varepsilon)^2/4r \to v^2 = c^2(\Delta \varepsilon)^2/4r = 87 \text{km/sec}^2 \approx 100 \text{km/sec}^2 \).

So the metric acts to quantize \( v \). Note also there is rotational energy quantization for the \( \Delta \varepsilon \) rotational states that goes as: \( (L(L+1)) \propto 1/2mv^2 \to \sqrt{L(L+1)} \propto v \). Thus differences in \( v \) are proportional to \( L \), \( L \) being an integer. Therefore \( \Delta v = kL \) so \( v = 1k, v = 2k, v = 3k, v = 4k \ldots v = N \) (the above \( \sim 100 \text{km/sec} \)) with dark matter then not required to give these high halo velocities. Recent nearby galaxy Doppler halo velocity data strongly support this velocity quantization result.