

Protein crystallography at the Brazilian Synchrotron Light Source-LNLS

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The Brazilian Synchrotron Light Source, LNLS, to be commissioned in August 1996, at Campinas, Brazil, will have a dedicated protein crystallography beamline. The beamline under construction will include a cylindrical mirror and bent crystal monochromator, focusing the high flux of synchrotron radiation at the position of the sample. The monochromatic radiation will be tunable between 1.9 to 1.2 Å with the optimum wavelength at 1.6 Å, chosen with the aim of maximizing the photon flux from the bending magnets of the storage ring (1.4 GeV).

Diffraction images will be recorded on an image plate system, and the beamline setup will include a cooler/chiller for the samples and computer facilities for beamline operation, data collection, and evaluation. Biochemistry facilities for crystallization, heavy metal soaks, crystal storage, and mounting at 20°C and 4°C will also be available. This facility, intended to serve the national and international community, is planned to be brought into operation in September 1996. It is foreseen that the commissioning of the first protein crystallography beamline in Latin America will boost the number of protein structures determined locally and will increase the general interest in this area from the molecular biology and biochemical research community of Brazil.