

## Lab 6: Magnetic Fields

Due Date: n/a

### Background

During your interstellar voyage to Kepler-186f, one of your crew members smacks their noggin during a game of *Pokémon Go* gone horribly wrong. You quickly cobble together a simple MRI machine to assess the severity of the injury.

### Challenge

Devise an apparatus that will generate magnetic fields of approximately 0.1 mT, 0.15 mT, and 0.2 mT. Compare your results to those expected from theoretical considerations.

### Available materials:

multimeter & probes

*Logger Pro* software

metal slinky

rheostat

wires, voltage source, clips

ruler

$B$  field sensor

Vernier high current sensor

tape

### Technical details

Before attempting to measure a magnetic field, familiarize yourself with the equipment and software. For example, measure the current through the slinky by using both a multimeter and Ohm's Law.

**No lab report will need to be submitted**

