

HERITAGE COMMITTEE Report to the CASCA Board

May 2005

The Heritage Committee has undertaken a few initiatives on which we'd like to report.

The first round of video taping of 3 retired astronomers was conducted in Ottawa last fall. Vic Gaizauskas, Ian Halliday and Norm Broten were the willing participants and Paul Feldman and Randall Brooks conducted the interviews. John Hodgson was approached but, on reflection, he declined to be interviewed fearing he would not recall accurately the answers to questions that might be posed. This experience reiterates the urgency to interview people while they still feel comfortable doing it. With Ernie Seaquist's assistance, we also attempted to set up an interview with Don MacRae but a time has not yet been established. The tapes are being converted to VHS and BetaCam and digital format and should be available soon.

Committee member Richard Jarrell is both a member of the editorial team and a contributor to the *Biographical Encyclopedia of Astronomers* to be published by Kluwer. David Turner recounted his work to help in the reconstruction of the historic St. John's Anglican Church in Lunenburg, NS (www.casca.ca/ecass/issues/2005-ve/content_fs.html). As a central element of a UNESCO World Heritage site, restoring the fire damaged church to its pre-fire state proved to be an interesting project. It had some surprises and astronomical challenges to determine if the stellar constellations were a unique feature and how and when they would have been laid out.

Elizabeth Griffin attended the National Consultative Meeting for CODATA Canada dealing with digitization of scientific data in Canada. This was reported on in *Cassiopeia* in a report co-authored by Elizabeth and David Schade (www.casca.ca/ecass/issues/2004-ws/content_fs.html). The meeting identified steps towards a comprehensive scientific data archive for Canada and a recommendation has been made to create a government agency, Data Canada, to oversee the project with Canada Foundation for Innovation support (see *Science*, **308**, p. 189, 8 April, 2005). Elizabeth has subsequently submitted a paper to CODATA regarding rescuing and re-using potentially valuable scientific data with particular reference to historic astronomical plates. She has also submitted a paper to the PASP describing her work to calculate historical terrestrial ozone strengths from photographic spectra taken through the 20th century at observatories world-wide.

The benefits of digitizing Canada's extensive spectroscopic plate files is fairly obvious but, convincing funding agencies and groups, in the face of many competing projects, is a very difficult proposition. Seed funding from a foundation followed by governmental support may bring this work to fruition. In the short term, holders of such resources must be encouraged to commit to the safe preservation of the plates and, if they are ever under pressure to dispose of them, to make sure the CASCA Board and other interested parties are provided with adequate time to propose a rescue plan for the resource. In agreement with IAU Resolution B3, August 2000 (provided below in Appendix A), CASCA should formerly declare plate files of the major observatories (e.g. DAO, DDO, UWO, Mont Mégantic, etc.) a nationally significant resources

that may not be destroyed. It is regrettable that the plates from the Dominion Observatory appear to have been disposed of when the facility closed in 1970 but to avoid similar losses in the future, the Heritage Committee would like to propose a motion which is provided in Appendix B.

With Calvin Klatt (NRCan), the committee Chair provided *Cassiopeia* readers with a short summary of the early years of the Dominion Observatory which had first light just over 100 years ago on 17th April, 1905 (www.casca.ca/ecass/issues/2005-ve/content_fs.html). A more detailed version appears on the Canada Science and Technology Museum's website as one of its Collection Profiles (www.sciencetech.technomuses.ca/english/collection/dominion_observatory.cfm and www.sciencetech.technomuses.ca/francais/collection/dominion_observatory.cfm). The Museum also opened a small exhibit on 16 April dealing with the 15" refractor's 100th anniversary as part of its International Year of Physics exhibit, *MégaScience*. This joins sections on the Sudbury Neutrino Observatory, Nobel Laureates and upcoming sections to include the ZEEP reactor from Chalk River and Tokamak de Varennes. The Dominion Observatory section includes the coelostat, double astrograph, transit telescope, measuring engines, original 15" Brashear lens, etc. from the Dominion Observatory's first 25 years. The 15" Warner & Swasey refractor, of course, still gets almost daily use in the Museum's Helen Sawyer Hogg Observatory.

The Heritage Committee's web site currently has resources related to important reports on astronomy in the second half of the 20th century. We have also provided direct links to papers related to the history of Canadian astronomy as well as obituaries of some of Canada's most eminent astronomers. Vic Gaizauskas is working to add more reference links and a PDF of W.E. Harper's 1915 paper (*Pub. Dominion Observatory*, 2 # 2) on the site selection for DAO. Adding to the resources related to the 100th anniversary of the Dominion Obs., sections of the early *Reports of the Dominion Astronomer* will be digitized for inclusion on the Committee's website by the end of the year. Information on the location of archival papers related to Canadian astronomers will be added in due course.

The term of one member of the Heritage Comm. is up in 2005. Dr. Jarrell is prepared to continue for another 3 year term to 2008 and I would nominate him for this term.

We would like to be able report that we have accomplished more, but trust the efforts over the last year are in keeping with the Board's objectives and directions. I'd also like to thank the members of the Heritage Committee for their contributions and discussions over the last year.

Other papers published recently related to the history of Cdn. astronomy:

Kate Helwig, "The Christian Island 'Astrolabe'", *CCI Newsletter* Dec. 2004 (#34) p. 4-5
Records the analysis and treatment at the Canadian Conservation Institute of the unusual 17th c instrument found near, Penetang Ont. and described by Peter Broughton (*JRASC*, 1986). The technical report prepared by CCI is unpublished.

Randall C. Brooks

Heritage Committee Members:

Chair: Randall Brooks (2002-06) Canada Science and Technology Museum

Richard Jarrell (2002-05) York University

Paul Feldman (2004-06) HIA/NRC

Elizabeth Griffin (2004-06) HIA/NRC

Vic Gaizauskas (2004-07) HIA/NRC

Nathalie Martimbeau (2004-07) Harvard University

Appendix A

IAU Resolution B3 (August 2000)

SAFEGUARDING THE INFORMATION IN PHOTOGRAPHIC OBSERVATIONS

The International Astronomical Union

Consequent upon

its Recommendation 13C (1991) of the XXIst General Assembly to create accessible archives of the large quantities of observational material collected during the 20th Century and currently stored on photographic plates,

Recognising

that unless urgent action is taken this unique historical record of astronomical phenomena will be lost to future generations of astronomers,

Considering

the important efforts made by the Working Groups on (i) Sky Surveys, (ii) Carte du Ciel plates and (iii) Spectroscopic Data Archives, as well as by the centre for European plates recently launched at the Royal Observatory of Belgium, in locating and cataloguing plates, in defining the tools needed to safeguard them, and in negotiating the means to preserve their recorded information in digital form in the public domain,

Realising

that the cataloguing, storage and safeguarding of the photographic plates is an important aspect for the implementation of the possible future digitisation process needed for selective media transfer of high quality data,

Recommends

the transfer of the historic observations onto modern media by digital techniques, which will provide worldwide access to the data so as to benefit astronomical research in a way that is well matched to the tools of the researcher in the future.

Appendix B

Motion: Preservation of Canada's historic astronomical photographic plates

Whereas, over the last 100 years, photographic observations, recorded by astronomers both in nationally supported observatories and in observatories operated by universities supported by public funds through operating and research grants, have been maintained for research purposes

and, whereas these plates, both direct and spectroscopic, constitute a unique and irreplaceable resource,

and, whereas these observations, reprocessed by modern techniques of plate digitization, measurement and analysis will provide valuable information on rare or slowly changing astronomical events and phenomena,

the Board of CASCA hereby recommends:

a) that any institution holding such photographic plates take reasonable measures to ensure the long-term preservation and usefulness of those resources and their supporting documentation, and

b) as opportunities arise, to arrange to preserve the information content in digital format to high standards.

The Board also recommends that any institution whose photographic plate resources are at risk of being damaged or destroyed should advise the CASCA Board and CODATA Canada at the earliest possible opportunity in order that a rescue plan may be implemented with the assistance of interested institutions and/or individuals.