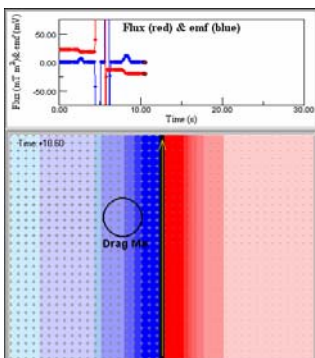


Worksheet for Exploration 29.3: Loop Near a Wire



A loop is near a wire which has a current flowing upwards. You can drag the loop (**position is given in meters, magnetic field strength is given in millitesla, emf is given in millivolts, and time is given in seconds**). The flux through the loop and the induced emf are shown in the graph. The animation will stop after 30 s.

- a. How does the flux through the loop and the emf change as you drag the loop towards and away from the wire?

Flux/toward/right side

emf

Flux/away/right side

emf

- b. How does the flux through the loop and the emf change as you drag the loop parallel to the wire?

Flux/parallel/right side

- c. Are the flux and emf different when the loop is on the left side, instead of the right side, of the current-carrying wire? Explain.

Flux/toward/left side

emf

Flux/away/left side

emf