

SuperB scientists test new ideas at Diamond

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In the Diamond Control Room, left to right: Riccardo Bartolini, Andrei Seryi, Pantaleo Raimondi and Simone Liuzzo

Accelerator physicists working on the recently funded SuperB accelerator in Italy have been collaborating with Diamond's accelerator physicists to test new techniques for low emittance tuning, which can potentially benefit both Diamond and the SuperB.

The 300 million euro SuperB project will develop a particle [accelerator](#) system (electron-positron collider). This machine will extend by 100 times the production of B mesons, leading to new insights into the birth of the Universe, and complementing the high energy frontier machines such as the LHC.

Since the Italian Government made the funding announcement in December 2010, Pantaleo Raimondi, Head of the SuperB accelerator

project, has made several visits to Diamond and have run low emittance tuning tests during machine shifts. Andrei Seryi, Director of the John Adams Institute in Oxford, also joined the Diamond shifts.

As a relatively new 3rd generation synchrotron, Diamond is at the forefront of accelerator developments and ideally placed for testing new techniques and ideas.

“We are delighted to be working with the SuperB project team on this accelerator development work. New techniques for low emittance tuning are of interest to us because they will help us to improve the performance of Diamond for all the scientific researchers who conduct experiments at the facility. The SuperB project is of great interest to the UK science community. Advances on both the detector and accelerator side are expected and there will be opportunities for UK scientists and companies to work on this flagship Italian science project.” said Riccardo Bartolini, Diamond’s Head of Accelerator Physics.

Provided by Diamond Light Source

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