

Experimental Magnetism Off the Lab

Laurent Ranno
Institut Néel, Grenoble, France
*laurent.ranno@neel.cnrs.fr

3 special experimental practicals will be organized. Each of them will last 2h and gather 18 students.

Tentative dates: Sunday 8th, Tuesday 10th, Wednesday 11th

The idea is to split the room in 6 groups and to address a magnetic problem for 20'. 6 problems will then circulate during each session. Each problem is based on a simple experiment (which can be rather easily transported). The idea is to perform the experiment and then to propose an explanation, qualitative at first, and then as quantitative as possible (time permitting). Each problem will illustrate a magnetic concept.

The planned list of experiments is the following:

- Levitation (at 300K)
- Magnetic Gun (Energy conservation)
- Fridge Magnets (Stray fields)
- Magnetic Brake
- Magnetic Sensing / Fluxgate
- Magnetisation (Temperature dependence)