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MEDIA RELEASE

Date: 26 May 2012. For immediate release

Subject: Australian Students observe Venus phenomenon

Students from over 300 schools across the country will get to view the Transit of Venus first hand, when it crosses the path of the Sun on Wednesday, 6 June 2012.

Using a “SolarScope”, students will get to see the planet slowly make its way across the Sun, and take observations to record the time and position of Venus as was performed historically.

The Transit of Venus occurs when the planet Venus passes directly in front of the Sun. This is extremely rare, with the next transit not due to occur for another 106 years. Eastern and central Australia will be one of the few places in the world to see the whole six-hour journey across the sun between 8:30am and 2:30pm.

The Transit of Venus was first recorded in 1639 with early Astronomers sailing the globe to make observations, including Lieutenant James Cook, an accomplished Surveyor and Navigator who was sent to Tahiti on HMS Endeavour to observe and record the Transit of Venus in 1769.

Using Navigation, Astronomy and Surveying principles, measurements were taken and analysed to help calculate the size of the solar system using Kepler’s 3rd law of planetary motion.

After the 1769 Transit, James Cook explored and charted the east coast of Australia making his voyage both scientifically important and historically monumental for us today.

“Venus will look like a black dot as it moves across the lower half of the sun, but no one should look directly at it,” Craig Roberts, from the UNSW School of Surveying & Spatial Information Systems said.

“Just as the Transit of Venus was a major scientific event in the 18th century, we’re still conducting large scale scientific observations using cutting edge surveying technology to exactly measure sea level rises, tectonic plate shifts and maybe one day earthquake prediction,” Roberts said.

Modern Surveyors benefit from this high-end science in their day to day work using survey accurate GPS, lasers and satellite imagery, to provide reliable solutions to real issues faced across the community, be it in relation to property boundaries, infrastructure management or environmental decision making.

“We are excited that schools are taking an interest in the Transit of Venus as it touches on so many subjects like space, maths, science, geography, engineering, history and of course surveying.”

“We have a looming skills shortage in the surveying profession and wider geospatial industries, and want students who like science or maths to consider studying its practical applications at university or TAFE.”

SolarScopes have been donated to schools across Australia by the Surveying and Spatial Science Industry as part of an awareness campaign to increase the profile and Surveying and Spatial Science in the community.

Media are invited to report on the observance of the Transit at participating schools on 6 June. Licensed Surveyors will be also in attendance at most schools to answer student questions about Surveying and how it was used historically to measure the Transit of Venus in Cook’s time.

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Core statements for editorial use

- Transits of Venus occur in a pattern that repeats every 243 years. Recorded observations have been in 1639, 1761, 1769, 1874, 1882 and 2004. The next one after 2012 is due in 2117. Venus actually passes between the Earth and the Sun about every 19 months, but we don't see it "transit" across the Sun as its orbital path is above or below it.
- The 2012 Transit will be best seen from eastern and central Australia.
- SolarScopes have been sponsored and distributed throughout Australia by the Surveying and Spatial Science Industry, the Transit of Venus Committee and the Astronomical Association of Queensland to increase the awareness of Surveying and engage students in a historically rare event.
- Over 300 schools are participating in the mass observation nationally as part of the Transit of Venus project with 95 in QLD, 120 in NSW, 70 in VIC, and 15 across TAS, SA and WA.
- The project provides students with the opportunity to make their own observations and use the web site tools to calculate the Astronomical Unit (AU) at their school.
- The Transit of Venus Schools project is designed to engage students in concepts relating to maths, science, geography, engineering, and history subjects.
- Never look directly at the Sun during the Transit as you may cause serious and permanent damage to your eyesight. Safe viewing options include using a SolarScope, Binocular or telescope projection (using appropriate safety precautions), or via webcast.
- Surveying is the measurement, mapping and analysis of the environment using specialised tools and technology.
- Over the years, the work of Surveyors using Astronomy has been greatly simplified by technological improvements and techniques. The need for the practical application of field Astronomy in Surveying has now shifted emphasis to Spatial Science tools, as earth satellites (Global Positioning System or GPS) are now generally used for determining location.



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