

(106)

$$e^{2\phi} = 1 - \frac{2M}{r}$$

$$e^{\phi} = \sqrt{1 - \frac{2M}{r}} = \sqrt{1 - \frac{2 \times 1.47}{7 \times 10^5}}$$

$$= 0.999997$$

$$Z = 3 \times 10^{-6}$$

second case

$$e^{\phi} = 0.760$$

$$Z = 0.315$$

$$e^{-\phi} = \frac{1}{e^{\phi}}$$