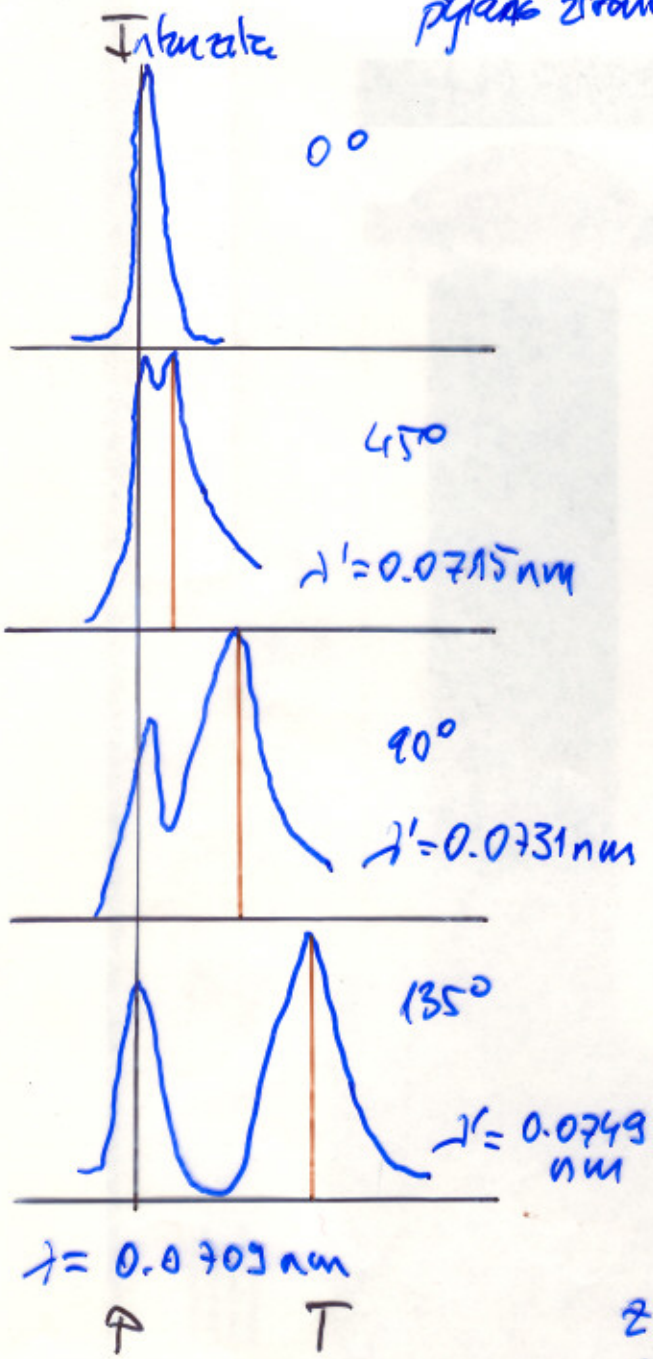
COMPTONOV JAV (1922)

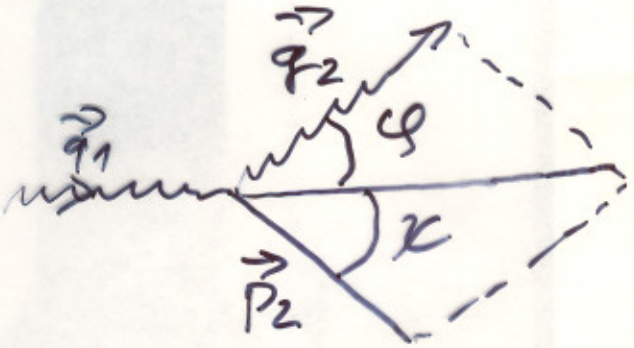
Rozptyl svetla na slabo viazanej alebo voľnej e^-



KED - e^- sa má rozkmitať a žiariť s rovnakou frekvenciou Rayleighov rozptyl.

Pozorované:

$$\Delta\lambda = 2\lambda \sin^2 \varphi/2$$



Energia:

$$\hbar\omega + E_1 = \hbar\omega' + E_2 \qquad (1)$$

$$E^2 = p^2c^2 + m_0^2c^4$$

pre fotón $m_0 = 0$ $\Rightarrow$ $p = \frac{E}{c} = \frac{\hbar\omega}{c}$