$$E(r)=\frac{U_a}{\ln(R_a/R_k)}\frac{1}{r}\,.$$

$$m\frac{d^2\vec{r}(t)}{dt^2}=e\vec{E}+e(\vec{v}\,x\,\vec{B})\,,$$

$$b=mr^2\frac{d\phi}{dt}+\frac{1}{2}er^2B=konst\,,$$

$$mr_{١}^{٢}\,\frac{d\varphi}{dt}+\frac{١}{٢}er_{١}^{٢}\;=mr_{٢}^{٢}\,\frac{d\varphi}{dt}+\frac{١}{٢}er_{٢}^{٢}\,.$$

$$\frac{d\varphi}{dt}=\frac{١}{٢}\frac{e}{m}B\,.$$

$$\frac{1}{2}mR_a^2(\frac{d\varphi}{dt})^2\;=eU_a\,,$$

$$\frac{1}{2}mR_a^2(\frac{1}{2}\frac{eB_c}{m})^2\;=eU_a\,.$$

$$\frac{e}{m}=\frac{8\mathrm{U}_a}{R_a^2B_c^2}\,,$$

$$:\;\frac{e}{m}=\frac{٨\mathrm{U}_a}{R_a^2B_c^2}=\frac{8.50}{٠,٠٠٤٧٥^2.0,01030^2}=1,671.10^{11}Ckg^{-1}$$

$$\frac{e}{m}=\frac{8\mathrm{U}_a}{R_a^2B_c^2}=1,787.10^{11}Ckg^{-1}$$

$$x_1=1,671.10^{11}Ckg^{-1}$$

$$x_{٢}=1,787.10^{11}Ckg^{-1}$$

$$\overline{x}=\frac{1}{n}\sum_{i=1}^{n}x_i=\frac{1}{2}(1,671+1,787).10^{11}=1,729.10^{11}Ckg^{-1}$$

$$\Delta_i=\overline{x}-x_i$$

$$\Delta_1=\overline{x}-x_1=1,729.10^{11}-1,671.10^{11}=0,058.10^{11}Ckg^{-1}$$

$$\overline{s}=\sqrt{\frac{\sum_{i=1}^{n}\Delta_i^{\,2}}{n(n-1)}}=0,058.10^{11}Ckg^{-1}$$

$$\overline{\vartheta}=\frac{2}{3}\overline{s}=\frac{2}{3}0,058.10^{11}=0,0386.10^{11}Ckg^{-1}$$