AuScope Launch, 29 September 2010 – Professor Kristjanson

- **Thank you all for joining us today. I would like to join with Julian in extending a particularly warm welcome to Minister Carr, my colleagues on the AuScope board, and those of you representing AuScope's partner agencies and institutions. What better place to showcase AuScope than here at the centre of activities in our national Parliament House?**
- **Not only does this space contain some extremely fine examples of geological material in areas such as the Marble Foyer; but the scale and significance of this building invites us to think of the big picture, the national interest, and our combined future as Australians.**
- **AuScope's aims are similarly large and focused on the future. We are working to provide a comprehensive, accessible, national research capability to increase and improve our understanding of the Australian continent.**
- **AuScope brings together hardware, data, software systems and technical expertise from agencies and institutions across Australia, and makes these tools available to support important research projects in a diverse range of fields.**
- **The AuScope initiative is made up of six linked components, which together provide a comprehensive framework for examining our continent—from its surface to its core, and in both space and time.**

- **I would like to take a moment to describe a little about each of these components and highlight how these fit together in the overall initiative.**
- **The earth composition and evolution component provides the geochemical infrastructure needed to learn more about the chemical and mineral composition of Australia. This capability allows us to gain new insights into how Australia was formed and over what time period.**
- **AuScope's National Virtual Core Library component involves the establishment of a unique virtual library of core samples taken from the top two kilometres of Australia's crust.**
- **The core library draws on a rich collection of core samples collected through mineral exploration and the work carried out by our state and territory surveys. AuScope will continue to build on this collection into the future.**
- **Establishing this library will give researchers world wide a vast bank of existing data from disparate sources to draw upon as a starting point for further research.**
- **The earth imaging and structure component uses state-of-the-art seismic equipment to support a range of experiments into Australia's geologic structure and the shifting plates which form the very basis of this continent.**
- **The research carried out through this component has important applications for areas such as natural resource management, as AuScope unlocks greater knowledge about the pressures at work on Australia's foundations.**

- **The simulation, analysis and modelling component unites AuScope's wealth of geological data with innovative software and specialist technology to create detailed simulations and models of the Australian continent under different conditions.**
- **Through this component, researchers can simulate natural hazards such as earthquakes and tsunamis, generate models for mineral deposits and geothermal energy resources, and develop other useful geological models to support decision-making in both the public and private sectors.**
- **The geospatial framework and earth dynamics component is working towards the creation of a national geodetic infrastructure that will allow for more accurate mapping of the Australian continent in three-dimensional space.**
- **Through provision of world class infrastructure using satellite laser ranging, very long baseline interferometry and global navigation satellite systems, the geospatial component is supporting Australian research on critical topics such as sea level variation.**
- **The AuScope grid and interoperability component connects all of the other elements together by creating a network of data storage hardware, high bandwidth data channels and specialised software, which allow seamless and cost effective access to information across Australia.**
- **Of critical importance is AuScope's grid, which will provide links for the data stores of key government agencies such as Geoscience Australia, state governments, and academic &**

research institutions for the first time, giving researchers access to a wealth of accessible and highly valuable data.

- **So this is very simply what each of our six components provides. But more important than any individual part of AuScope, is the capability of our facilities when these components work together. This is what I refer to as the "so-what factor" of our capability.**
- **AuScope's research infrastructure provides an integrated context for researchers to carry out targeted studies on issues such as climate change, groundwater resources, mineral and energy resources, land use, natural hazards, and the secure disposal of both hazardous and non-hazardous waste.**
- **These are not just topics of academic interest—they are critical issues important for Australia's future.**
- **AuScope unites and builds on previously disconnected initiatives; and in doing so, places Australia in a much stronger position to respond to, and make good use of our shared understanding of the natural environment.**
- **Knowledge about our continent, its resources and the changing environment helps government set and implement relevant evidence-based policies.**
- **Access to complex, easy-to-use datasets allows companies to make good decisions about their future business ventures, and it helps communities plan for the future.**

- **Knowledge about this continent and its potential is what AuScope is working to unlock, and that is why this initiative is so fundamentally important for our future.**
- **AuScope has now been in operation for four years, and in that time we have made substantial advances in the sophistication and comprehensiveness of our research infrastructure.**
- **However, the infrastructure is still very much a work in progress, and more work remains to be done to weld together developing technologies, data streams, expertise and software systems.**
- **We recognise the importance of maintaining the current momentum and maximising the investment to date in AuScope as the vehicle for continuing to build a world class infrastructure for Australian earth science. As a research community we have been given a tremendous opportunity to take some very important first steps.**
- **That is why we were particularly pleased to hear from Minister Carr's department that AuScope has been awarded $23 million through the latest Education Investment Fund grant round**

- **This funding will be used to develop AuScope's Australian Geophysical Observing System, which will deliver new and cheaper ways of monitoring, imaging and modelling the top five kilometres of Australia's crust to understand the subtle, but important changes that are occurring as a result of human activity.**
- **The system will build on industry's previous investment in deep drilling by making existing boreholes available to geoscience researchers. This will allow for both direct and indirect examination of Australia's upper crust, in an unprecedented level of detail.**
- **This funding comes on top of the $42.8 million provided by the Australian Government in 2007 to establish AuScope's basic capacity.**
- **I would like to thank Minister Carr for recognising the importance of this initiative, and for the ongoing support that the government has provided to date.**
- **I would also like to thank each of AuScope's partners, who together, have contributed more than $70 million in kind since 2007 to grow and expand our research capabilities.**
- **These partners include: the CSIRO, Geoscience Australia, and 11 universities: ANU, Curtin, Macquarie, Monash, Swinburne, the University of Adelaide, University of Melbourne, the University of Queensland, the University of Sydney, the University of Tasmania, and UWA.**

- **I would also like to acknowledge Geoscience Victoria, the Geological Survey of Queensland, the Geological Survey of Western Australia, the Geological Survey of New South Wales, Mineral Resources Tasmania, the Northern Territory Department of Planning, Infrastructure and Environment, the Northern Territory Department of Primary Industries, Fisheries and Mines, Primary Industries and Resources South Australia and the National Aeronautics and Space Administration.**
- **Our partners' support and involvement have been absolutely critical to AuScope's success over the past three years, and we look forward to continuing to work with you to grow this initiative in the future.**
- **As Julian has mentioned, all of our component leaders are here today to demonstrate AuScope's work in action and I encourage you to spend some time visiting them at each of the stations.**
- **Thank you again for coming along to today's AuScope showcase. We hope that you will continue to keep an eye on our future developments and achievements in the months and years ahead. We have much to offer the wider community and we remain committed to ensuring that the research and innovation we foster make a difference.**