



odchytko v oblasti polia:

$$\frac{y}{x} = \frac{x}{2R-y}$$

$$\Rightarrow \frac{x^2 + y^2}{2y} = \frac{mv}{qB}$$

celková odchytka:

$$Y = y_1 + y_2 = y_1 + D \tan \phi_L$$

$$\left(\frac{dy}{dx}\right)_{x=L}$$

V prípade ch $y^2 \ll x^2 \Rightarrow$

$$y = \frac{qB}{2mv} x^2$$

$$\frac{dy}{dx} = \frac{qB}{mv} x \Rightarrow \text{dráha v poli sa dá apro- ximovať parabolou.}$$

$$\Rightarrow y_1 = \frac{qB}{2mv} L^2 \quad \tan \phi_L = \frac{qB}{mv} L$$

$$\begin{aligned} \Rightarrow Y &= \frac{qB}{2mv} L^2 + D \frac{qB}{mv} L \\ &= \left(\frac{L}{2} + D\right) \frac{qB}{mv} L = \left(\frac{L}{2} + D\right) \tan \phi_L \end{aligned}$$