The Australian Synchrotron

Richard GARRETT[1], Alan JACKSON[2], John BOLDEMAN[2], Andy BROADBENT[2]
and Greg LE BLANC[2]
[1]Australian Synchrotron Research Program, c/- ANSTO, PMB1, Menai NSW 2234, Australia
[2]The Australian Synchrotron Project, 800 Blackburn Road, Clayton, Vic. 3168, Australia

The Australian Synchrotron, located in Melbourne, Victoria, is a third generation 3 GeV synchrotron facility designed to produce high brilliance X-ray beams in the range 100 eV to 65 keV. The facility comprises a 100 MeV electron linac feeding a full energy booster synchrotron injecting into a 3 GeV storage ring, 216 m in circumference. The building and accelerators are complete, first light was achieved on July 14 this year and currently a stored beam of 100mA has been realised. The Australian Synchrotron will have an initial suite of 9 beamlines and an eventual capacity of over 30, and is scheduled to open in 2007 with 5 of the initial 9 beamlines being commissioned. These 5 will be protein crystallography (bending magnet source), powder diffraction (bending magnet), X-ray absorption spectroscopy (multi-pole wiggler), soft X-rays (Apple II undulator) and infra-red spectroscopy. The experimental stations for these beamlines are being installed and the first optical components are about to arrive. The accelerator systems and the design and status of the initial suite of 9 beamlines will be presented.