

**Press release
(January 18, 2006)**

First SOLEIL users meeting

A numerous public, impatient to visit SOLEIL—before coming to work there!—attended the first users meeting, organized before the opening of the synchrotron—on January 18 and 19, 2006. This users meeting was an opportunity to inform the 319 participants of the progress of SOLEIL's programs, as well as to form a users' representative committee.

A user meeting is, as its name indicates, a gathering of users. More than 300 SOLEIL users attended this particular meeting. However, at the moment SOLEIL is not yet operational. These are more than 300 *potential* users who gathered at SOLEIL on January 18 and 19, 2006. The second day was focused on the scientific experiments and technological developments that can be conducted at a synchrotron beam center like SOLEIL. The scientific themes soon to be addressed at SOLEIL were discussed at six round tables (material physics: diluted milieus (physical chemistry); biology: chemistry, condensed phase, soft matter; surfaces, interfaces, nano-objects; Heritage, archaeology, environment, geosciences).

Two related symposiums, each hosting a hundred participants, had preceded the users meeting. To begin, the "magnetism" workshop of January 16 and 17 emphasized recent advances obtained thanks to the synchrotron beam in the area of magnetism. A follow-up to workshops held in Strasbourg, particularly in May 2001 ("magnetism and SOLEIL") and February 2003 ("magnetism and synchrotron radiation"), it included three sessions: the challenges of magnetism, the benefits of synchrotron radiation in this area, and finally means for studying magnetism at SOLEIL and other European synchrotrons.

The following morning, the "short pulses" symposium renewed the scientific prospective around the use of short pulses at SOLEIL. Promising perspectives in terms of FWHM of pulses generated as well as in terms of average photon fluxes are opened with the operation of "CRAB" cavities permitting the local modification of the electron packet in order to be able to inflict compressed (to 500 fs) synchrotron ray pulses on the sample. Presentations permitted an evaluation of the interest in such applications in a large area of energy, in order to establish a solid scientific case in favor of the development of such a project at SOLEIL.

REMINDER

Located on the Saclay Plateau in Essonne, SOLEIL is the second 3rd-generation synchrotron constructed in France; the first, the Grenoble ESRF, is a European synchrotron. SOLEIL is a public company whose two shareholders are the CNRS and the CEA, and in which the Ile-de-France region and the General Council of Essonne are quite deeply invested. The construction of such a facility requires both large sites and highly precise mechanics. It involves the acceleration of packets of electrons so that they produce an exceptionally bright light ray that covers a very wide range of wavelengths, from infrared to X-rays, including ultraviolet light. The characteristics of this light (intensity, focus, stability, polarization, etc.) permit the observation of matter at the atomic level and makes experiments possible that were inconceivable before, in fundamental as well as applied and industrial research. At SOLEIL, there are various fields mobilized by science and industry today: biology, chemistry, material sciences, environment, physics, Earth sciences, and cultural heritage and archaeology. The criteria defined for SOLEIL (operating energy, number of wavers, large spectral range from infrared to X-ray, brilliance, continuous injection for stability of micron beam, etc.) place it at the highest level of international competition.

CONTACT

Communications Department: Marie-Pauline Gacoin- 01 69 35 90 15 – marie-pauline.gacoin@synchrotron-soleil.fr
Website: www.synchrotron-soleil.fr
Contact: webcom@synchrotron-soleil.fr