It is claimed correctly but it was derived by Schwarzschild, for the Einstein field equation. However, only (1) is formally a possible solution of the ECE orbital theorem, one of an infinite set of possible solutions of the orbital theorem. So formally, the following method derives from the ECE orbital theorem. In this received opinion, it is described as "the relativistic Kepler problem."

Define:

\[ T = \frac{1}{2} mc^2 = \frac{1}{2} m \left( \frac{ds}{dt} \right)^2 = \frac{m}{2} \int \frac{dx^1}{\gamma_{11}} \frac{dx^2}{\gamma_{22}} \frac{dx^3}{\gamma_{33}} - (3) \]

where \( S \) is the action and:

\[ c^2 ds^2 = \frac{m}{2} \int \frac{dx^1}{\gamma_{11}} \frac{dx^2}{\gamma_{22}} \frac{dx^3}{\gamma_{33}} - (4) \]

So:

\[ g_{00} = 1 - \frac{r_s}{r}, \quad \gamma_{11} = -\left( 1 - \frac{r_s}{r} \right)^{-1}, \quad \gamma_{22} = -1, \quad \gamma_{33} = -1, \]

\[ dx^0 = c dt, \quad dx^1 = dx, \quad dx^2 = r d\phi, \quad dx^3 = dz. - (5) \]

So:

\[ \frac{dt}{ds} = c^2 = g_{00} \left( \frac{dx^0}{dt} \right)^2 + g_{11} \left( \frac{dx^1}{dt} \right)^2 + g_{22} \left( \frac{dx^2}{dt} \right)^2 + g_{33} \left( \frac{dx^3}{dt} \right)^2 - (7) \]

\[ = \left( 1 - \frac{r_s}{r} \right) c^2 \left( \frac{dt}{dr} \right)^2 - \left( 1 - \frac{r_s}{r} \right)^{-1} \left( \frac{dr}{dt} \right)^2 - \left( \frac{r_s}{r} \right) c^2 \left( \frac{d\phi}{dt} \right)^2 - \left( \frac{dz}{dt} \right)^2 - (7) \]

The Lagrange equation is:
\[ \frac{d}{dt} \frac{d}{dx} \mu = \frac{d}{dx} \mu \quad - (8) \]

\[ \frac{d}{dt} (mc^2 \phi) = 0 \quad - (9) \]

\[ \frac{d}{dt} \left( m (1 - \frac{v^2}{c^2}) \frac{dt}{dx} \right) = 0 \quad - (10) \]

\[ \frac{d}{dt} \left( m (1 - \frac{v^2}{c^2}) \frac{dr}{dx} \right) = 0 \quad - (11) \]

Eqs. (9) to (11) give the constants of motion:

\[ E = mc^2 \left( 1 - \frac{v^2}{c^2} \right) \frac{dt}{dx} \quad - (12) \]

\[ L = mc^2 \frac{dr}{dx} \quad - (13) \]

\[ p = m (1 - \frac{v^2}{c^2})^{-1} \frac{dr}{dx} \quad - (14) \]

These are the total energy \( E \), the momentum \( p \) and the angular momentum \( L \).

In the plane: \( dz = 0 \quad - (15) \)

We have:

\[ (1 - \frac{v^2}{c^2}) = m c^2 \left( 1 - \frac{v^2}{c^2} \right)^2 \left( \frac{dt}{dx} \right)^2 - m \left( 1 - \frac{v^2}{c^2} \right)^2 \left( \frac{dr}{dx} \right)^2 \]

\[ = \frac{E^2}{mc^2} - m \left( \frac{dr}{dx} \right)^2 - \left( 1 - \frac{v^2}{c^2} \right) \frac{L^2}{mv^2} \quad - (16) \]

Therefore:

\[ m \left( \frac{dr}{dx} \right)^2 = \frac{E^2}{mc^2} - \left( 1 - \frac{v^2}{c^2} \right) T - \left( 1 - \frac{v^2}{c^2} \right) \frac{L^2}{mv^2} \]
This is Eq. (30) of note 149 (2). It gives the same processing elliptical orbit as the ECE-Minkowski theory.

\[
\frac{1}{2} m \left( \frac{dx}{dt} \right)^2 = \frac{1}{2} E^2 - \frac{1}{2} \left( \frac{1 - \frac{v^2}{c^2}}{c^2} \right) \left( mc^2 - \frac{L^2}{mr^2} \right)
\]

This is because Minkowsky and gravitational

This is because Minkowsky and gravitational
time metrics are self-similar solutions of the same equation, \textbf{ECE\, Orbital Theorem of Unification} for spherical 4-space\textsuperscript{2}.

However, Eq. (19) can be generalized to

cannot, it always give a processing elliptical
terms of the same information - it processing elliptical

Eq. (17) is one that use \( L \), \( N \), a constant

which does not appear in Eq. (19). Eq. (17)

reduce to Eq. (19) when:

\[
\frac{L}{r} \to 0 \quad (21)
\]
4) and \[ E \rightarrow \gamma mc^2 = mc^2 \frac{dt}{d\tau} \quad -(22) \]

\[ p \rightarrow \gamma m \frac{d\tau}{dt} = m \frac{dt}{d\tau} \quad -(23) \]

As shown in note 149(2), the concepts of force and potential energy are not needed. Neither the first nor the second law of Newton are used.

The Einsteinian description is not used because the convention must be antisymmetric, not symmetric as used by Einstein. Dark matter is not used. The concepts in these notes are radically new, but the calculations are relatively straightforward.