Welcome

Mt Stromlo Observatory is the headquarters of The Australian National University’s Research School of Astronomy and Astrophysics. The University operates two observatories, Mt Stromlo, west of Canberra, and Siding Spring, in the Warrumbungle Mountains near Coonabarabran, NSW.

The administrative centre, the offices of the astronomers and students, the mechanical, electronic and optical workshops, and the computer laboratories are located at Mt Stromlo. The telescopes and associated maintenance facilities are located at Siding Spring. Siding Spring also hosts telescopes of the Anglo-Australian Observatory, the University of NSW, and the Faulkes Telescope Project.

Mt Stromlo began operation as the Commonwealth Solar Observatory in 1924. During the Second World War it was the design and prototype centre for the Australian Optical Munitions Factory. After the war, the Observatory changed from solar to stellar astronomy and in 1957 became part of ANU. Today, Mt Stromlo and Siding Spring Observatories comprise Australia’s premier university centre for astronomical research.

Mt Stromlo was severely damaged by the firestorm of 18 January 2003. All but one of the telescopes, the workshops, the design offices, the administration offices and the library and archives were destroyed. Fortunately, the offices of astronomers and students, the lecture rooms and the computer laboratories survived, so staff were able to be back on site two weeks after the fire. Mt Stromlo is now in the process of rebuilding.

You can watch the progress of the rebuilding process on our website: www.mso.anu.edu.au

OUR MISSION

• Advance the observational and theoretical frontiers of astronomy and its enabling technologies
• Provide national and international astronomical leadership
• Train outstanding scientists

MT STROMLO OBSERVATORY VISITORS GUIDE

1 74” Reflector
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3 Uppsala Dome
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6 Original Commonwealth Solar Observatory Building
7 The Heliosstat
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10 Duffield and Woolley Buildings
11 26” Yale-Columbia Refractor
12 9” Oddi Refractor
13 W G Duffield’s Grave
14 Advanced Instrumentation & Technology Centre
15 Temporary Engineering Offices
16 Temporary Mechanical Workshop (The Barn)
0 Residential Area — NO ADMITTANCE

MT STROMLO OBSERVATORY

Built by Grubb Parsons in the UK and erected at Mt Stromlo in 1954. It was the equal fourth largest telescope in the world at the time and until 1974 it was the largest telescope in the southern hemisphere. With its spectrographs and advanced CCD cameras, the 74” was one of the most powerful instruments for investigating the chemistry and physics of stars and galaxies.

The 74” Reflector was damaged beyond repair by the fires of 18 January 2003.

The Workshops were damaged beyond repair by the fires of 18 January 2003 and have since been demolished.

Workshops staff do all maintenance of observatory equipment at Mt Stromlo and at Siding Spring. They also design and build new instruments for our own observatories and for those worldwide.
was damaged beyond repair by the fires of January 2003. A further five houses were destroyed

4 DIRECTOR’S RESIDENCE

The residence was built between 1910 and 1912 on Observatory Hill. It has since been home to most of the directors of Mt Stromlo. A further five houses were destroyed in the fires, three of which dated back to the earliest days of the Observatory.

5 50” REFLECTOR

Formerly called the Great Melbourne Telescope, it was built by Sir William Dobbie in 1848 and designed for visual observation, when the atmosphere was clear. The telescope was later used as a visual tool by J. W. Smith Murdoch, the government architect who also designed Old Parliament House. Work on the solar laboratory, founded in the basement below the Sun telescope, took another two years to complete. At the time of the building’s completion it was the largest observatory in Australia. In 1899 it housed the mechanical design section, the library and archives. All were totally destroyed by the fires of 18 January 2003.

6 COMMONWEALTH SOLAR OBSERVATORY

The main building was constructed between 1924 and 1925 and was designed by John Smith Murdoch, the government architect who also designed Old Parliament House. The Sun telescope, housed in the basement below the Sun telescope, took another two years to complete. At the time of the building’s completion it was the largest observatory in Australia. In 1899 it housed the mechanical design section, the library and archives. All were totally destroyed by the fires of 18 January 2003.

7 THE HELIOSTAT

After the closure of the Melbourne Observatory in 1944, Mt Stromlo Observatory purchased the telescope and built it drastically renovated to a shorter focal length and given a new glass mirror. Between 1945 and 1960, it was used for spectroscopy and photometry. Most of the PhD thesis produced at Mt Stromlo during this time by ANU students depended on data from this observatory.

8 6” FARNHAM TELESCOPE

The telescope was initially installed on Mt Stromlo as a small dome on the east wing of the Commonwealth Solar Observatories building in 1939. The Farnham was used for variable star measurements in the 1940s, and later as guide scope for wide-angle survey cameras. It furnished the foreground and was relocated for use in supporting our public education and astronomy programs.

12 9” ODDIE REFRACTOR

This refraction is named after James Oddie of Ballarat, who donated the 30” refractor to the Observatory in 1905, and had obtained Federal government agreement just as World War I broke out, but it was not until 1924 that the Observatory began operation. The telescope was completely destroyed in the fires of 18 January 2003.

13 DUFFIELD’S GRAVE

On a ridge of the mountain, overlooking the Mount Stromlo valley, is the grave site of Dr Walter Geoffrey Duffield. He was the first director of the Commonwealth Solar Observatory at Mt Stromlo. He died suddenly in 1929 and his grave site was opened for public education and observation programs. Much of the equipment used for astronomical observations is very specialized and demands high levels of performance. These scientific instruments are not easily accessible to commercial or industrial use. The AITC provides specialist optical, electronic, mechanical, and software engineering and fabrication facilities for designing, constructing, integrating, and testing instruments that are used on telescopes in Australia and overseas.

14–16 ADVANCED INSTRUMENTATION & TECHNOLOGY CENTRE

The engineers and technicians of the Observatory are world leaders in the design and construction of astronomical instruments. Spectrographs and imaging systems built here can be found in many of the world’s major observatories. The first priority in rebuilding the observatory was to replace the destroyed workshop complex. By the end of September 2003, a temporary workshop, the Barn, was ready for use. By the end of November all of the workshop staff were back on site and manufacturing was returning to the Mount Stromlo as a site for a Commonwealth observatory. It did much pioneering work in measuring the parallax of distant stars and recording the brightness, colours and spectra of distant stars. From the 1970s it was prime telescope of the Observatory used in public education and observation programs, introducing tens of thousands of visitors to the Universe.

10 THE DUFFIELD & WOOLLEY BUILDINGS

One of the objects of the Foundation on 18 January 2003 is that these two buildings remain intact. Between these two buildings lie the solar laboratories, housed in the basement. It is difficult to say which observing parameters are most important, but the brightest objects and stars stand out in the sky for the public to see. The Duffield Building was built in 1946 and the Woolley Building in 1956.

11 26” YALE-COLUMBIA REFRACTOR

This telescope was built in the USA in 1923 for Yale and Columbia Observatories to be the main instrument at their southern hemisphere field station. It was first used outside Australia in 1924, and is still in use at Mt Stromlo in 1932. The telescope was extensively damaged in the fires of January 2003.

The Duffield Building in named after our first director, Dr Walter Geoffrey Duffield, and the Woolley Building after our second director, Dr Sir Richard van der Riet Woolley. It was built in 1956 to become the observatory’s Astronomical Observatory. The Royal telescope was built in 1946 and the Woolley Building in 1956.

9 ODDIE REFRACTOR

The Oddie refraction was destroyed beyond repair by the fires of 18 January 2003.