



SOLEIL synchrotron embarks on the final pre-construction stage of the IPANEMA facility (16 July 2009)

On 15 July, the SOLEIL synchrotron, in agreement with its Board of Directors – the French National Centre for Scientific Research (CNRS) and the French Atomic Energy Commission (CEA) –, approved the start of the last stage of studies leading to the construction of the IPANEMA building. This unique instrumental platform that is like no other in the world will facilitate access to synchrotron techniques for scientific communities working with “ancient materials”. The project will be officially launched during European Heritage Days in September 2009.

The European Institute for the non-destructive photonic analysis of ancient materials (IPANEMA - Institut photonique d'analyse non-destructive européen des matériaux anciens) was founded with the support of the French State and the Ile-de-France region in the framework of the 2007-2013 State-Regional Project Contracts (CPER) and is dedicated to the advanced study of materials in the fields of archaeology, palaeontology, palaeoenvironments and cultural heritage conservation. IPANEMA was set up jointly by SOLEIL, the CNRS, the National Museum of Natural History and the Ministry of Culture and Communication.

More than one hundred scientists from the four fields concerned have been meeting since 2008 to collectively design this facility to ensure that it will meet their needs in terms of non-destructive analysis. IPANEMA, which will adjoin the SOLEIL synchrotron, will facilitate the study of sample corpora, specimens and ancient objects. To that end, it will house scientists sponsoring research projects for periods of up to three years and will develop research activities focussed on instrumentation and methodologies specifically adapted to the study of ancient materials. IPANEMA is European in scale and a member of the European Commission's CHARISMA project, which will provide support for access by European users.

The project, backed by a multidisciplinary team, includes the construction of a building and a synchrotron beamline optimised for these fields of research.

SOLEIL

Located on the Saclay Plateau in the Essonne department, SOLEIL is the third-generation French synchrotron. SOLEIL is a research centre directed by the CNRS (French National Centre for Scientific Research) and the CEA (French Atomic Energy Commission). The building of this type of facility involves major construction work as well as precision mechanical work. Its purpose is to accelerate bunches of electrons until they radiate extremely bright light covering a very wide range of wavelengths: from infrared to x-ray, with ultraviolet in between. The characteristics of this light (intensity, focus, stability, polarisation, etc.) allow scientists to observe matter down to the atomic level and perform experiments that would previously not have been possible, in the interests of fundamental, applied, and industrial research. SOLEIL serves many areas currently of particular interest to the scientific and industrial communities: biology, chemistry, materials science, the environment, physics, Earth sciences, cultural ancient materials. SOLEIL's specifications (operating energy, number of undulators, broad spectrum from infrared to x-ray, brilliance, continuous injection for beam stability to within a micron, etc.) make it competitive at the top level on the international scene.

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