Transactions IAU, Volume XXVIIA
Reports on Astronomy 2006-2009
Karel A. van der Hucht, ed.

DOI: 00.0000/X000000000000000X

DIVISION XII / COMMISSION 5 / TASK FORCE TASK FORCE PRESERVATION AND DIGITIZATION OF PHOTOGRAPHIC PLATES

CHAIR **Elizabeth Griffin**

TRIENNIAL REPORT 2006-2009

1. Report from the PDPP Task Force

Many members are involved in studies of long-term variability, which require monitoring over a time-base well exceeding that available through born-digital observations alone. Historic data reproduced accurately from archived plates are thus central to such research. New results can be read in the literature, and are not cited here. Several projects involve *Carte du Ciel* plates; in 2006 the WG-CdC was merged with the PDPP.

Plate Preservation: A North American Astronomical Plate repository has been established at PARI (Pisgah Astronomical Research Institute, North Carolina). The Cambridge (UK) plate store was dismantled and the contents repatriated or disseminated. Requests to create user-friendly access to the RGO plates currently stored in London and to transfer a limited set to the ROE were unsuccessful.

Direct plates: Measurements (accurate to 0.5 μm) of Black Birch, AGK2 and Hamburg Zone astrograph plates with the USNO StarScan plate measuring machine have been completed; the repeatability of StarScan has an error of 0.2 μm. The new data will contribute to the UCAC3 (as reported under Commission 8). Century-old plates from the Sydney Observatory Galactic Survey yield positions and magnitudes that have now been catalogued; early analyses of those data are already contributing new science. A proposal is being formed to provide for a comparison between Gaia results (when available) and CdC measurements along an equatorial belt, to search for changes. A discussion in Paris of the benefits of the unfinished *Carte du Ciel* project heard about the detection of the ISM from CdC plates. At the DAO, part of a 14×14-inch plate from Palomar thought to have imaged an elusive comet was digitized, along with an appropriate control plate. A catalogue of Vatican Observatory Schmidt plates (now digitized), plus 'thumbnail' scans, will be posted on a web-site (yet to be named). In China, the preservation and digitization of the substantial historic collections of direct and objective-prism plates from the National, Qing Dao and Purple Mountain Observatories under the auspices of the Chinese VO project is hampered by lack of resources and a working PDS.

Spectroscopy: The digitizing of selected spectrograms borrowed from various US observatories for telluric ozone research has re-started at the DAO following a major downtime and upgrade of its PDS. A collaboration with the Carnegie Institution to digitize a subset of Mount Wilson spectra for the same purpose is now commencing. The 10-10 PDS from KPNO has been brought in as a first step in setting up an international scanning laboratory. Requests to scan specific spectra continue to arrive. The major objective-prism survey of the Byurakan Observatory has now been digitized, and is in the public domain; early scientific results are already impressive.