

ASTRONOMY IN AUSTRALIA

STAR GAZING FROM MT STROMLO
TO SIDING SPRING



Siding Spring
Observatory,
Coonabarabran

OVERVIEW

From Canberra's iconic Mount Stromlo Observatory to the dark skies of Siding Spring, explore Australia's astro-tourism capitals with unique access to world-leading research facilities.

This exclusive tour is led by Dr Brad Tucker, one of Australia's leading Astrophysicists and science communicators, and Dr Chris Carter, an indigenous and historical archaeologist. Across one week, we'll journey through Australia's important role in astronomical history, while taking a glimpse into the future of astronomy in this country as we visit iconic observatories from Canberra to Coonabarabran, such as Parkes famous "Dish". We'll also visit lesser-known sites, including NASA's Honeysuckle Creek and Tidbinbilla tracking stations, the SpaceX Starlink ground station at Boorowa, and The Australia Telescope Compact Array (ATCA) just outside of Narrabri.

On this new tour, you will touch a piece of the Moon at Geoscience Australia, learn about the Indigenous Australian's connection to the skies with Gamilaroi astronomer Peter Swanton, experience the country's first Dark Sky Park at the Warrumbungles, and enjoy three nights in the official astronomers' lodging at Siding Spring Observatory.

TOUR LEADERS

Dr Brad Tucker is an Astrophysicist and Cosmologist at ANU, with degrees in Physics, Philosophy and Theology. Brad will be joined by archaeologist **Dr Chris Carter**. Chris' research covers both Indigenous and Australian historical archaeology.

TOUR DATES

April 12-18, 2024

TOUR PRICE

\$5,680 per person, twin share

\$740 single supplement

TOUR DEPOSIT

A **\$500** non-refundable deposit is required per person to confirm your booking on tour.

GROUP SIZE

Maximum number of **16** in group

ITINERARY

Canberra (2 nights), Parkes (1 night),
Coonabarabran (3 nights)

INCLUSIONS

6 nights' accommodation, with a 4-star hotel in Canberra, a 4-star motel in Parkes, and Lodging at Siding Springs Observatory. All breakfasts, 3 lunches and 5 dinners. Services of two expert tour leaders throughout. All ground transport, entrance fees and tipping.



DETAILED ITINERARY

Start & Finish

The tour starts at 2.00pm on Friday 12 April, at the Brassey Hotel, Canberra.

The tour ends at 12.00pm on Thursday 18 April, arriving at Dubbo Airport for return flights home.

Included meals are indicated with B, L, D.

Friday 12 April

From Canberra to the Moon!

Following introductions at the charming Brassey Hotel in Canberra, we make our way to Geoscience Australia. Here we have the opportunity to explore an extensive collection of meteorites and a Moon rock collected on Apollo 17. Incredibly this is the only piece of the Moon you can touch in the Southern Hemisphere! Afterwards, we head to Mt Stromlo Observatory – headquarters of the ANU Research School of Astronomy and Astrophysics – which is celebrating its 100th anniversary in 2024. Here we learn more about the history of Mount Stromlo and participate in a unique behind-the-scenes tour covering Professor Brian Schmidt’s Nobel Prize, the 250kg meteorite and the Advanced Instrumentation and Technology Centre, home to the National Space Testing Facility. Following the tour, we enjoy some stargazing time using the Mt Stromlo outreach telescopes. Overnight Canberra (D)

Saturday 13 April

NASA in Australia

This morning we travel to Honeysuckle Creek Tracking Station, one of the first NASA tracking stations in Australia. Playing an important role in world history, this Station received and relayed footage of the first 8 minutes and 26 seconds of the Apollo 11 Moon landing! Afterwards, we visit NASA’s Tidbinbilla Tracking Station, one of only three facilities around the world NASA uses to contact their deep space missions, including Voyager 1 – the first spacecraft to cross into interstellar space. It also hosts the old radio receiver that was previously located at Honeysuckle Creek. A highlight of our day is a talk by Gamilaroi astronomer Peter Swanton, who explains how Aboriginal Australians have a deep understanding and connection to the stars, and a burning desire to preserve our dark skies. Overnight Canberra (B)

Sunday 14 April

The Iconic Dish

Departing Canberra this morning we head for historic Parkes. On the way, we enjoy a quick stop to see the hidden space infrastructure of the SpaceX Starlink ground station at Boorowa, often called a Gateway. This deceptively humble-

TOUR HIGHLIGHTS

Mount Stromlo Stargazing

Experience a unique stargazing opportunity using the outreach telescopes at Mount Stromlo Observatory, one of ANU’s iconic astronomical research facilities.

Indigenous Astronomy

Learn as Gamilaroi astronomer Peter Swanton explains how Aboriginal Australians have a deep understanding and connection to the stars, and a burning desire to preserve our dark skies.

NASA’s Deep Space Missions

Visit NASA’s tracking station at Honeysuckle Creek which played a crucial role in the Apollo 11 Moon landing and nearby Tidbinbilla Tracking Station, which is used to contact the NASA deep space missions, including Voyager 1.

Deep inside the Dish!

Marvel at the iconic and world-famous Parkes Observatory, otherwise known as “The Dish”. Experience a behind-the-scenes tour, going deep inside the CSIRO operations where they explore the wonders of the Universe.

Siding Spring Observatory

Become budding Astronomers and enjoy exclusive access to the 2.3m telescope at Siding Spring Observatory where the crystal-clear night skies, low humidity and high altitude enable unrivalled stargazing.



Mount Stromlo



The Dish



Warrumbungle

looking facility allows people in regional areas to connect to a low orbit satellite-based internet system. En route to Parkes we also visit the POW camp and cemetery at Cowra, before enjoying a guided tour and lunch at the stunning Japanese Gardens. Arriving in Parkes later in the afternoon, we head to the iconic and world-famous Parkes Observatory, otherwise known as “The Dish”. Here take a behind-the-scenes tour with Operations Scientist John Sarkissian, going deep inside The Dish to see the technology that allows the CSIRO to explore the Universe. While we won’t be able to play cricket here, we will enjoy dinner in town this evening. Overnight Parkes (B, L, D)

Monday 15 April Stargazing at Siding Spring

We depart Parkes this morning, with our first stop in Dubbo. From here we begin what is known as the ‘World’s Largest Virtual Solar System Drive’ to Siding Spring Observatory, commencing with Pluto at the Dubbo Visitor Centre. The planets are displayed on huge billboards along the five main roads that lead to Coonabarabran, with the size of the planets and the distance between each billboard scaled relative to Siding Spring’s dome, which represents the Sun. Venturing along the Newell Highway, we come to Gilgandra (the location of Neptune), stopping to explore the Cooe Historical Museum. Arriving at Coonabarabran, we make our way to Siding Spring Observatory – Australia’s premier observatory located on the edge of the Warrumbungle National Park. We venture inside the facility, home to over 40 telescopes, and visit the largest optical telescope in Australia! We have the exclusive opportunity to be astronomers for a night using the ANU 2.3m telescope, which the astronomers engage to measure and chase new explosions in the night sky. After a night of magical stargazing (up to midnight), we retire to the official astronomers’ accommodation at ANU’s Siding Spring Lodge. Overnight Coonabarabran (B, D)

Tuesday 16 April Dark Sky Park

This morning we enjoy a leisurely walk through the striking volcanic landscape of the Warrumbungle National Park, Australia’s first Dark Sky Park. This certification by the International Dark-Sky Association (IDA) recognises the exceptional quality of the park’s nocturnal environment to see our Universes with uncommon clarity and has made it a magnet for professional and amateur astronomers alike. We also visit a number of other telescopes on the mountains, such as the Las Cumbres Observatory and the iTelescope facilities – telescopes belonging to a global network that constantly studies our solar system. While the outback’s wide-open spaces may appear infinite from today’s adventures, tonight we see what true infinity looks like as we use the 2.3 telescope to explore the crystal clear starry skies of Warrumbungle. After our exploration, we retreat back to the astronomers’ lodge for a good night’s rest in what is officially recognized as one of the darkest places in the world. Overnight Coonabarabran (B, L, D)

HOTELS

Accommodation on this tour varies from a 4-star hotel in Canberra to a more simple and functional 4-star motel in Parkes, followed by lodging accommodation at Siding Springs Observatory – the research facility of ANU, not normally open to the public.

Canberra, Brassey Hotel

(2 nights)

brasseyhotel.com.au

Parkes, Parkes International

(1 night)

southerncrossmotelgroup.com.au

Coonabarabran, Siding Spring Observatory - The Lodge

(3 nights)

services.anu.edu.au

WEATHER

The middle of Autumn, weather offers daytime highs of 24°C and night-time temperatures of approximately 13°C. There is always a chance of rain so pack a travel umbrella, and a warm jacket is a must with plenty of nights stargazing into the late hours.

FITNESS REQUIREMENTS

Grade Two

This tour is designed for people who lead active lives. You should be able to:

- comfortably participate in up to five hours of physical activity per day, including walking at an easy to regular pace, sometimes on uneven terrain
- keep up with the group at all times
- negotiate challenging historic and archaeological sites, which are often uneven and unstable
- negotiate stairs and bridges
- stand for one to two hours in museums at a time without a break
- get on and off a coach with steep stairs unassisted

Wednesday 17 April

Black Holes & The Big Bang Glow at Narrabri

This morning we enjoy a short drive to the Australia Telescope Compact Array (ATCA), located at the Paul Wild Observatory near the town of Narrabri. Like Parkes, this major international observatory is operated by CSIRO's Astronomy and Space Science division. Exploring the ATCA, we find an array of five 22-metre 'antennas' for collecting radio waves from space. The antennas sit on a track, so that they can be moved into different arrangements and work together using a technique called 'interferometry', giving the telescope an ability to see very fine detail. The ATCA is used to study things like energetic electrons spiralling around massive black holes, rapidly rotating 'dead' stars, and the glow left behind by the Big Bang from 13 billion years ago! Returning to Siding Spring Lodge, we have time to freshen up before dinner and an evening of more star gazing. Overnight Coonabarabran (B, L, D)

Thursday 18 April

Departure

The tour concludes after breakfast today. We then make our way to the Dubbo Airport where we say our goodbyes. (B)

TOUR STYLE & SIDING SPRING LODGING

This tour is quite different from a regular Academy Travel tour. Accommodation and food in regional NSW can be relatively basic and we have to use a sturdy rather than luxury coach. Please note, our three nights at Siding Spring Observatory is in the astronomers lodging, organised by our tour leader Brad Tucker. This is a research facility of ANU and not normally open to the public. The accommodation is simple and functional, offering double-bed rooms ONLY, each with an ensuite. Rooms are NOT serviced during the 3 day stay, so making our own bed will be on the cards! Our time here also includes a continental breakfast, light lunch and dinner.



ENQUIRIES & BOOKINGS

For further information or to secure a place, please contact **Jamal Fairbrother** on 9235 0023 (Sydney) or 1800 639 699 (outside Sydney) or email:

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 academytravel.com.au

