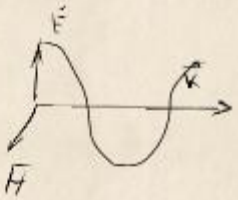


$\vec{E}_1 = \vec{E}_{10} \cos(\omega_1 t - \vec{k}_1 \vec{r} + \varphi_1)$ $I_1 \neq 0$

$\vec{E}_2 = \vec{E}_{20} \cos(\omega_2 t - \vec{k}_2 \vec{r} + \varphi_2)$ $I_2 \neq 0$

$\vec{S} = [\vec{E}, \vec{H}]$ $E \sqrt{\varepsilon \varepsilon_0}$ H μ

$S \sim E^2$ $I \sim E^2$

$I = E^2$

$I_\Sigma = \vec{E}_\Sigma^2 = \vec{E}_1^2 + \vec{E}_2^2 + (\vec{E}_1, \vec{E}_2)$

$\langle I_\Sigma \rangle = \langle \vec{E}_\Sigma^2 \rangle = \langle E_{10}^2 \cos^2 \rangle + \langle E_{20}^2 \cos^2 \rangle +$

$+ 2 \langle (\vec{E}_1, \vec{E}_2) \rangle$

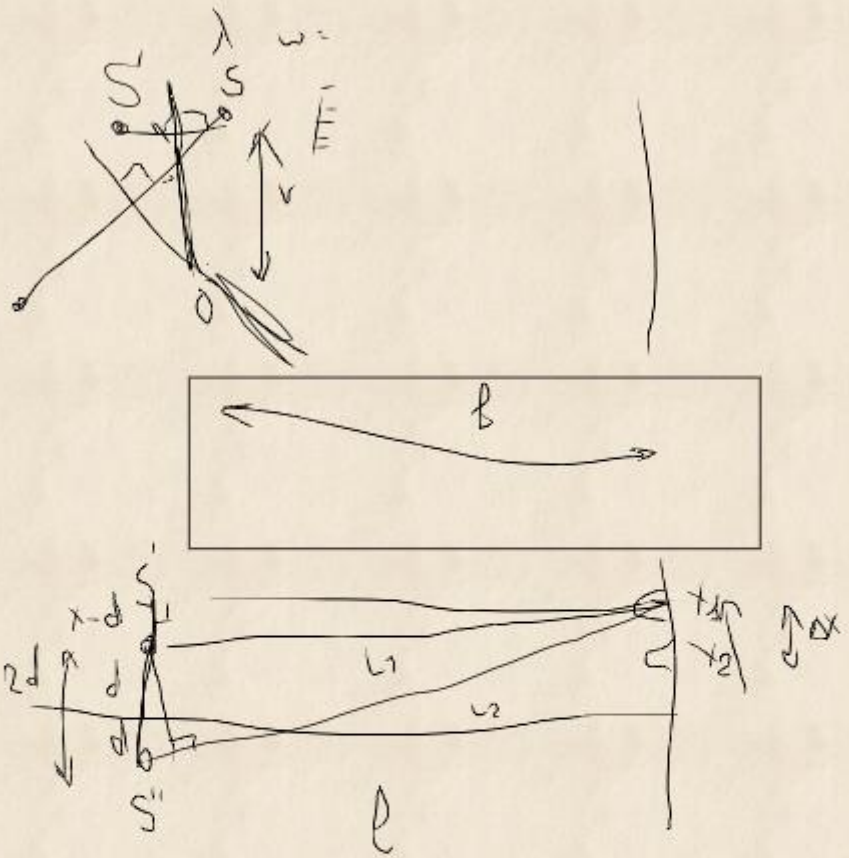
$\cos_1 \cos_2$ $E_1 = E_2$

$\cos\left((\omega_1 - \omega_2) t + (\vec{k}_1 - \vec{k}_2) \vec{r} + \Delta\varphi \right)$

$E_1 = E_0 \cos(\omega t - kx)$

$E_2 = E_0 \cos(\omega t - kx - \pi)$

481



$$L_1^2 = (x-d)^2 + l^2$$

$$L_2^2 = (x+d)^2 + l^2$$

$$L_2^2 - L_1^2 = (x+d)^2 - (x-d)^2 =$$

$$= x^2 + 2xd + d^2 - x^2 + 2xd - d^2$$

$$= 4xd = (L_2 - L_1)(L_2 + L_1)$$

$$d \ll l \qquad 2l$$

$$L_2 - L_1 = \frac{2xd}{l}$$

$$L_1 - L_2 = m\lambda \quad -\text{max}$$

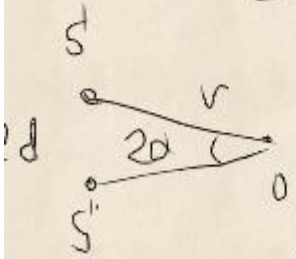
$$L_1 - L_2 = \left(m + \frac{1}{2}\right)\lambda \quad -\text{min}$$

$$m_1\lambda = \frac{2xd}{l}$$

$$(m_1 + 1)\lambda = \frac{2x_2 d}{l}$$

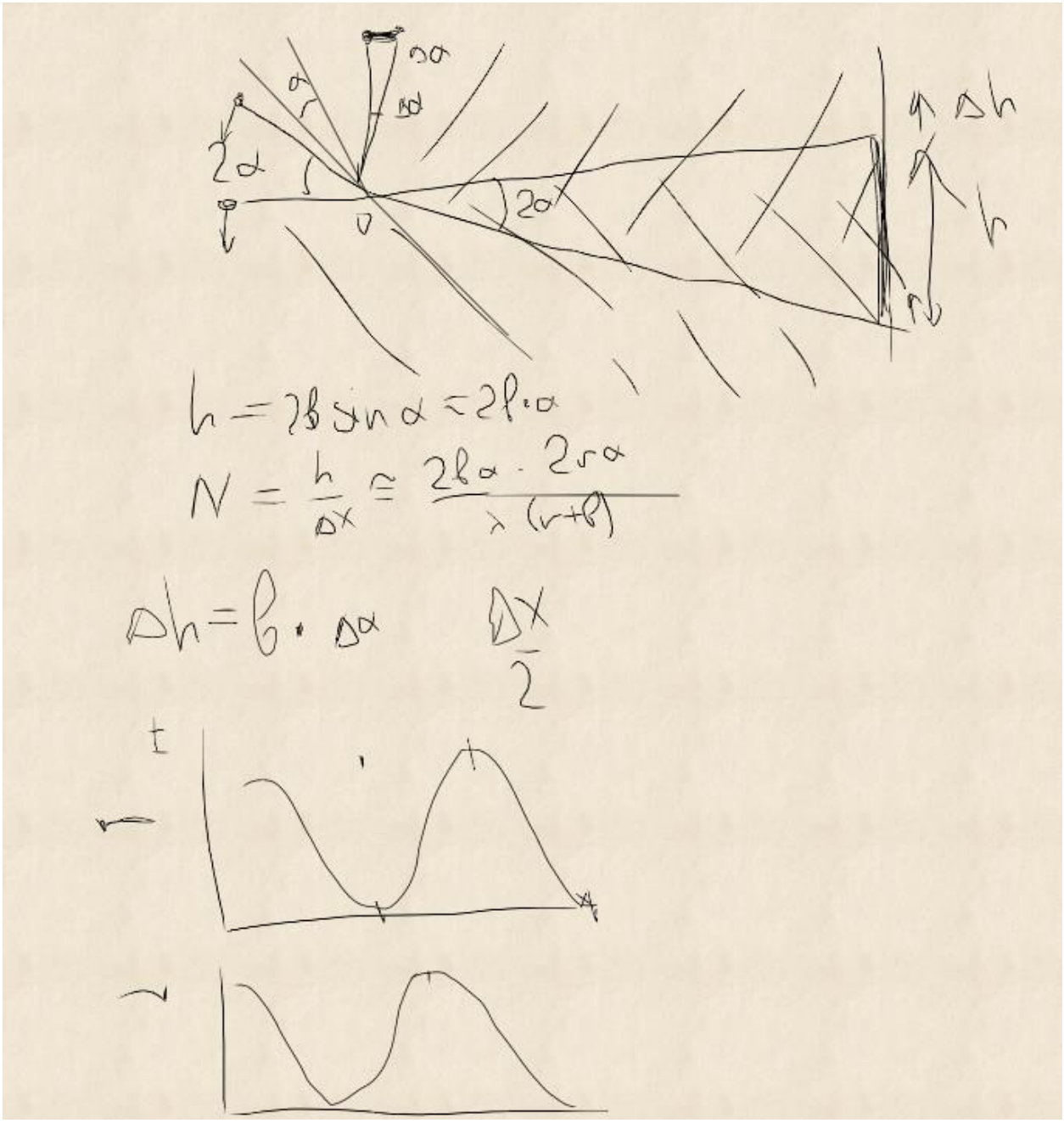
$$\lambda = \frac{2\Delta x \, d}{l}$$

$$\Delta x = \frac{\lambda l}{2d}$$



$$2d = 2r\sin\alpha \approx 2r\alpha$$

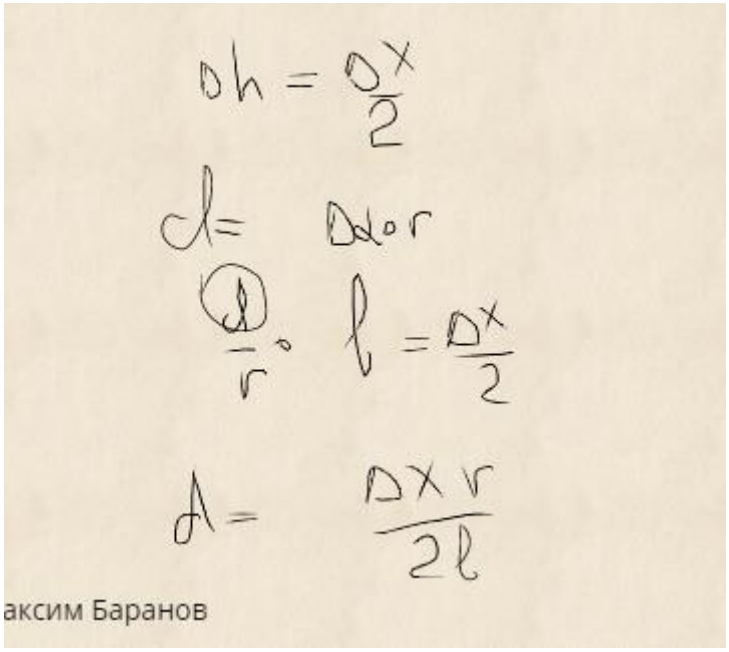
$$\Delta x = \frac{\lambda l}{2r\alpha} = \frac{\lambda(r+b)}{2r\alpha}$$



$$h = 2b \sin\alpha \approx 2b\cdot\alpha$$

$$N = \frac{h}{\Delta x} \cong \frac{2b\alpha \cdot 2r\alpha}{\lambda(r+b)}$$

$$\Delta h = b \cdot \Delta\alpha \qquad \frac{\Delta x}{2}$$

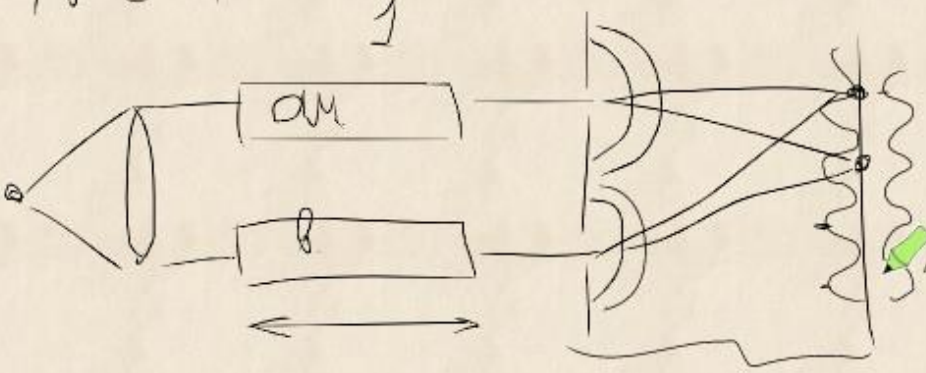


аксим Баранов

4.87

Семен Обрубов

1



Александр

$$n = \sqrt{\varepsilon \mu}$$

$$n = \frac{c}{v}$$

l

l

$$L = n \cdot l = l \cdot \frac{c}{v} =$$

$$= c \frac{l}{v} = ct$$

Никита Еловский

Константин Ба

$$L_{Ам} - L_{В} = 17\lambda$$

$$l(n_{Ам} - n_{В}) = 17\lambda$$

Сергей

Кристина Лобанова

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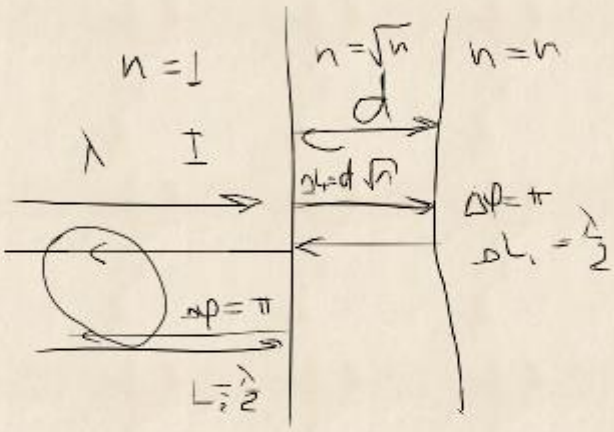
$$n' = \sqrt{n}$$



$$L_1 = d\sqrt{n} + \frac{\lambda}{2} + d\sqrt{n}$$

$$L_2 = \frac{\lambda}{2}$$

$$\Delta L = 2d\sqrt{n} = \left(m + \frac{1}{2}\right)\lambda$$

$$\Delta l = d \qquad \Delta L =$$

$$d = \frac{\lambda}{4}$$

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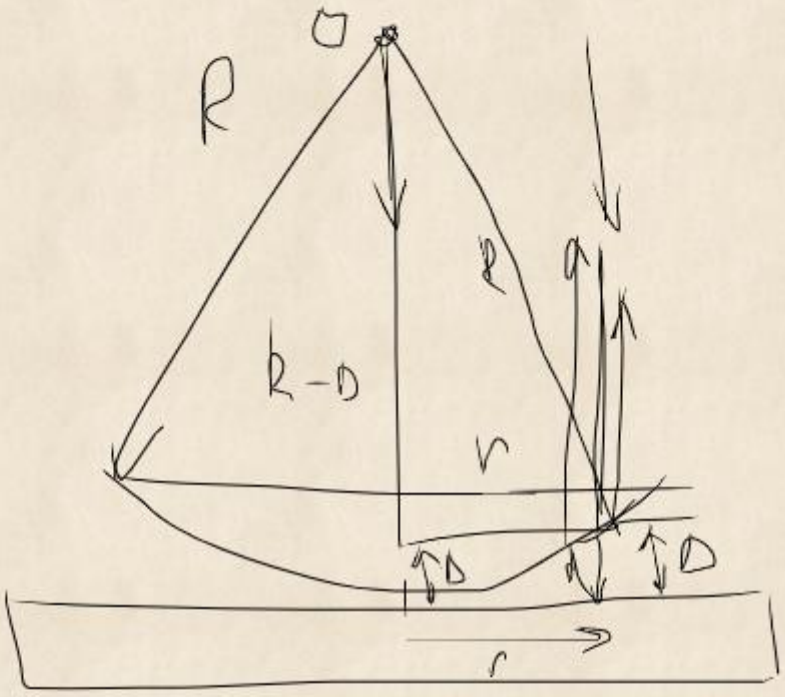


$$R^2 = (R - D)^2 + r^2$$

$$R^2 = R^2 - 2RD + D^2 + r^2$$

$$r \approx \sqrt{2RD}$$

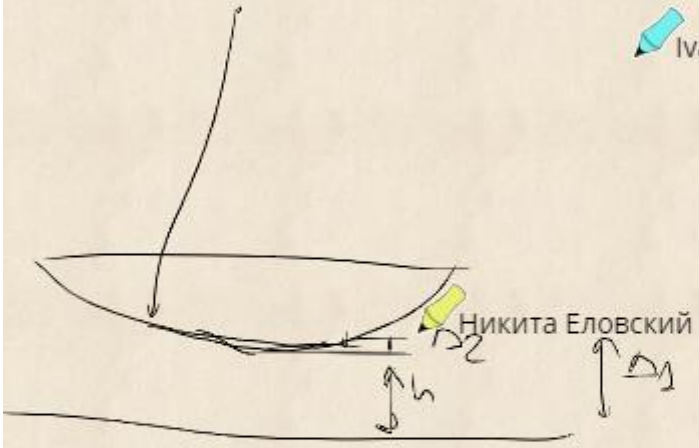
$$D = \frac{r_1^2}{2R}$$

$$\Delta = \left(m + \frac{1}{2}\right)\lambda - m\lambda$$

Семен Обрубов

$$\Delta = m\lambda - m\lambda$$

Ivan Kozlov



Никита Еловский

$$\Delta_2 + h = \Delta_1$$

$$r_2 = \sqrt{2R\Delta_2} =$$

$$= \sqrt{2R(\Delta_1 - h)} = \sqrt{2R\left(\frac{r_1^2}{2R} - h\right)} =$$

$$= \sqrt{r_1^2 - 2Rh}$$