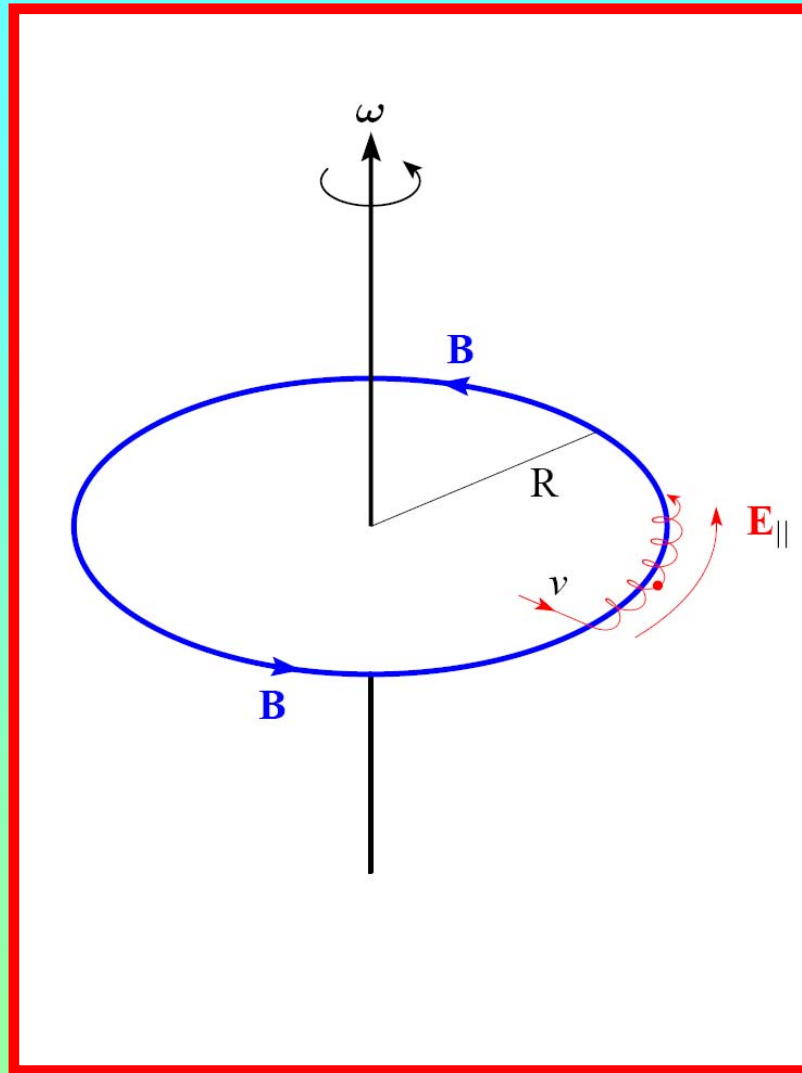
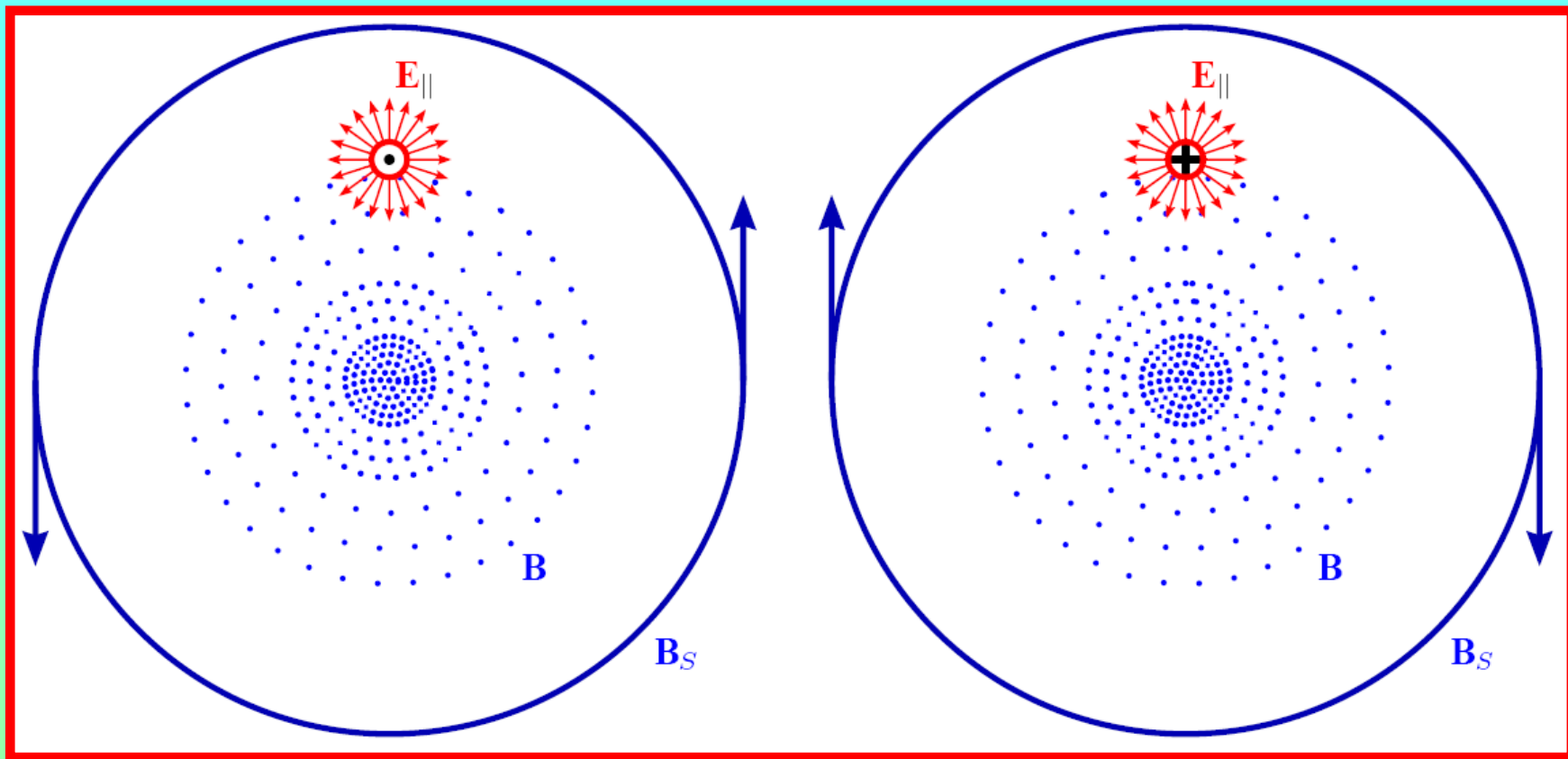


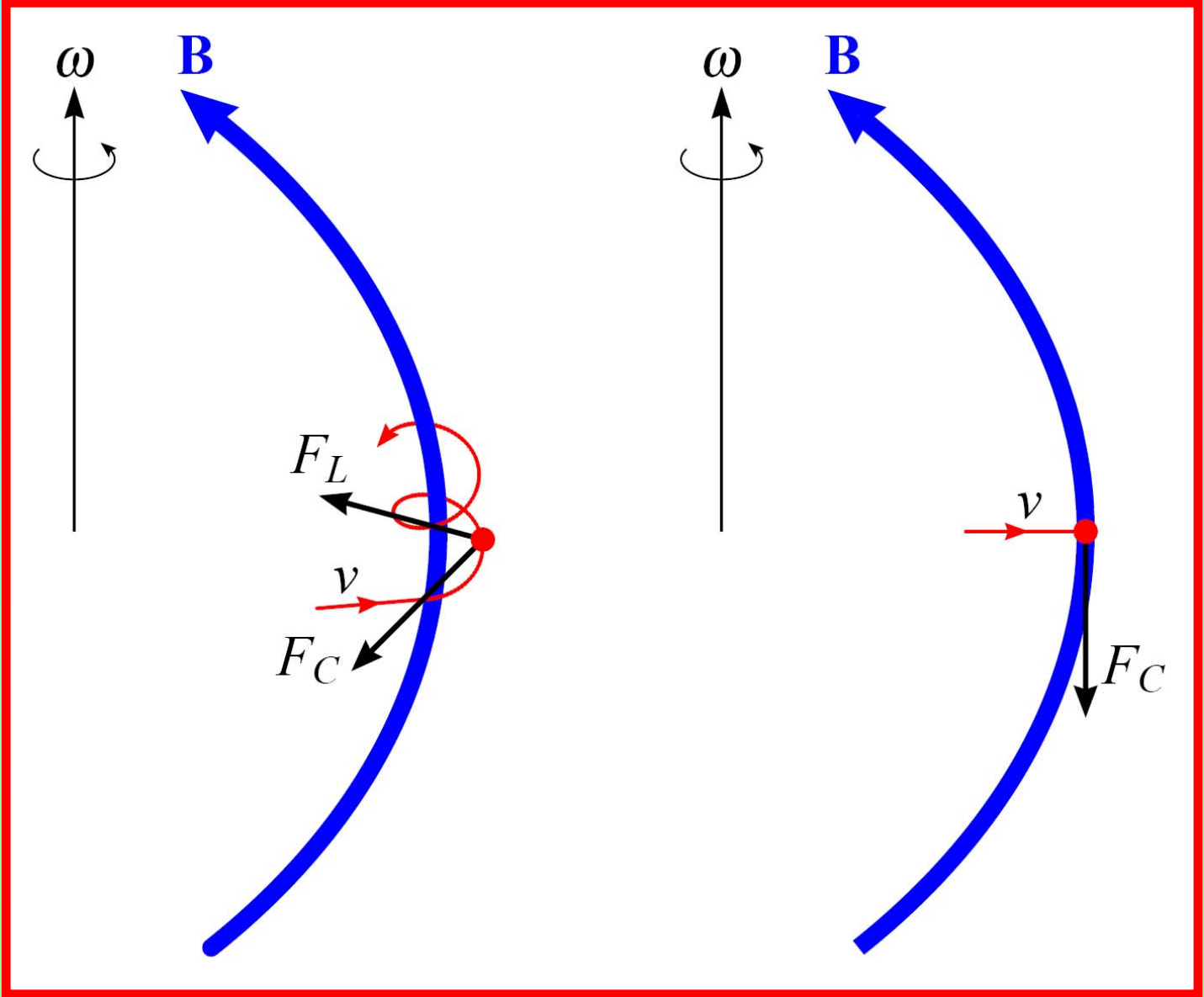
# **Jednoduchý model magnetického prepólovania**

**I. Túnyi, D. Majcin, P. Guba**

**Geofyzikálny ústav SAV**







Lorentzova sila:  $\mathbf{F}_L = e \mathbf{v} \times \mathbf{B}$

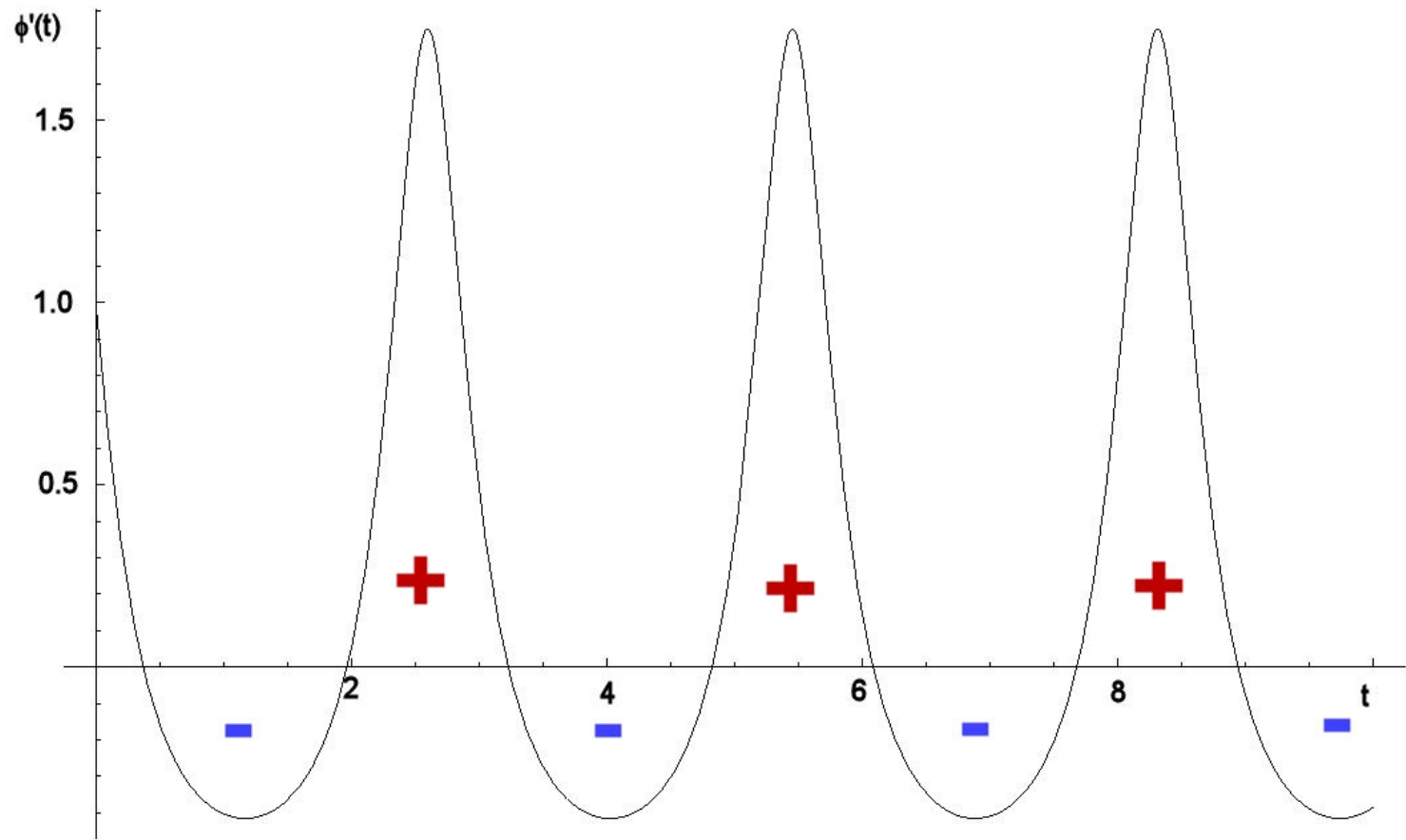
Coriolisova sila:  $\mathbf{F}_C = -2m \boldsymbol{\omega} \times \mathbf{v}$

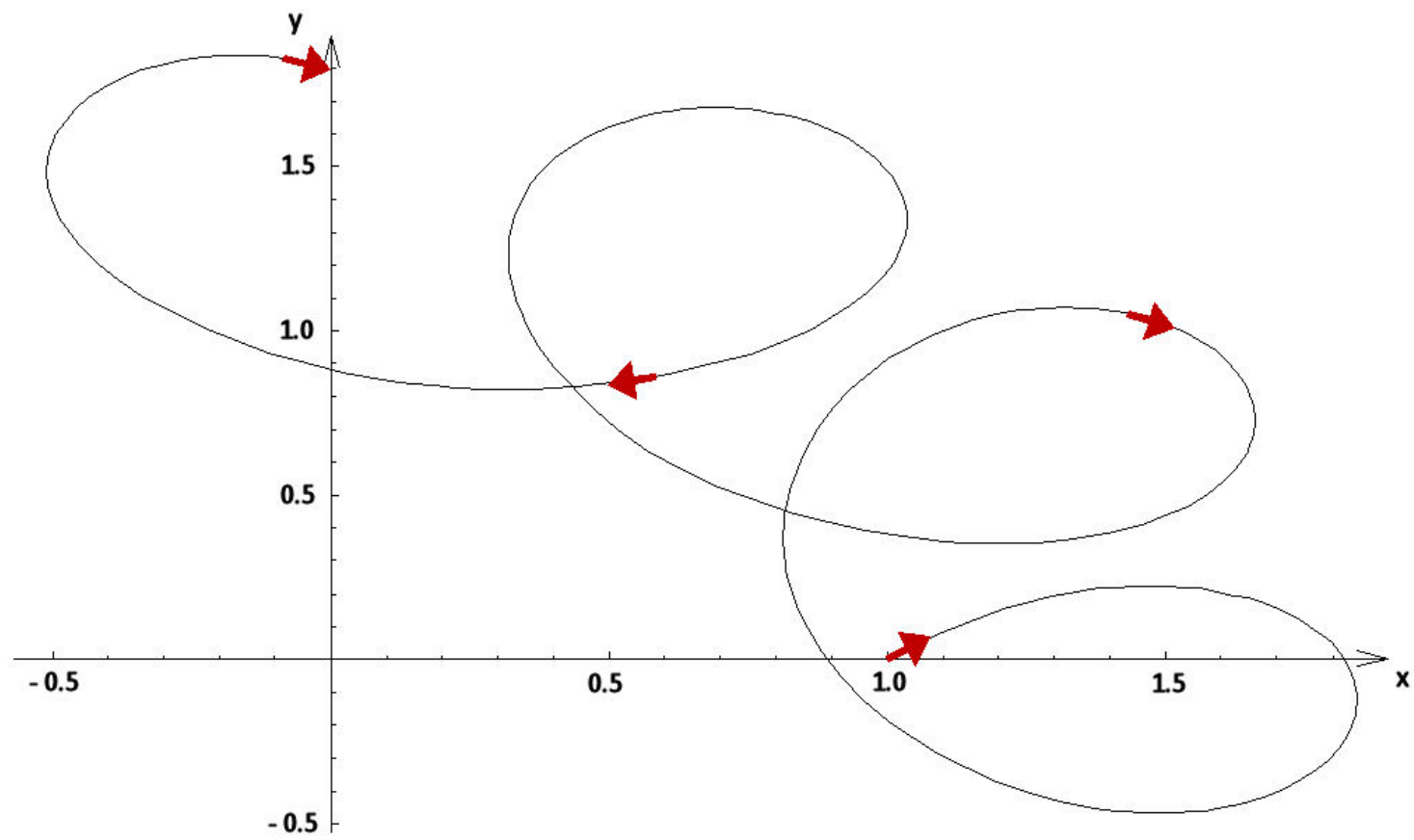
System riadiacich rovníc:

$$-2\dot{r}\dot{\phi} \sin \phi + \ddot{r} \cos \phi - r(\dot{\phi}^2 \cos \phi + \ddot{\phi} \sin \phi) = -\frac{eBR}{m} \frac{1}{r} \dot{z} \cos \phi + 2\omega(\dot{r} \sin \phi + \dot{\phi} \cos \phi)$$

$$2\dot{r}\dot{\phi} \cos \phi + \ddot{r} \sin \phi + r(-\dot{\phi}^2 \sin \phi + \ddot{\phi} \cos \phi) = -\frac{eBR}{m} \frac{1}{r} \dot{z} \sin \phi - 2\omega(\dot{r} \cos \phi + \dot{\phi} \sin \phi)$$

$$\dot{z} = \frac{eBR}{m} \frac{1}{r} \dot{r}$$





# 3D



Mag3ds.exe



**Ďakujem za pozornosť!**