



MEDIA RELEASE

Sydney, Australia: February, 2016

COLLIDER EXCLUSIVE TO SYDNEY SCIENCE FESTIVAL

The **2016 Sydney Science Festival** will take visitors deep into CERN's Large Hadron Collider. Experience the world's largest science experiment, as part of a compelling program of exhibitions, talks and workshops right across the city.

Now in its second year, the Sydney Science Festival is led by the Museum of Applied Arts and Sciences, in collaboration with museums, galleries, universities, businesses, scientists, engineers and community organisations across greater Sydney, to deliver a vibrant 11-day program for National Science Week.

Museum of Applied Arts and Sciences Acting Director, **Dolla Merrillees**, said festival audiences had a lot to look forward to.

"In 2015 the inaugural Sydney Science Festival attracted over 39,000 participants across 132 events, and we are looking forward to working with even more partners this year for an even bigger program," said Ms Merrillees.

Organisations interested in being a part of the 2016 festival program are invited to submit an expression of interest by the 7 March.

A highlight of this year's Sydney Science Festival program will be **Collider**, an exhibition direct from the London Science Museum, which takes visitors on an immersive journey through the Large Hadron Collider in CERN's Geneva laboratories.

"This immersive exhibition is a once in a lifetime opportunity to get up close and personal with one of the world's ground-breaking scientific facilities," said Ms Merrillees.

"With its recreated tunnels and work spaces this is the place where the very hot meets the intensely cold, where the big sits alongside the extremely small and where art and science intersect. It is the perfect representation of the Museum's ongoing commitment to showcasing human innovation and the intersection of art, science and technology,

Blending theatre, video and sound with real artefacts from CERN, this exhibition puts visitors at the heart of an experiment that recreates the conditions that existed just after the Bing Bang occurred 13.8 million years ago," said Ms Merrillees.

Australian researchers and students are involved in the LHC project through the ARC Centre of Excellence for Particle Physics at the Terascale (CoEPP), a collaborative research venture between the Universities of Melbourne, Adelaide, Sydney and Monash.

Sydney Mini Maker Faire will also return to the Powerhouse Museum as a highlight of the Sydney Science Festival. Now in its fourth year, the two-day faire provides an opportunity for Sydney's best Makers, from a wide range of disciplines, to showcase their creations to the public. From wine makers to Arduino coders and 3D printing designers, share in the wonder of invention with passionate Makers from across NSW.

Sydney Science Festival

11–21 August 2016

Powerhouse Museum

Expressions of Interest close 7 March 2016

www.sydneyscience.com.au/eoi/

Collider exhibition

11 August – 30 October 2016

Powerhouse Museum

Tickets free with general admission

Adult \$15, Concessions \$8

Children 16 years and under FREE



About the Museum of Applied Arts and Sciences

The Powerhouse Museum, alongside Sydney Observatory and Museum Discovery Centre, is part of the Museum of Applied Arts and Sciences (MAAS), Australia's contemporary museum for excellence and innovation in applied arts and sciences. The Museum of Applied Arts and Sciences has a vast and diverse collection of over 500,000 objects.

About the London Science Museum

As the home of human ingenuity, the Science Museum's world-class collection forms an enduring record of scientific, technological and medical achievements from across the globe. Welcoming over 3 million visitors a year, the Museum aims to make sense of the science that shapes our lives, inspiring visitors with iconic objects, award-winning exhibitions and incredible stories of scientific achievement.

Notes to Editors:

Collider

The Collider exhibition transports visitors into the heart of one of the greatest scientific experiments of our time: the Large Hadron Collider (LHC). Collider provides a behind-the-scenes look at the CERN particle physics laboratory in Geneva in the first exhibition of its kind, offering visitors the closest experience possible to visiting the famous site itself.

The immersive exhibition blends theatre, video and sound art, to take visitors to the site of the LHC where they can explore areas including CERN's Control Room and a huge underground detector cavern. Visitors can meet 'virtual' scientists and engineers from CERN, snoop around a researcher's workbench, and examine objects up-close.

Visitors will follow the journey of particle beams as they are injected into the accelerator chain, ramped up to speed and steered around the 27km LHC tunnel. Moving along the tunnel, visitors are then immersed in the highlight of the exhibition – a wrap-around projection taking in both extremes of the scale of the LHC: from an enormous experiment cavern, to the very heart of a particle collision.

The Large Hadron Collider: facts and figures

- The Large Hadron Collider is the largest, most sophisticated and most powerful scientific device ever made. It is being used by thousands of scientists and engineers around the world to learn more about the tiny building blocks that make up our Universe and the laws that govern their behaviour.
- The precise circumference of the LHC accelerator is 42,903 km, containing thousands of the world's most powerful magnets.
- Not only is the LHC the world's largest particle accelerator, just one-eighth of its cryogenic distribution system would qualify as the world's largest fridge.
- When in operation, trillions of protons race around the LHC accelerator ring 11,245 times a second, travelling at 99.9999991% the speed of light. Altogether some 600 million collisions take place every second.
- When two beams of lead ions collide, they generate temperatures more than 100,000 times hotter than the heart of the Sun
- By contrast, the 'cryogenic distribution system', which circulates superfluid helium around the accelerator ring, keeps the LHC at a super cool temperature of -271.3°C (1.9 K) – even colder than outer space!

About CERN

CERN, the European Organization for Nuclear Research, is the world's leading laboratory for particle physics. It has its headquarters in Geneva. At present, its member states are Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom. Romania is a candidate for accession. Serbia is an associate member in the pre-stage to membership. Pakistan and Turkey are associate members. India, Japan, the Russian Federation, the United States of America, the European Commission, the Joint Institute for Nuclear Research and UNESCO have observer status.

About Winton Capital Management

Winton Capital Management is a leading global alternative investment company and a world leader in financial mathematics and empirical scientific research into financial markets. The company, founded in 1997, now employs some 280 people, including 120 scientists, at research campuses in London, Oxford, Zurich and Hong Kong. Winton Capital also has office in New York and Sydney.

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