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## Wits Astronomical Plate Archive –preservation of a century of Southern Hemisphere astronomy at the Johannesburg Observatory

The trend worldwide is to preserve astronomical photographic plates by digitisation, with some plates dating back to over a century. Indeed, South Africa should be no exception and has a long tradition of observing the night sky of the Southern Hemisphere, initially to produce star charts for improved navigation by seafaring ships. This gave way to observatories for mapping star positions precisely by using telescopes to record images on photographic plates. The John Franklin-Adams wide-angle telescope, donated in 1909, was originally sited at the Union Observatory (present-day Johannesburg Observatory, Johannesburg) and was later moved to the Observatory's Dark Sky Outstation at Toppieshoek, Hartbeespoort. Here, it was joined by the Rockefeller 16" Twin Astrograph in 1938, constituting the Netherlands Leiden Observatory Southern Station. In particular, observations were made for variable stars, binaries and transients. It should be noted that from 1911 to 1970 the Franklin-Adams telescope was used in the discovery of 148 asteroids and the production of a set of 556 sky maps south of -19 degrees.

In total the Franklin-Adams telescope produced over ten thousand, monochrome, photographic plates, up to a size of 15" x 15". This heritage is not conveniently accessible and, in addition, the emulsion of such plates deteriorates over time. By taking high-resolution digital photographs of the plates, the plate information is preserved and becomes easily accessible using modern computers and networks.

This presentation follows the steps for setting up the Wits Astronomical Plate Archive in 2015 in order to preserve the Franklin-Adams plates and digitise the images for future long time-based astronomical use. Also, attention is paid to the heritage value of the Franklin-Adams and Rockefeller telescopes, championed by the Magaliesberg Association for Culture and Heritage (MACH).

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None

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Yes, I ACCEPT

**Primary authors:** Mr JAMIESON, Alec (Astronomical Society of Southern Africa); Prof. CARTER, John (University of the Witwatersrand)

**Co-authors:** Ms JOUBERT, A (Council for Scientific and Industrial Research); Ms CARTER, Amy (University of the Witwatersrand); Prof. CHEN, Andrew (University of the Witwatersrand); Mr VOLSCHENK, Constant (University of the Witwatersrand); Mr PHEIFFER, D (Pyromet Technologies); Mrs VEALE, Hillary (Wits Technikon); Prof. CARRUTHERS, Jane (University of South Africa); Mr HANIBAL, Melvyn (Astronomical Society of Southern Africa); Prof. KOMIN, Nukri (University of the Witwatersrand); Prof. COLAFRANCESCO, Sergio (University of the Witwatersrand); Mr CARRUTHERS, Vincent (Magaliesberg Association for Culture and Heritage)

**Presenter:** Prof. CARTER, John (University of the Witwatersrand)

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