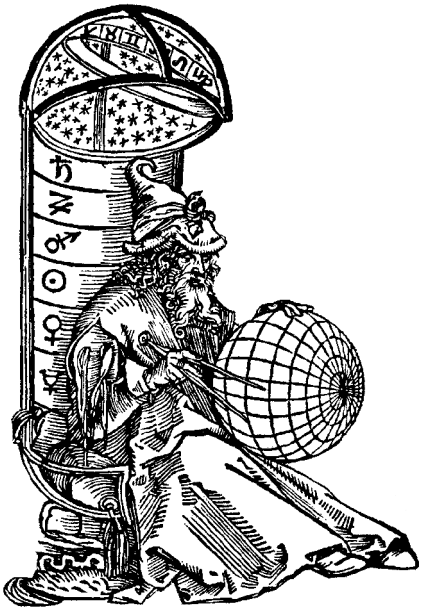
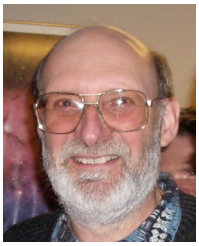


H•A•D NEWS

The Newsletter of the Historical Astronomy Division of the American Astronomical Society

Number 81 * October 2012





New HAD Officers Elected

Joseph S. Tenn, Sonoma State University

Newly-elected Vice Chair/Chair Elect Marc Rothenberg (center) and at-large Committee Members Linda French and Wayne Orchiston will take office at the end of the HAD Business Meeting on 7 January in Long Beach.

Current chair Jarita Holbrook will turn over the gavel and the "Ich bin HAD" plaque to current Vice Chair Jay Pasachoff. She will then become Past Chair and Chair of the HAD Prize Committee, which will select the recipients of HAD's highest honor, the LeRoy E. Doggett Prize for Historical Astronomy, next year, and the Donald E. Osterbrock Book Prize for Historical Astronomy the following year.

As Vice Chair, Marc Rothenberg will in charge of soliciting and editing obituaries of all newly-deceased AAS members for the next two years.

This year's election was a close one. Thanks to the much-appreciated efforts of the nominating committee, Brenda Corbin (chair), J. McKim Malville, and Donald W. Olson, there was a full slate of candidates. Thanks go to Jay Holberg,

continued on p. 11


Osterbrock Prize to Brickers

Jarita Holbrook, UCLA

The Donald E. Osterbrock Book Prize of the Historical Astronomy Division of the American Astronomical Society will be awarded in 2013 to Harvey M. Bricker and Victoria R. Bricker for *Astronomy in the Maya Codices* (Philadelphia: American Philosophical Society, 2011). The prize is for "the author(s) of the book judged to best advance the field of the history of astronomy or to bring history of astronomy to light."

The conquest of the new world saw the destruction of nearly all of the written works of the Maya of Central and North America. Fortunately for historians of astronomy, four works survived that provide a window into Mayan astronomy: the Dresden Codex, the Grolier Codex, the Madrid Codex, and the Paris Codex. *Astronomy in the Maya Codices* brings together in one volume everything that is known about astronomy in the Codices. The Brickers have an impressive publication history on the astronomy found in the Dresden Codex, the Madrid Codex, and in some

continued on p. 11

Three Special Sessions in Long Beach

Joseph S. Tenn, Sonoma State University

The coming AAS/HAD/HEAD meeting promises to be an exciting one. It will start Sunday, 6 January 2013, with two HAD Special Sessions.

Peter Abrahams, David DeVorkin, and Thomas Williams have organized "Making Astronomy Public, Los Angeles Style," featuring talks by John Briggs, Lew Chilton, Anthony Cook, E.C. Krupp, and Tom Williams. David DeVorkin will chair and comment afterward.

Clive Ruggles, Sara Schechner, David DeVorkin, and Wayne Osborn will speak in a special session titled "Preservation of Astronomical Heritage and Archival Data," organized by Wayne Osborn and James Lattis.

Monday morning will see a different kind of special session. Sponsored jointly by HAD and HEAD (the High Energy Astrophysics Division), and organized by Hale Bradt and Richard Rothschild, it is titled "Fifty Years of Celestial X-ray Astronomy."

Rather than a few speakers, it will feature brief statements and panel discussions by seventeen participants: Lynn Cominsky, Martin Elvis, Kathryn Flanagan, Christine Jones, Frederick Lamb, Stephen Murray, Laurence Peterson, George Ricker, Daniel Schwartz, Peter Serlemitsos, Fred Seward, Luigi Stella, Jean Swank, Melville Ulmer, C. Megan Urry, Martin Weisskopf, and Nicholas White.

The annual HAD Business Meeting will be held at midday Monday. This is an opportunity for members to hear from the officers and express their views on HAD activities.

Monday afternoon we will have the first three contributed oral papers followed by the presentation of the second Donald E. Osterbrock Book Prize to Harvey and Victoria Bricker and their invited lecture, "Astronomical Records in the Hieroglyphic Writings of the Precolumbian Maya." Poster papers will be up all day Monday, and the day will end with the sixth annual HAD Minibanquet.

Most oral contributed papers will be presented on Tuesday, with up to six each in morning and afternoon sessions. Abstracts for all HAD sessions will be available early on the HAD website at http://had.aas.org/.

See you in Long Beach!

joe.tenn@sonoma.edu

The HAD Booth in Long Beach

Arnold Heiser, Vanderbilt University

At our meeting in Long Beach this coming January we will again have our "booth" (table) set up in the exhibit hall. The format will be a bit different, as our table will be a part of the much larger AAS booth. We are hoping that HAD members attending the meeting will volunteer to help at the booth sometime between Monday 9:00 a.m. and Thursday noon, except at those times when we will be having HAD sessions. Please let me know those dates and times that you will be able to join us at the HAD booth. Use e-mail or after 1 January call me at 615-438-4290.

a.heiser@vanderbilt.edu

From the Chair

Jarita Holbrook, UCLA

During the four years that I have served as Vice Chair and Chair of the Historical Astronomy Division, the issue of creating permanent and enduring records about astronomers, ideally from astronomers, for the use of future historians has arisen multiple times. Three ideas that have been floated without action, but which may coalesce, are:

1. Create a new oral history project focused on the more senior AAS members. This would involve raising grant money to cover expenses associated with travel, recording, and transcribing oral history interviews. There is an existing oral history project for physicists with grant money available at the American Institute of Physics Niels Bohr Library. A few lofty astronomers have made it into the archives; their oral histories can be accessed online: http://www.aip.org/history/ohilist/.

2. Emerging from Vice Chair Jay Pasachoff's work on the obituaries, he suggested that it would be helpful for astronomers to write their own mock obituary which can be used by the real obituary writers after they pass. The advantage is that astronomers can place emphasis wherever they want in the hopes that it will be picked up by their obituary writer as well as provide all the family details that are often hard to track down. Perhaps this was a tongue-in-cheek suggestion; however, the question arises of where these future obituaries should be kept until needed?

3. Similar to NPR's Storycorps, a recording area should be set up during one of the AAS annual meeting for astronomers to record themselves talking about their lives and their research. Having done NPR Storycorps, they do have a question sheet prepared for those who don't know what to say or where to start.

Each of these suggestions are for the consideration of HAD along with a short list of "what ifs." For example, if we decide to build our own oral history project a) do we have members willing to write the proposals to get the money needed, b) do we have members willing to do the interviews, c) how do we decide whom to interview and in what order, d) do we want our oral history archive to be an online resource or a book? If we decide upon the Storycorp model many of the same issues arise except participation would be voluntary and based on who attends the meeting.

As a researcher who does oral history interviews with astronomers (under an NSF grant), I think the path of least resistance is to use the resources offered by AIP: 1) apply for one of their grants, and 2) turn the oral history interview over to them. I confirmed with AIP's Greg Good that they will do the transcription and add the new oral history to their online archive. Information about their grant program for oral histories can be found at http://www.aip.org/history/grants.html. If there is sufficient interest we can have further discussion at our meeting in Long Beach.

jcholbrook@ucla.edu

From the Vice Chair

Jay M. Pasachoff, Williams College

I congratulate my successor, Marc Rothenberg, and I look forward to working with him on the overlap, particularly of the obituaries now posted regularly online at approximately biweekly intervals. My report on the AAS's current obituary policy recently appeared in the collected volume *Organizations, People and Strategies in Astronomy*, edited by André Heck.

I further look forward to collaborating with my predecessor, Jarita Holbrook, at observations of the total solar eclipse to be visible from Queensland, Australia, on November 14 Australia

time/date. She is making a movie that has an emphasis on research by minority astronomers, and with her encouragement, I got a supplement to my NSF research grant for our eclipse observations to bring our Williams College alumna Amy Steele ('08; now a graduate student in astronomy at Wesleyan University) to work with a colleague there and with us; Amy is a veteran of the 2006 total eclipse expedition from Williams College to Kastellorizo, Greece.

I had the pleasure of representing our Historical Astronomy Division at the General Assembly of the International Astronomical Union in Beijing during the last two weeks of August. I blogged about the IAU for *Sky and Telescope,* in a series of which the last is at http://bit.ly/UOFtxt. One post relevant to our historical interest dealt with our expedition to Inner Mongolia during the weekend between the General Assembly's two weeks in order to see the new solar radioheliograph set of forty 4.5-m telescopes. In the nearby city of Mingantu, it turned out that there was a 10-m-high statue of, surprisingly, an astronomer! You can read my full account and see more images at http://bit.ly/MYuZIz. Mingantu was a Mongolian astronomer who lived from 1692 to 1765. Honoring the naming of asteroid 28242 after him, on the side of his statue was a 1-m-high marble reproduction of the IAU Minor Planet Center card, complete with email addresses at CfA and the authentic fonts. A modern museum was half devoted to his work in astronomy and mathematics, with a final room about modern astronomy, including NASA space images and Solar Dynamics Observatory movies.

I also enjoyed a historical session on Discovery and Classification in Astronomy organized by Steve Dick and Ken Kellermann. It included talks from Ron Ekers of Australia about the reclassification of Pluto from his point of view as an IAU past president; from Dick on a general framework for classification in astronomy; from Martin Harwit, Barry Madore, David DeVorkin, and Ray Norris; and from Kellermann of the National Radio Astronomy Observatory about the continuum of discovery that led to our early knowledge of quasars and related objects.

Joint sessions with the Astronomy and World Heritage Working Group and with the Historical Instruments Working Group of IAU Commission 41 on the History of Astronomy were organized by Clive Ruggles and Schechner.

Kellermann organized another session: on Radio Source Counts and Cosmic Evolution, as part of the Historic Radio Astronomy Working Group's function.

jay.m.pasachoff@williams.edu

From the Secretary-Treasurer

Joseph S. Tenn, Sonoma State University

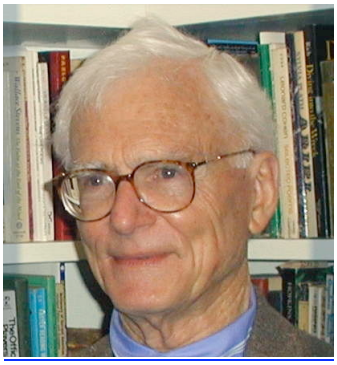
HAD is in good shape. In the six years I have been on the HAD Committee (two to go), we have inaugurated the Osterbrock Book Prize and the Student Travel Award, established the HAD booth at meetings held jointly with the AAS, and begun awarding a subsidy, now $1250, to the organizer(s) of each special session to assist some of their speakers in coming to the meetings. There has been an increase in the number of speakers coming from abroad and, arguably, increased interest in our special sessions. After the member

survey conducted last year, the HAD committee decided to meet twice in each odd-numbered year, a 50% increase in the number of meetings.

These activities cost money. We were fortunate to have a large bank account when I took office, and we have not yet depleted it, yet I think we should consider increasing our annual dues, which have been $8 for AAS members for many years. The other AAS divisions charge dues ranging from $10 (DDA) to $20 (LAD), with the other three at $15. The HAD bylaws specify that our affiliate members pay the regular dues plus the fee charged to the Division by AAS, currently $5. Membership in HAD and four of the other five divisions is free to emeritus members.

Since dues can only be changed by a vote of the membership at an annual Business Meeting, the HAD Committee plans to propose an increase to $15 at the Long Beach meeting. This would automatically mean $20 for affiliate members. We propose that the new rate begin in 2014. Emeritus members (21% of our membership) would still be exempt from dues but encouraged to voluntarily donate an equivalent amount. Please send me or any committee member your comments before the Long Beach meeting.

joe.tenn@sonoma.edu



Curtis Wilson (1921-2012)

The first recipient of HAD's LeRoy E. Doggett Prize for lifetime achievement in the history of astronomy passed away 24 August 2012. Curtis Wilson, called "the most highly regarded historian of astronomy of this generation" by Owen Gingerich in his *Journal for the History of Astronomy* obituary, was a scholar of mathematical astronomy and a renowned expert on Kepler. His last book, *The Hill-Brown Theory of the Moon's Motion: Its Coming-to-be and Short-lived Ascendancy (1877–1984)* was published by Springer in 2010, when he was nearly ninety. Wilson spent almost his entire career at St. John's College, with a seven-year interlude at the University of California, San Diego.

Brenda Corbin, retired librarian at the U.S. Naval Observatory, recalls:

Curtis Wilson frequently used the rare book collection at the USNO Library. He would take public transportation from Annapolis to the Observatory, walking up the long hill to the main building well into his eighties. Curtis was a kind, witty, and gentle person who delighted in the breadth of the Observatory's collection. He was always generous in thanking both me and Asst. Librarian Gregory Shelton, in his acknowledgements. I knew Curtis as a professor and historian of astronomy, but at his memorial service at St. John's College on September 30, I learned that he also played the piano, loved classical music, and attended a tai chi class twice weekly. In addition to the classical writers on whom the St. John's curriculum is based, he was impressed by the writings of John Maynard Keynes and the plays of modern playwright August Wilson. He met with a local high school mathematics teacher on Saturday mornings to work calculus problems together just for fun. Curtis Wilson and his scholarship will be greatly missed.

brenda.corbin@verizon.net

Future HAD Meetings

2013 October: Denver, with DPS

2014 January: Washington, with AAS, HEAD

2015 January: Seattle, with AAS

2015 August: Honolulu, with IAU, AAS, HEAD

New Working Group Proposed to Preserve Archival Records

Jennifer Lynn Bartlett, U.S. Naval Observatory

An April 2012 Workshop co-hosted by the AAS and American Institute of Physics (AIP) with NSF grant (AST-1110231) support recommended the establishment of a new AAS Working Group on Time Domain Astronomy (WGTDA). The proposed group will encourage and advise on the preservation of historical observations in a form meaningful for future scientific analysis.

While considerable astronomical archival material is at risk, the Workshop focused on observations that represent an extensive, but largely unexploited, source of data regarding the changes over time in intensity, position, or spectral characteristics of astronomical objects. Modern computing techniques, improved measuring tools, and increased electronic storage capacity now enable the extraction of more content, detail, and complexity from older media. The majority of the discussion focused on photographic plates and their essential metadata, such as inscriptions on the glass, handwritten logs, and calibration information. However, participants expressed concern about other materials such as observations recorded on magnetic tapes, strip-charts, punched tape or cards, and in historical documents.

The finite resources available dictate the need for criteria to prioritize preservation efforts. Workshop participants recommended consideration of the information density of the records, the amount of data already published from them, their format and the associated materials required to use them effectively, their current condition, and their expected rate of deterioration. Because even the best digital reproduction is still an observation of an observation, the raw data in its original state should be preserved for future projects.

Workshop participants T. Girard (Yale), J. Lattis (U. Wisconsin-Madison), W. Osborn (Yerkes), G. Good (AIP), J. Anderson (AIP), and E. Griffin (DAO.)

The Workshop also recognized the need for these historic materials to be accessible. Archived observations and their metadata should be available digitally for manipulation with current software, preferably via the Internet. A centralized list of repositories will be necessary together with standardized systems for the classification, organization, and listing of holdings. To the extent possible, the design of these systems should enable the eventual discovery of historical observations through the Virtual Astronomical Observatory (http://www.usvao.org/) or similar portals.

Workshop participants also recommended the promotion of pilot projects that will not only produce solid scientific results but also demonstrate the dependence of some advances on heritage data and open new avenues of exploration. For example, a systematic survey of a broad region of the sky, employing a long time-base and high cadence would best engage other astronomers. The integration of historical observations with modern survey data should lead to the discovery of new phenomena and should improve the available statistics for rare events. The Digital Access to a Sky Century at Harvard (http://hea-www.harvard.edu/DASCH/) program could provide the basis for such a pilot project.

Engaging historians of science and laymen is also important. Historians might be interested in the photographic plates and associated documentation used in making particular astronomical discoveries in order to understand better what led to those events. Citizen science projects might allow contributors to identify asteroids or detect transient phenomena.

Adequate and continuing financial support for the preservation and use of archival data is essential to the goals of this plan. In addition to support for plate preservation and digitization, participants placed a high priority on funding for transferring data from magnetic tapes, because information in these formats has the greatest risk of loss. While the primary motivation for maintaining these materials is their continued capacity to produce new science, their potential for historical research and citizen science is also valuable. Therefore, scholarly organizations, cultural institutions, and other private sources should be targeted, with approaches matching projects to a group's interests.

The Workshop elected an *ad hoc* committee to prepare the WGTDA proposal to the AAS. The WGTDA should have members representing modern survey data, heritage material data, data management, data standardization and integration, follow-up observations of time-domain discoveries, and integration of time-domain data into virtual observatories As needed, the WGTDA should be able to invite participation from non-AAS members.

The AAS Working Group on the Preservation of Astronomical Heritage has posted a full Report of the April 2012 Workshop downloadable from its website at http://bit.ly/S3wOqi.

jennifer.bartlett@usno.navy.mil

New Division Structure for the International Astronomical Union

Mary Kay Hemenway, U. of Texas at Austin

At the conclusion of the Beijing IAU meeting on 31 August, the membership voted on a new structure for the Union. According to the incoming president, Norio Kaifu, "the new Division structure gives the IAU more flexibility to cope with the rapid evolution of astronomy." The outgoing president of the IAU, Bob Williams, recently said, "I think a key change for the IAU is that we are moving from an organization that historically has been largely internally focused on the professional development of astronomy to one that is more outward looking and committed to using astronomy as a tool for development in emerging nations. As part of this we are becoming a more operational organization and increasing our programs in education and outreach. Much of this has been follow-up from the International Year of Astronomy 2009."

Of interest to HAD is the new Division C: Education, Outreach and Heritage. I've been appointed as the President of Division C for 2012-2015, with Hakim Malasan of Indonesia as Vice-President. The commissions and their working groups that will come under this umbrella include Commission 41: History of Astronomy; Commission 46: Astronomy Education and Development; Commission 50: Protection of Existing & Potential Observatory Sites; and Commission 55: Communicating Astronomy with the Public. In addition, the working groups on Historic Radio Astronomy and on Communicating Heliophysics are included.

The Executive Committee and new Division officers will work together to produce initial plans for a revised structure for Commissions, Working Groups and other bodies by May 2013. It is hoped that all the new Divisions, not just Division C, will find ways to work towards the successful implementation of the Union's Strategic Plan that was approved at the 2009 IAU General Assembly. As a member of both Commissions 41 and 46, I've long noted the importance that the history of astronomy can play within educational and outreach settings. In Commission 46 there has recently been more emphasis on applying more rigorous attention to research rather than just practice. Such issues may come up in the other disciplines within Division C. In pulling together this new scheme, the planners had a vision of three axes of activity: science, education (including outreach and heritage), and instrumental research and engineering. I think that the new structure will increase the visibility of history and heritage. The Division structure should allow sharing of ideas across these commissions and working groups, and perhaps even result in joint projects. The first meeting of the Division officers and Executive Committee has not yet occurred, so details on these changes will be forthcoming.

marykay@astro.as.utexas.edu

Editor's Note: HAD member Mary Kay Hemenway was awarded a 2012 College of Natural Sciences Outreach Excellence Award by the University of Texas at Austin. The award was in recognition of her involvement in many different outreach efforts, with particular notice taken of the teacher professional development workshops she has presented over the years.

"African Cosmos: Stellar Arts" Exhibit at Smithsonian

This exhibit is at the National Museum of African Art until 9 December. Jay Pasachoff highly recommends the catalogue of the same title by curator Christine M. Kreamer (ISBN 1580933432). For more information see http://africa.si.edu/exhibits/cosmos/index.html.

History of Astronomy at the IAU

Naomi Pasachoff, Williams College

Nine very interesting talks, organized by Rajesh Kochhar, Sara Schechner, and Jay Pasachoff, were given during sessions on field expeditions held by International Astronomical Union Commission 41 on the History of Astronomy during the 2012 meeting in Beijing.

Many serendipitous interconnections among the talks were pointed out in the Q & A that followed, and suggestions for follow-up papers, perhaps to be given at the next IAU meeting in Honolulu in 2015, were made.

Although westerners tend to think of the first Transit of Venus as the one predicted by Horrocks for 1639, the first paper in the session, by R. C. Kapoor of the Indian Institute of Astrophysics in Bangalore, India, explored the question of whether the renowned Arab scientist Ibn Sina's comment that "I saw Venus as a spot on the surface of the sun" meant that he in fact saw the ToV in May 1032. Although Bernard Goldstein concluded in 1969, on the basis of Brian Marsden's analysis of Jan Meeus's 1958 tables, that the ToV would not have been visible where Ibn Sina lived, Kapoor, using Fred Espenak's data, suggests that Ibn Sina might have seen it from Isfahan, where he lived after 1023, or from Hamadan, where he died, and where a university is named for him. Kapoor also says that sun cycle recreations indicate that the sun was quiet in 1032, so whatever Ibn Sina saw was unlikely to be a sunspot. At Jay Pasachoff's suggestion, Xavier Jubier in France has since run his clickable, zoomable Google-maps computer program (http://bit.ly/RITmzX) to confirm where the ToV of 1032 would have been visible.

A theme raised by Rajesh Kochhar, of the Indian Institute of Science Education and Research, in his paper on Transits of Venus and Colonial India echoed throughout a number of subsequent talks, namely, that countries have always hidden sometimes nefarious geopolitical goals behind seemingly lofty astronomical goals. "Scientific expeditions condone expeditions of other kinds."

Lu Lingfeng, of the University of Science and Technology of China, described the tension in 19th-century China between science and pseudoscience as evidenced in the coverage of the Transit of Venus of 1874. While some Chinese scholars and western missionaries published articles debunking astrological interpretations of the forthcoming ToV, the traditional Chinese equation of the emperor and the sun prevailed, meaning that the passage of another star across the face of the sun would result in disaster. The death of the emperor from smallpox in 1874 was attributed to the ToV. The ToV of 1882 was not covered at all in the Chinese press, and only later did Chinese participate in astronomical science.

Kim Malville of the University of Colorado at Boulder discussed the 17 eclipse expeditions led by W.W. Campbell, director of the Lick Observa–tory from 1901 to 1930. Malville noted that, as opposed to George Ellery Hale at Mt. Wilson, who strove to develop state-of-the-art telescopes, Campbell was content with modest telescopes and devoted himself to leading eclipse expeditions. Malville noted that although Campbell was a skeptic about Einstein's theory of general relativity and about Eddington's supposed confirmation of Einstein's predictions during his

1919 eclipse observations, Campbell's 1922 observations nonetheless did confirm them, though he said "I wished it were otherwise." David DeVorkin of the Smithsonian argued that Malville's point that the many photographs collected in the Lick expeditions were never analyzed but merely stored in the observatory's vaults was actually standard operating procedure during the era of cartographic astronomy. DeVorkin did, however, feel that Malville's point that Campbell didn't follow up on Hale's work was a topic worthy of further exploration.

Jay Pasachoff of the Hopkins Observatory of Williams College described the outcome of some astronomical expeditions that ended in "death and disaster," notably the ToV expeditions of the French Abbé Chappe d'Auteroche and the Briton Charles Green. He also noted, in line with Kochhar's thesis, that Prof. Marcus Levitt of the University of Southern California has written recently that Chappe's 1761 ToV expedition to Siberia was probably instigated by the French crown as a cover-up for espionage. In an aside, Wayne Orchiston commented that he believes that the data published in the *Philosophical Transactions of the Royal Society* as Green's were actually written by Nevil Maskelyne as part of the geopolitical conflict with France, which was publishing its ToV results. According to Orchiston, Green's observations were inconsistent and riddled with discrepancies. Jay Pasachoff suggested that this topic would be another good one to pursue for presentation at the next IAU.

The only talk based on an expedition in which the speaker was also a participant was Gennadiy Pinigin's on the Ukrainian Nikolaev Observatory's program in West Spitsbergen in the 1970s. (The total solar eclipse of 2015 will also be visible from that Arctic cluster of islands, now known as Svalbard.) The talk tied in not only with Jay Pasachoff's theme of expeditions culminating in disaster (in March 1975, two astronomers on the expedition had a fatal accident as their snowmobile traversed a steep fjord) but also with the sessions on Antarctic astrophysics running separately at this IAU. The observations made by this expedition led to the compilation of a new international catalogue of star positions.

Also tied in with the theme of expeditions affected by geopolitical tensions was the talk by Sara Schechner of Harvard about three 18th-century American expeditions in a time of conflict. Two were ToV expeditions led by John Winthrop of Harvard, the first when the enemy was France, the second when the enemy was Britain. The third was a total solar eclipse expedition led by Winthrop's successor, Samuel Williams. In all three cases, the American scientists had to negotiate with enemies, and in each case the negotiation was well worth the effort.

Among the very interesting things put forth in a talk by Gudrun Wolfschmidt of Hamburg University about the solar eclipse expeditions of Hamburg Observatory was the suggestion that a 1912 painting by French artist Robert Delaunay ("Formes circulaires, Soleil et Lune" http://bit.ly/V2czrY) and "White point," painted in 1923 by the Russian Wassily Kandinsky (https://secure.flickr.com/photos/cieguilla/2685440513/) were inspired by eclipse observations. Wolfschmidt now has funding to track down the instruments used in these expeditions that were not lost. The suggestion was made that she present her results at the 2015 IAU in Honolulu.

Christian Sterken of the Free University of Brussels introduced the fascinating figure of Jean-Charles Houzeau, whose career took him from Belgium to the U.S. to Jamaica and back to Belgium. Houzeau, who believed that adminis–trators were "parasites in power," not surprisingly got himself into trouble wherever he went. During his expedition to Jamaica in 1868, however, he created a star atlas from scratch, without reliance on any reference books, based only on what he saw himself. Houzeau's resulting *Uranométrie* played a major role in the compilation of the first edition of the *Norton Star Atlas.*

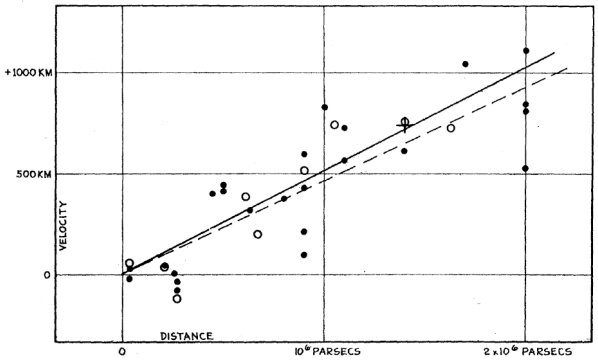
Note: This article is based on one posted on the *Sky and Telescope* website 10 September 2012.

Naomi.Pasachoff@williams.edu

Wanted

HAD members to organize special sessions for the October 2013 and January 2014 HAD meetings. Sessions for the October meeting with DPS must be related to planetary astronomy.

Send proposals to hadsec@aas.org by 1 February 2013.



Who Discovered the Expanding Universe?

Joseph S. Tenn, Sonoma State University

Last month I attended a conference in Flagstaff, Arizona titled "Origins of the Expanding Universe: 1912-1932." It was an educational experience. I accepted the invitation from Michael Way, who organized the conference with Joe Patterson, because it was largely about V.M. Slipher, one of the Bruce Medalists. HAD members John Briggs, David DeVorkin, Owen Gingerich, Robert W. Smith, and Matthew Stanley were among the speakers, and there were also astronomers talking about related current research in observational cosmology.

What I was not previously aware of (am I the only one?) was the controversy that has been ongoing for more than a year regarding the question, "Who discovered the expanding Universe?" There were supporters of Alexander Friedman, Georges Lemaître, and V.M. Slipher in attendance, but no one defended Edwin Hubble. Cormac O'Raifeartaigh of Ireland suggested that, like many advances in science, the discovery of the expanding universe really arose from a slow accumulation of theory and observation, with credit due to all four named above, plus Lord Rosse, William Huggins, Henrietta Leavitt and Harlow Shapley for their observations, not to mention Albert Einstein, Willem de Sitter, Herman Weyl and Cornelius Lanzcos for contributions to the underlying theory. A similar point was made by Harry Nussbaumer of Switzerland.

The controversy started with the discovery that Georges Lemaître, in a 1927 publication in a journal that was read by almost no one outside Belgium, actually derived the Hubble Law from theory and then applied it to the observational data available: redshifts from Slipher, which he obtained from a book by Stromberg, and distances from Hubble, who had published a distance-magnitude relation in 1926. Lemaître estimated the Hubble constant to be 625 km s^{-1} Mpc^{-1}.

Hubble was unaware of this when he published his famous paper of 1929 in the *Proceedings of the National Academy of Sciences,* obtaining a Hubble constant similar to that of Lemaître. Hubble obtained nearly all of his velocities from Slipher, but neglected to credit the Lowell Observatory astronomer (although he did in subsequent papers).

Two years later, a translation of Lemaître's 1927 paper appeared in the *Monthly Notices of the Royal Astronomical Society,* omitting the equation and the comparison with observations.

More than half a dozen papers, most of them posted on http://arXiv.org in 2011, deal with this. They feature such lurid titles as "The Curious Case of Lemaître's Equation No. 24," "A Hubble Eclipse: Lemaître and Censorship," and "Did Edwin Hubble Plagiarize?" Last November Mario Livio published an article in *Nature* proving that Lemaître did his own translation and deliberately omitted material he thought no longer of interest.

There is a movement to drop Hubble from the cosmological pantheon. If you are not familiar with this, I suggest you consult the source where most college students and the public get their information: look up "Edwin Hubble" on Wikipedia.

All of this leads up to the real questions: what is a discovery and who, if anyone, should be credited with it? The conference ended with the astronomers and historians discussing these questions from their different perspectives, an unusual occurrence initiated by the conference organizers. It is widely known that most "laws" in science are named for those who convinced the world of their validity, who are rarely the ones who first thought of them. Is it too late to rename the Fraunhofer lines the Wollaston lines? Would anyone want to? Yet it appears that some anonymous individuals can rename the velocity-distance relation for galaxies Lemaître's law via Wikipedia.

The conference is described at http://www2.lowell.edu/workshops/slipher/ with a link to the scientific program yielding most presentations. Proceedings will be published in the ASP Conference Series.

joe.tenn@sonoma.edu

Osterbrock Prize *(cont. from p. 1)*

Mayan throne inscriptions. This volume far surpasses these earlier works.

The existence of the Codices and the fact that they contain astronomical knowledge is not new. What the Brickers have done is bring together in one volume everything that is known about the Codices, and they have gone on to explore all elements of astronomy contained within them and other Mayan materials.

The culmination of thirty years of collaborative research, this volume presents the Mayan glyphs, the calendar and counting system, the planetary cycles and their correlates to the Mayan agricultural cycle, eclipses and more. The Brickers do not limit themselves by only focusing on the four major Codices; they include information from the other remaining Codices, from engravings on stone monuments and artwork, and from Mayan myths and legends, while continually engaging with the research done by previous scholars as well as our modern understanding of the night sky. The Brickers have been thorough and exact in their research. They have created a definitive volume that will please experts on the Maya as well as historians of astronomy.

Harvey Bricker and Victoria Bricker are professors emeriti at Tulane University and are also courtesy professors of anthropology and research associates of the Florida Museum of Natural History at the University of Florida. Victoria Bricker earned her PhD in anthropology from Harvard. She has published consistently on the Mayan people. Her commencement into the astronomy of the Maya began with a study of the eclipse tables found in the Dresden Codex in the early 1980s. Harvey Bricker also earned his PhD in anthropology at Harvard. His career includes studies of Paleolithic man through archaeological sites in France. He began collaborating with Victoria Bricker on the Mayan astronomy materials in the 1980s. This volume contains all of their scientific findings from their previous works on the astronomy of the Maya as well as their analyses of other scholars' findings and their new findings about the remaining codices.

This volume is ideal for teaching a section if not an entire class on Mayan astronomy because it requires no other text or articles: it is all here.

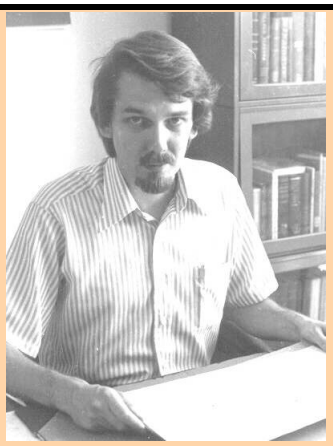
jcholbrook@ucla.edu

New Officers *(cont. from p. 1)*

Jennifer Barnett, and Alan Harris for also serving as candidates. A total of 66 members voted, almost 23% of the 291 eligible.

Thanks to those who have served their terms: Thomas Hockey, who will complete six years of service as Vice Chair, Chair, and Past Chair, and Richard Jarrell and Wayne Osborn, who have served the past two years on the HAD Committee.

joe.tenn@sonoma.edu



Call for Nominations for the 2014 LeRoy E. Doggett Prize for Historical Astronomy

The Historical Astronomy Division of the American Astronomical Society awards its highest honor, the LeRoy E. Doggett Prize, biennially to an individual who has significantly influenced the field of the history of astronomy by a career-long effort.

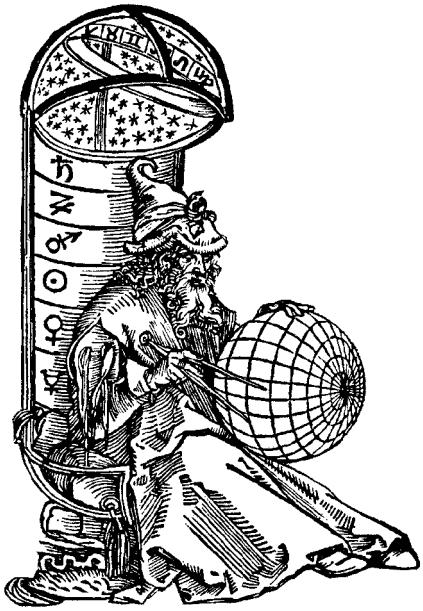
Any member or affiliate member of HAD may nominate a candidate for the Prize. Nominations must include at least one detailed letter of support and a complete curriculum vitae for the nominee.

The deadline for nominations for the 2014 prize is **1 March 2013**. Those nominated for the 2012 and 2010 prizes remain eligible without further nomination.

Please send nominations and supporting materials to me.

More information about the Prize, may be found at http://had.aas.org/doggett/.

joe.tenn@sonoma.edu



Historical Astronomy Division
of the American Astronomical Society

HAD News #81, October 2012, edited by Joe Tenn.
Please send contributions for the next issue, comments, etc. to joe.tenn@sonoma.edu.

A complete version of this newsletter, with color photographs and active links, may be found on the HAD website at http://had.aas.org/.

Photo credits: P. 1: Those portrayed. P. 2: Long Beach Area Convention & Visitors Bureau. P. 3: J. Holbrook; J.M. Pasachoff. P. 4: J.M. Pasachoff; E. Tenn. P. 5: D.H. DeVorkin. p. 6: M. Castelaz (PARI). P. 7: University of Texas; National Museum of African Art. P. 8: J.M. & N. Pasachoff. P. 10: E.P. Hubble, *PNAS* 15, 168 (1929). P. 11: HAD.

HAD News
c/o. J. S. Tenn
Department of Physics & Astronomy
Sonoma State University
Rohnert Park, CA 94928, USA