

217 (6) : Slopes of the Conc Sections

The processing conc section is:

$$r = \frac{d}{1 + \epsilon \cos(x\theta)} \quad - (1)$$

so $\frac{dr}{d\theta} = \frac{x\epsilon}{d} r^2 \sin(x\theta) \quad - (2)$

As x is varied a vast array of patterns will appear. From general relativity:

$$\frac{dr}{d\theta} = r^2 \left(\frac{1}{b^2} - \left(1 - \frac{r_0}{r}\right) \left(\frac{1}{a^2} + \frac{1}{r^2} \right) \right)^{1/2} \quad - (3)$$

where $a = \frac{L}{mc}$, $b = \frac{Lc}{E}$, $- (4)$

$$r_0 = \frac{2MG}{c^2} \quad - (5)$$

In eq. (2), $d = \frac{L}{2k}$, $\epsilon = \left(1 + \frac{2EL^2}{mk^2}\right)^{1/2}$, $- (6)$

$$k = mMG$$

IT BECOMES OBVIOUS THAT EGR FAILS TOTALLY. EQ (3) CANNOT PRODUCE THE PATTERNS OF EQ. (2).