

# HST Working group 4

S'Cool LAB – Julia, Alexandra, Vincent

# Motivation

- Make particle physics understandable for students by hands-on experiments
- Bring particle physics into the classroom
- Develop experiments affordable for the majority of schools

# Framework – S’Cool LAB

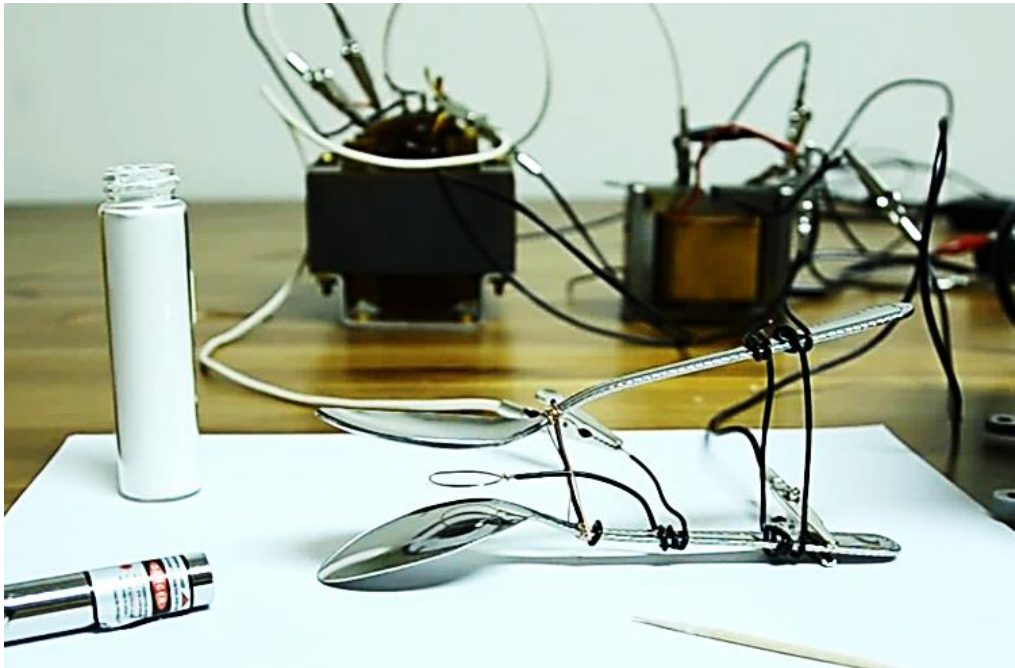


200 m<sup>2</sup> modular laboratory space in 143-R-003, with the goal to make CERN's physics and technologies understandable for students. Our offer for school groups (age group 16-19): 1-day programme at CERN including visits in the morning and hands-on experiments in the afternoon

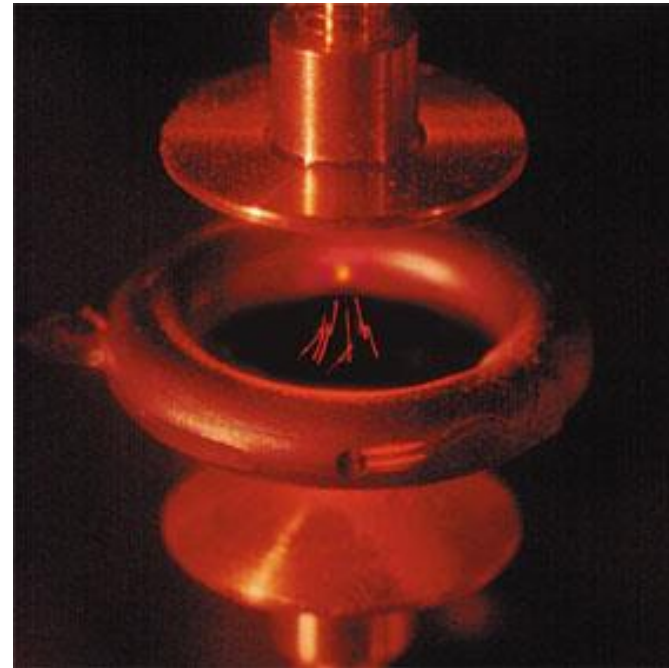
<http://cern.ch/s-cool-lab>

# Experiments this year – Paul traps DIY

- Trap electrically charged lycopod spores in electric fields



Homemade ion trap using spoons and wire (2012).  
<https://www.youtube.com/watch?v=PYpbKSmOnNc>



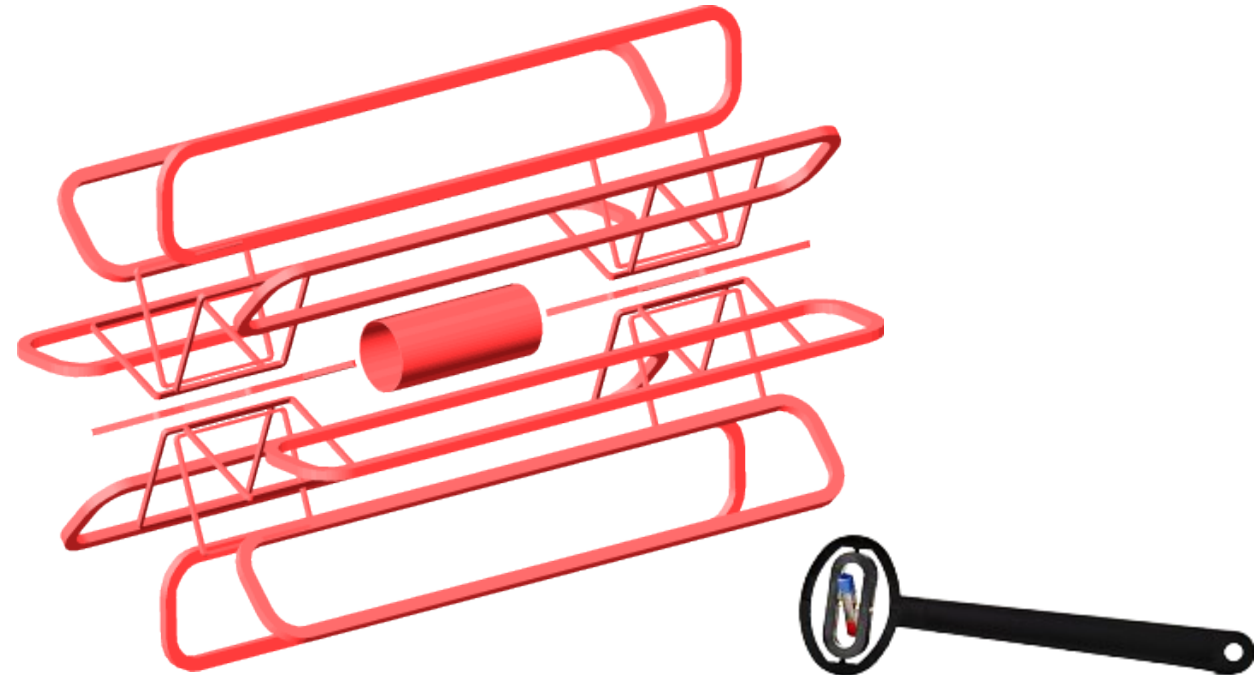
LD Didactic. Paul Trap [LINK](#)

# Experiments this year – ATLAS magnet DIY

- Develop prototype 2, make the magnetic field visible



Image credit: [Jeff.Wiener@cern.ch](mailto:Jeff.Wiener@cern.ch)



[ATLAS Magnet Group / Roger Ruber \(2002-2010\)](#)

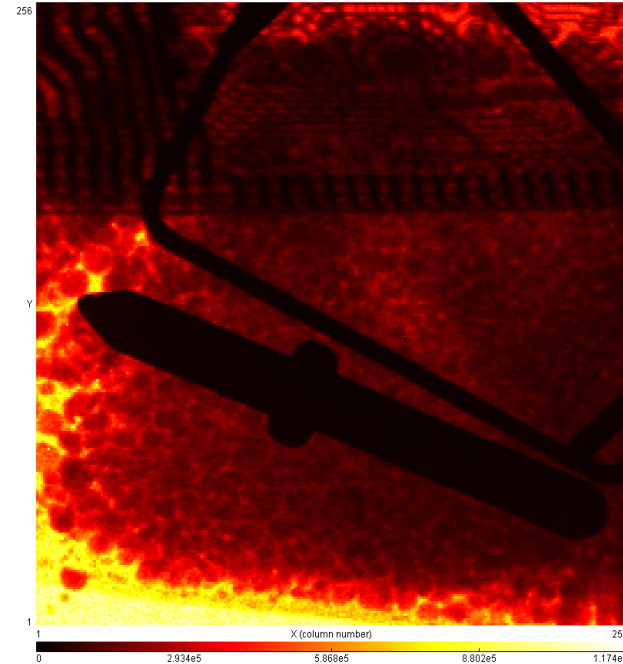
[Magnaprobe™ Magnetic Field Indicator Mark II](#)

# Experiments this year – MX-10 Pixeldetector

- Study the full range of possible experiments



Image credit: Jeff.Wiener@cern.ch



# Goals

- Build prototypes / study the experiment
- document the construction process
- propose a concept of how to integrate this experiment in the classroom taking into account students' conceptions
- Write a short article about your experiment

Questions?