

Brazilian Synchrotron Light Laboratory - LNLS: from Scratch to a State-of-the-art Machine in 30 Years

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The first discussions to build a synchrotron light source in Brazil started in the early SO's. At that time, Brazil had no knowledge in either building or operating a synchrotron machine. Moreover, only a handful of researchers in the country had already used a synchrotron somewhere else in the world. Strategies were taken both to train young physicists, engineers and technicians in the different fields needed to build a synchrotron accelerator and its beamlines, as well as to educate researchers for their usage. The overall design and construction of UVX, the name of the Brazilian second generation machine, took from 1987 up to 1997, when it was opened to users. It was the first synchrotron light source in the southern hemisphere, as it is still today the only one in Latin America. It opened with 7 beamlines, and it evolved to have 18 today. The number of users grew from less than two hundred to more than a thousand per year. They come today from a community of almost 3.000 users that have at some point visited LNLS. The development of such a community placed a natural demand for a better machine. Thus, LNLS started to work on a project of a new synchrotron light source. The first proposal to initiate the studies of such a machine was presented to the Minister of Science and Technology in 2008. From then on many developments were made, and today Sirius, the nickname of the new synchrotron, is starting to become a reality. It is a very challenging light source, designed to have one of the highest brightness among the 3 GeV synchrotron sources in the world. Construction of the building is planned to start by the end of 2014, and the first beam is expected by 2018.

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