

Research Opportunities at the New BR-GHT Beamlines at the Australian Synchrotron

The Australian Synchrotron is one of Australia's premier research facilities and, at about AUD\$300 million, represents one of the biggest single investments in scientific excellence in the nation's history. Despite this substantial investment, an enviable record in machine reliability as well as excellent scientific productivity, the Australian Synchrotron remains one of the most undercapitalised facilities in the world. Achieving first light in 2006 and first users in 2007, the Australian Synchrotron currently only operates its original suite of 10 beamlines.

Following extensive consultation with the User Community, the Science Case for the Phase II beamlines at the Australian Synchrotron was finalised in 2010. The conceptual designs for several of the priority beamlines were further refined in 2012, before a hiatus in the planning for new beamlines while the ongoing operational funding of the facility was settled.

2016 saw a substantial re-engagement with respect to new beamline development; made possible by the Australian Commonwealth Government's AUD\$520 million, 10 year operating funding package for the Australian Synchrotron. The BR-GHT campaign was subsequently launched, with the aim of securing AUD\$114 million to fund the construction of 8 new beamlines. It is expected that the BR-GHT program will commence later this year.

This presentation will detail the beamlines that form the BR-GHT suite of instruments at the Australian Synchrotron; discuss their conceptual designs and areas of scientific impact.
