

ЛЮМЛИК с ген уа а.

С.П.У. $R(\nu, T) = \frac{d^2 P(\nu; \nu + d\nu)}{dS d\nu}$ $[R(\nu, T)] = \frac{\beta T}{\mu^2 \text{Гг.}}$; $\lambda = \frac{c}{\nu}$

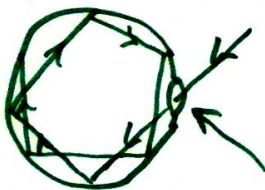
$R(\nu, T) = \frac{\lambda^2}{c} R(\lambda, T)$

Э.С. $R(T) = \frac{dP}{dS}$ $[R(T)] = \frac{\beta T}{\text{М}^2}$

С.К.П. $A(\nu, T) = \frac{W_{\text{вс}}^{\text{нов}}(\nu; \nu + d\nu)}{W_{\text{вс}}^{\text{нов}}(\nu; \nu + d\nu)}$ | У.К.П. $A(T) = \frac{W^{\text{нов}}}{W^{\text{нов}}}$

АЧТ $A(\nu, T) = 1$, $A(T) = 1$

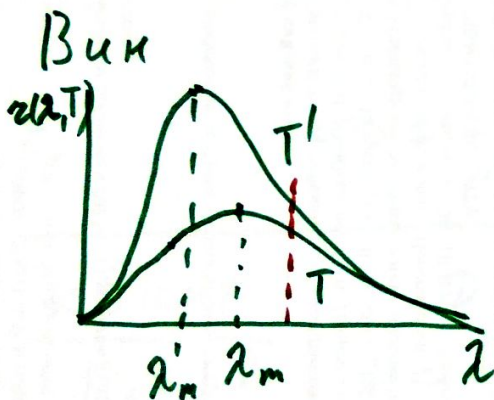
$A(\nu, T) = \text{const}$ - серое тело, Pt зepкo W $A(2700\text{K}) \approx 0,45$



АЧТ

Кирхгоф 1859 $\frac{R(\nu, T)}{A(\nu, T)} = z(\nu, T) \leftarrow A \cdot T$

Стеран, Больцман 1879.
 для АЧТ $z(T) = \int_0^\infty z(\nu, T) d\nu$, $z = 5,672 \cdot 10^{-8} \frac{BT}{m^2 \cdot K^4}$



$\lambda_m T = b$, $b = 2,9 \cdot 10^{-3} \text{ м} \cdot \text{К}$
 $T' > T$

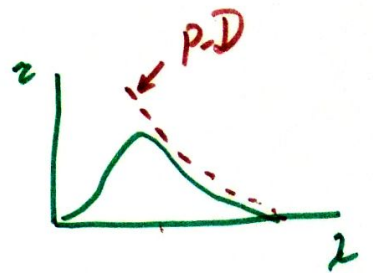
$z(\nu, T)_{\max} = CT^5$, $C = 1,3 \cdot 10^{-5} \frac{BT}{m^2 \cdot K^5}$

Рэлей-Джонс

$$z(\nu, T) = \frac{2\pi\nu^2}{c^2} kT$$

"УФ к-фа"

$$z(T) = \int_0^{\infty} z(\nu, T) d\nu = \infty$$



ПИРОМЕТР. 10 МММ

М. Планк 1900 г

АЧТ

$$z(\nu, T) = \frac{2\pi\nu^2}{c^2} \frac{h\nu}{e^{\frac{h\nu}{kT}} - 1}, \quad h = 6,62 \cdot 10^{-34} \text{ Дж} \cdot \text{с.}$$

E_0

$$\langle \epsilon \rangle = \frac{h\nu}{e^{\frac{h\nu}{kT}} - 1}, \quad E_0 = h\nu$$

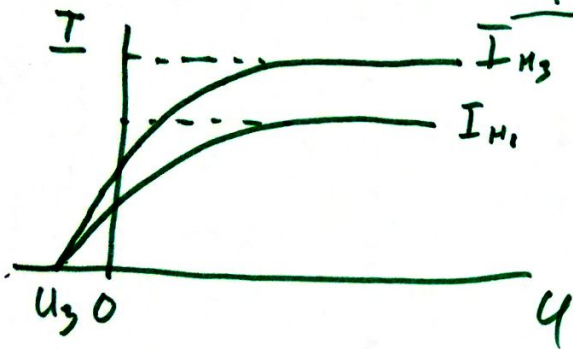
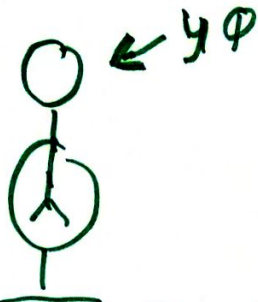
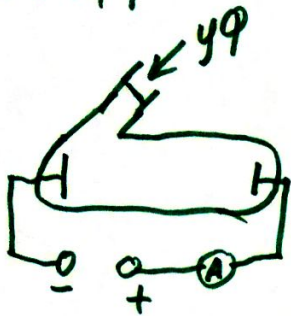
квант!

ФОТОН

$$E_0 = h\nu, \quad P = \frac{h\nu}{c}$$

Фотоэффект

Столетов 1890



$\Phi_2 > \Phi_1$

1

2 $U_3 = f(\nu)$

3 $\nu < \nu_{кр}$

$$h\nu = A_0 + \frac{m_0 c^2}{2}$$

ЭЛ-К.

~~$E = mc^2$~~