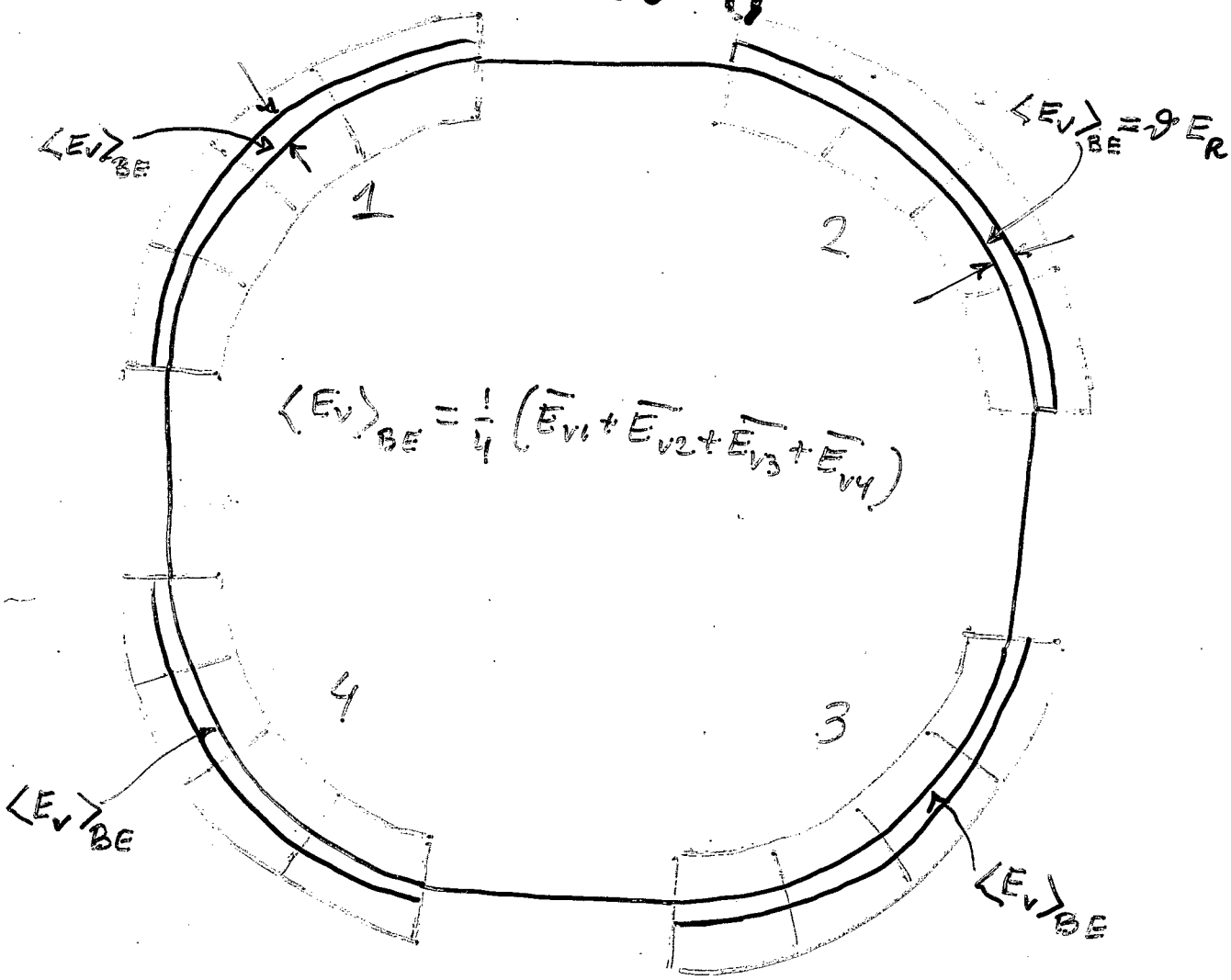
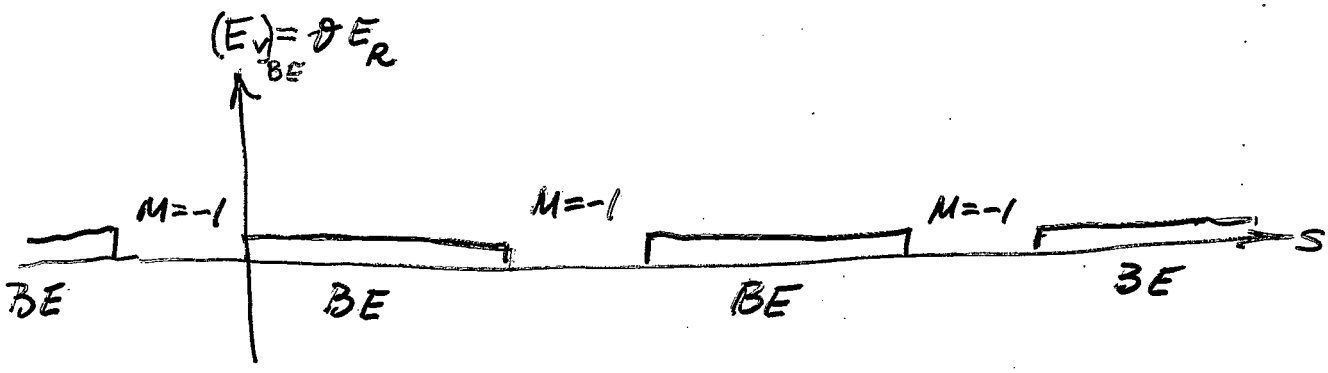
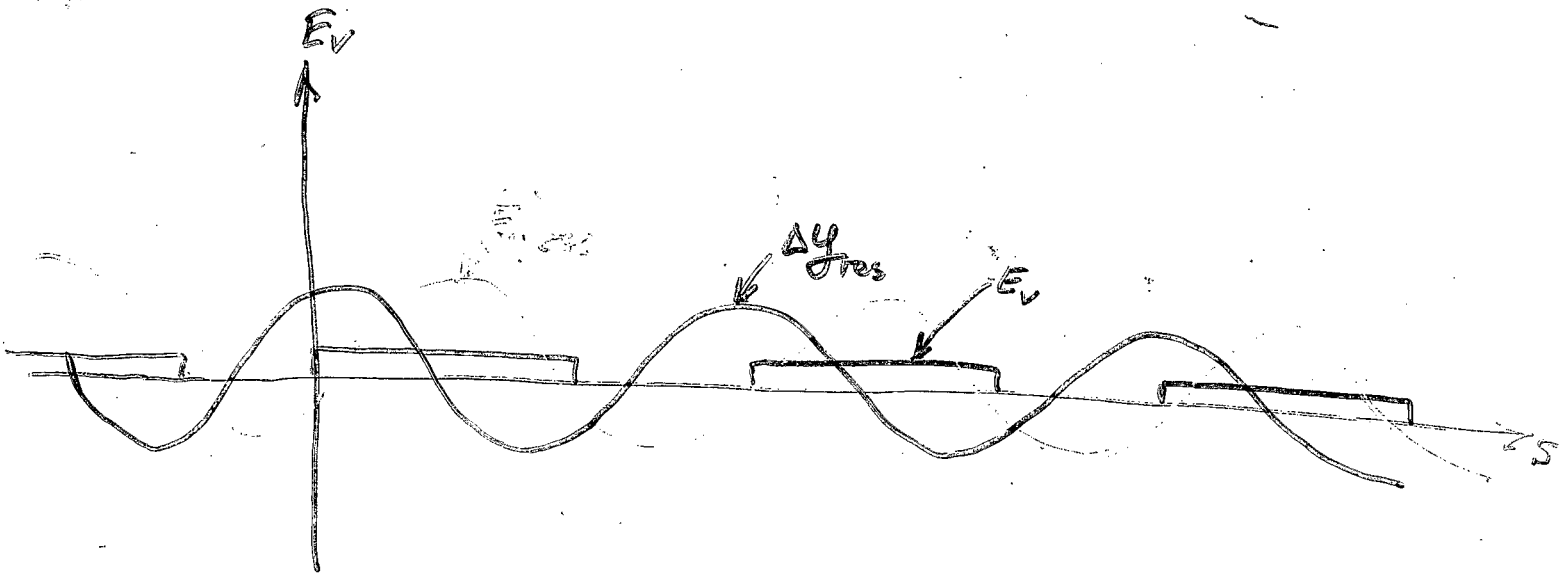
Yuri Orlov
2/21/2004

$$M = \begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix}$$







$$E_v \cong \bar{E}_v \left(1 + \frac{2}{\pi}\cos\frac{8\pi}{T}(t-t_0)\right) + \dots$$

Resonance: $\nu_y \to 4$

$$\Rightarrow \quad \ddot{y} + \left(\frac{8\pi}{T}\right)^2 y \cong \omega_c^2 R\left(\frac{E_R}{B\beta}\right)\bar{\vartheta}\left(1 + \frac{2}{\pi}\cos\frac{8\pi}{T}(t-t_0)\right) + \dots$$

$$\vartheta = \frac{E_v}{E_R}$$

$$\boxed{\Delta y_{res} \cong (\omega_c t) R\left(\frac{E_R}{B\beta}\right)\frac{\bar{\vartheta}}{4}\cdot\frac{2}{\pi}\sin\frac{8\pi}{T}(t-t_0)}$$

$\omega_c \approx 2\pi\times10^6\,s^{-1}$	$\frac{E_R}{B\beta} \approx \lvert a\rvert \sim 0.14$	$y_{res} \cong 10^7\times15\times10^6\times0.14\times10^{-12}\,\mu m =$
$t = 10\,s$	$\bar{\vartheta} = 10^{-12}$	$= 20\,\mu m$
$R = 15\,m = 15\times10^6\,\mu m$		