

## 204(1): Further Refutation of the Einstein Theory

The Einstein theory is based on the metric:

$$ds^2 = c^2 d\tau^2 = \left(1 - \frac{r_0}{r}\right) c^2 dt^2 - \left(1 - \frac{r_0}{r}\right)^{-1} dr^2 - r^2 d\theta^2 \quad - (1)$$

in the usual notation. By now it is well known that this does not produce a precessing ellipse, or light bending. It is claimed in this theory that the total energy is:

$$E = \left(1 - \frac{r_0}{r}\right) \gamma m c^2 \quad - (2)$$

and that the total angular momentum is:

$$L = \gamma m r^2 \omega \quad - (3)$$

where  $\omega = \frac{d\theta}{dt} \quad - (4)$

The factor  $\gamma$  must be calculated as follows:

$$\underline{dr} \cdot \underline{dr} = v^2 dt^2 = \left(1 - \frac{r_0}{r}\right)^{-1} dr^2 + r^2 d\theta^2 \quad - (5)$$

$$\text{So: } ds^2 = c^2 d\tau^2 = c^2 dt^2 \left(1 - \frac{r_0}{r}\right) - \underline{dr} \cdot \underline{dr} \\ = \left( \left(1 - \frac{r_0}{r}\right) c^2 - v^2 \right) dt^2 \quad - (6)$$

$$\text{So: } \frac{d\tau}{dt} = \left(1 - \frac{r_0}{r} - \frac{v^2}{c^2}\right)^{1/2} \quad - (7)$$

$$\text{and } \gamma = \frac{dt}{d\tau} = \left(1 - \frac{r_0}{r} - \frac{v^2}{c^2}\right)^{-1/2} \quad - (8)$$

2)

So:

$$E = \left(1 - \frac{r_0}{r}\right) \left(1 - \frac{r_0}{r} - \frac{v^2}{c^2}\right)^{-1/2} mc^2 \quad - (9)$$

$$L = \left(1 - \frac{r_0}{r} - \frac{v^2}{c^2}\right)^{-1/2} m r^2 \frac{d\theta}{dt} \quad - (10)$$

There is a self contradiction in these equations. This is because  $v$  is not a constant in general relativity but  $E$  and  $L$  are claimed to be constant.

In general relativity it is claimed by Einstein and his supporters that  $v$  can be arbitrary. However, if  $E$  is constant then:

$$\left(1 - \frac{r_0}{r} - \frac{v^2}{c^2}\right) \left(\frac{E}{mc^2}\right)^2 = \left(1 - \frac{r_0}{r}\right)^2 \quad - (11)$$

$$\text{So } \frac{v^2}{c^2} \left(\frac{E}{mc^2}\right)^2 = \left(1 - \frac{r_0}{r}\right)^2 - \left(1 - \frac{r_0}{r}\right)^2 \quad - (12)$$

$$= \left(1 - \frac{r_0}{r}\right) \left(\left(\frac{E}{mc^2}\right)^2 - 1 - \frac{r_0}{r}\right)$$

$$\text{and } v^2 = c^2 \left(\frac{mc^2}{E}\right)^2 \left(1 - \frac{r_0}{r}\right) \left(\left(\frac{E}{mc^2}\right)^2 - 1 - \frac{r_0}{r}\right) \quad - (13)$$

So  $v$  is a function of  $r$  and cannot be

3) arbitrary. For example in the limit:

$$r \rightarrow \infty \quad - (14)$$

then: 
$$v^2 \xrightarrow{r \rightarrow \infty} c^2 \left( 1 - \left( \frac{mc^2}{E} \right)^2 \right) - (15)$$

and 
$$E \xrightarrow{r \rightarrow \infty} \left( 1 - \frac{v^2}{c^2} \right)^{-1/2} mc^2 - (16)$$

Combining eqs (15) and (16) merely gives:

$$v^2 \xrightarrow{r \rightarrow \infty} v^2 - (17)$$

However, eq. (16) shows that in the limit of infinite  $r$ ,  $E$  cannot be constant because  $v$  is arbitrary.

In the limit:

$$v \ll c - (18)$$

for finite  $r$ , eq. (11) shows that:

$$\left( \frac{E}{mc^2} \right)^2 \rightarrow 1 - \frac{r_0}{r} - (19)$$

and again  $E$  cannot be constant, because it depends on  $r$ .

There are so many possible and entirely obvious refutations now known of the Einstein theory but it has become conventional nonsense.