

1) 194(1): The Attempted Calculation of Perseus in General Relativity.

The starting equation is:

$$\frac{d^2 u}{d\theta^2} + u = -\frac{m}{L^2} \frac{1}{u^2} F(u) \quad - (1)$$

where

$$u = \frac{1}{r} \quad - (2)$$

In Einsteinian general relativity:

$$\frac{d^2 u}{d\theta^2} + u = \frac{GM^2 M}{L^2} + \frac{3GM}{c^2} u^2 \quad - (3)$$

$$:= \frac{1}{a} + \delta u^2$$

A trial solution is obtained:

$$u_2 = u_1 + u_p \quad - (4)$$

where:

$$u_1 = \frac{1}{a} (1 + \epsilon \cos \theta) \quad - (5)$$

$$u_p = \frac{\delta}{L^2} \left[\left(1 + \frac{\epsilon^2}{2} \right) + \epsilon \theta \sin \theta - \frac{\epsilon^2}{6} \cos 2\theta \right]$$

The computer can be used to show that: - (5)

$$\frac{1}{r_2} = u_2 \neq \frac{a}{1 + \epsilon \cos(x\theta)} \quad - (6)$$

so that u_2 is not a precessing ellipse.