THE SYDNEY OBSERVATORY ARCHIVE

BY DR DEAN LEITH

An eyewitness account of Halley's Comet reported by John Dunlop, Superintendent of the Parramatta Observatory, in 1835. Workbooks cataloguing Australia's early attempts to photograph the stars for a project launched by the Paris Observatory in 1887. A series of original maps of the Carte du Ciel (literally 'Map of the Sky') initiated by Ernest Amédée Barthélemy Mouchez (24 August 1821 – 29 June 1892) at observatories in Paris, Bordeaux, Toulouse and Algiers. Letters from William Scott, Government Astronomer in the 1850s, to the Colonial Secretary concerning the planning and construction of buildings on Observatory Hill, NSW. Original drawings of various elevations of Sydney Observatory building, circa 1891. The hand written research notes of Harley Wood, Government Astronomer from 1943-1974, used to compile a history of Sydney Observatory for the Proceedings of the Astronomical Society of Australia. Notebooks of W. E. Cooke, Government Astronomer from 1912 to 1926, describing the total solar eclipse observed at Goondiwindi in 1922.

These are just a few of the extraordinary records comprising the archive of Sydney Observatory now searchable via our website. From 1887 Sydney Observatory, along with the Adelaide, Melbourne and Perth observatories, participated in the international project to produce an Astrographic (Star) Catalogue (a table of star data) and a Carte du Ciel (a pictorial Chart of the Sky). The photographic plates created by the project remain at the Museum of Applied Arts and Sciences (MAAS) and Macquarie University, however the NSW State Archives collection now includes full draft and final versions of the published Astrographic Catalogue, a series of charts from the never-completed Carte du Ciel, as well as materials highlighting the development and achievements of Sydney Observatory, one of the oldest and most significant sites of Australia's scientific history, built in 1858.

Previously held at Sydney Observatory prior to its transfer to MAAS in July 1982, this collection was then transferred to the NSW State Archives. The records have now been fully appraised and documented by NSW State Archives staff with advice from Dr Paul Wilson and astronomers, Dr Andrew Jacob and Melissa Hulbert, from MAAS. As Dr Jacob explained during his visit to the Archives:

"This collection is a completely unique and valuable resource for astronomers today as the plates are the most faithful documentation of the period". He added, "New technology hasn't rendered the plates obsolete, rather this historical snapshot enhances current research as comparative analysis now becomes possible. The skies, of course, are ever changing, and the plates are the only documentation of the period in which they were taken and are therefore of huge interest to researchers and practitioners in the field today."

Sydney Observatory's contribution to the Astrographic Catalogue was critical to preparing for more recent space missions and will be critical to future explorations. This reflects the direct relevance of much of the State Archives Collection to recent developments in contemporary society. The photographic plates and supporting records in the archive are irreplaceable as they offer snapshots created by experienced astronomers working at Sydney Observatory at key points in time. These

snapshots contribute to many subsequent astronomical endeavors providing a baseline against which to compare all future work."

As Dr Jacob observes:

“These records represent the first epoch survey which may now be compared to the second epoch survey conducted in the nineteen-sixties. Future digitization and analysis will undoubtedly provide the opportunity to extract even more detailed data, previously undiscovered, which will further enhance our knowledge and understanding of the skies”.

While some of the collection requires conservation work and therefore access to all records may not be available immediately, the metadata for the 41 series, comprising 64 consignments and 3,010 items, is now searchable via our website.