

The
PHYSIQUARIUM,
a visitors' area
at the Institut
NÉEL

This dedicated visitors' area aims to make the story of scientific advances- past and present- comprehensible and attractive, and to provide glimpses of future developments. It was planned as a gateway to the Institut NÉEL's research work, adaptable for a varied public. It provides a pedagogical presentation of our work, including possibilities for simple demonstration experiments.



Fig. 1: View of part of the visitor area.

Opened in 2014, the PHYSIQUARIUM consists at present of three sections: Magnetism, Crystallography and Low Temperatures, three domains that are fundamental to much of the Institut NÉEL's research. Text, images and videos (accessed interactively via a touch-screen terminal), multiple posters and "hands-on" experiments introduce the visitor to the history of these three domains and present a selection of our recent discoveries and current work.

« Il est de notre responsabilité de vulgariser nos travaux pour les rendre accessibles à un plus grand nombre. »

Alain Schuhl, Director of the Institut NÉEL 2011-2014

Various frameworks for visits are possible. In 2015, these have benefited, in particular: classes from regional high schools; the winners of the national "Olympiades de Physique" competition; the general public during Grenoble's annual Fête de la Science; the undergraduate-level university students attending the International Nanosciences Summer School.

The first initiatives have interested some of the Institut NÉEL's partners. Representatives from Okayama University have visited the PHYSIQUARIUM to prepare the visit of 15 Japanese high school students in 2016. Locally, a formal collaboration has been started with our regional education authorities: a specific science-popularisation programme named "school@physiquarium". This programme is designed to actively engage high-school students, to stimulate their curiosity and sense of wonder, and to encourage them to apply all their powers of observation. Before the visits, the classes' science teachers meet with Institut NÉEL personnel and a supervising teacher for a day of preparation at the PHYSIQUARIUM. This enables the teachers to plan the most appropriate experiments to undertake with their students.

A specific programme also exists with the École des Pupilles de l'Air de Grenoble in which their post-baccalaureate year students develop new pedagogical experiments, for presentation at the PHYSIQUARIUM and possible integration into its panoply of experiments.

The researchers responsible for the PHYSIQUARIUM are Julien Delahaye, Jean-Louis Hodeau and Pierre Molho. Many Institut NÉEL staff and Ph.D. students contribute regularly to its success, including by welcoming the visiting students into their laboratories.

Popularisation of science is an important mission and the PHYSIQUARIUM is a concrete example of the Institut NÉEL's ongoing commitment to communicating with the public and especially to awakening young people to science. In return, our staff have been gratified by the response of teachers and their pupils. And for our Ph.D. students, the PHYSIQUARIUM provides an opportunity to present – often for the first time – their discipline to a non-specialist audience.

In 2016, a fourth section will be added to the PHYSIQUARIUM, called "Microscopies" (to include optical, electron, and near-field microscopies), which is another major area of the Institut NÉEL's research.



Fig. 2: Observation.



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FURTHER READING

neel.cnrs.fr/physiquarium