



2.3m Telescope Tour, Trig Point, Huntsman



David Allen Walking Track

INFORMATION and FIRST AID



SSO Lodge, Adult Talks, Coffee and Cake



i-Telescope Tour



ENTRY to SSO

Food & Coffee



Exploratory and Kids Talks, Astro Photography



AAT Tour, Displays, Planetarium



TALKS PROGRAM in the SSO LODGE SEMINAR ROOM

1030am - Sven Buder

Unravelling the Milky Way's history through starlight with the GALAH Survey

1100am - Sowmya Krishna

Creating artificial stars with lasers

1130am - Josephine Munro

Removing the twinkle from stars: bad for songwriters but good for astronomers

1200pm - Michelle Cluver

Science from the other Web: creating a 3D map of our local universe (that started at the AAT!)

LUNCH BREAK 1230—1330

OPENING of the David Allen Trail

130pm - Fred Watson

Satellite Constellations

2pm—Matthew Colless

A spectacular new view of the universe

TALKS in the Exploratory

1030am - Matt Dodds

How to explore the night sky with a telescope.

1100am - Matthew Colless

A spectacular new view of the universe

1130am—Jonti Horner

1200pm - Sven Buder

How a very special GALAH creates stellar rainbows at night

LUNCH BREAK 1230—1330

1330pm - Tony Lewis

1400pm— Q&A time

BOK LECTURE 230pm - 330pm

SSO Lodge Conference Room

Prof. Susan M Scott

Surfing gravitational waves to probe the dark side of the Universe

In 1915 Albert Einstein produced his miraculous new theory of gravitation, general relativity. In the following years it would be well tested, but only in local regions of the Universe where gravity is weak. It passed all these tests, but it remained to be seen if it would still hold up, or break down, when tested in regions of the Universe where gravity is strong.

A few months after Einstein announced his new theory, he concluded that it predicted the existence of gravitational waves, an entirely new form of radiation, which is not part of the electromagnetic spectrum. He thought, however, that these waves would be too weak for us to ever detect them.

Following a century of technology evolution, and fundamental advances in our understanding of general relativity, and despite an ongoing groundswell of naysayers and disbelievers, in 2015 we achieved the remarkable first direct detection of gravitational waves on Earth.

This talk documents that journey. We will examine how well Einstein's theory stands up under conditions of strong gravity, and we will see how we can surf gravitational waves to probe the dark side of the Universe



THINGS TO DO @ SSO OPEN DAY

- *Behind the scenes of the AAT, 2.3m, Huntsman, iTelescope and talk with technicians
 - *Lil Coffee Cart at the AAT Entrance
 - *Grab a sausage sizzle from Coona Rotary Club
 - *Pilliga Pottery ice-creams and food
 - *Lodge CAFÉ for coffee and cakes
 - *Visit the Exploratory
 - *Catch the bus to the summit of the mountain for guided tours of the 2.3m Telescope and Huntsman
 - *Free buses circling around the site all day
 - *Planetarium on the Ground Floor of AAT
 - *Donna the Astronomer solar viewing
 - *Tamworth Astronomy Club Solar viewing
 - *Astro Photography in the Exploratory area
 - *Blast Off! With OzGrav's amazing VR system - take a trip out into the solar system and beyond
 - *AAT Catwalk for thrill seekers and a great photo—6th Floor AAT
 - *Dress up like astronauts in the AAT and have a photo—6th Floor AAT
 - *Get up close to the AAT- and find out what its up to in the sky
 - *talks in the lodge seminar room
 - *talks in the Exploratory area
 - *BOK Lecture at 230pm in the lodge seminar room with Susan Scott!!!
 - *David Allen walking Track—NOTE steep walking in some areas.
The track starts below the ANU lodge—look for the signs
- And will be Officially Opened and followed by a traditional Smoking Ceremony**



**Australian
National
University**

**Please note: the ANU require all persons entering a ANU premises to wear face masks.
These are supplied at entries to ANU owned areas.**





NAME: Anglo Australian Telescope (AAT)

BUILT: Early 1970's

YOUR TOUR GUIDES: AAT Staff

FACTS: Mirror is 3.9m diameter and weights 16tonne!

Diameter is 37m & height to base of dome 26m

COME TOUR INSIDE ME!



NAME: ANU 2.3m Telescope

BUILT: Early 1980's

YOUR TOUR GUIDE: Ian Adams & ANU Staff

FACTS: Rather than a rotating telescope mount, the whole building rotates!

And with a light mirror weight this allows for more rapid movement during observations.

COME TOUR INSIDE ME!



NAME: Huntsman Telescope

BUILT: 2020

YOUR TOUR GUIDE: Huntsman Team

FACTS: Our Newest arrival to site - and opened in August 2022.

COME TOUR ME!



NAME: iTelescope

BUILT: 2013

YOUR TOUR GUIDE: Blake Estes

FACTS: -Telescopes are located all around the world

Anyone can book time on these telescopes

There are 24 telescopes in the building!

COME TOUR INSIDE ME!



NAME: Korea Microlensing Telescope Network (KMTNet)

BUILT: 2014

FACTS: KMTNet has telescopes all around the world

Mirror is 1.6m in diameter

Targeting—the discovery of extra solar planets

NOT OPEN TO PUBLIC



NAME: Las Cumbres Observatory (LCO)

BUILT: 2002-2003

YOUR TOUR GUIDE: Mark Willis

FACTS: 1x2m Telescope

2x 1m Telescopes

LCO has telescopes all around the world

NOT OPEN TO PUBLIC



NAME: Skymapper

BUILT: Late 2000's

FACTS: Dome is 11.5m high, and 6.25m in diameter

Its mapping the entire southern sky, by the time its finished it will have imaged more than BILLION stars and galaxies!!

NOT OPEN TO PUBLIC



NAME: United Kingdom Schmidt Telescope (UKST)

BUILT: Early 1970's

FACTS: Currently being refurbished and equipped with new instruments to carry out the planned TAIPAN galaxy survey.

NOT OPEN TO PUBLIC