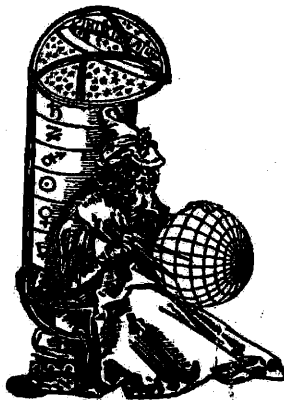


H. A. D. News

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

Number 44 May 1998



Pictorial Highlights of the January 1998 HAD Meeting

photographed by Steven Dick (USNO)



Dr. Curtis Wilson Accepts the First LeRoy Doggett Prize for Historical Astronomy. The Certificate is Presented by Woody Sullivan, Chair of the Prize Committee.



Dr. Ian Bartky Speaks on the National Bureau of Standards Study into the Affects of Daylight Savings Time.

San Diego, July '98

Session 1: Sunday afternoon "The Hale Telescope at 50"

Chair: To be determined

[to be held at Palomar, on the floor of the telescope]

- (1) Welcome - Ron Angione and Bob Brucato
- (2) Karl Hufbauer (UC Irvine) "Big Telescopes, Theoretical Physics, and the Advance of Astronomy 1910-1950"
- (3) Don Osterbrock (UC Santa Cruz/Lick) "George Ellery Hale, Caltech Astrophysics, and the Hale 200-inch Telescope, 1920-1948"
- (4) S. George Djorgovski (Caltech) "The Future of Palomar"

Session 2: Monday morning "New Telescopes and New Tools"

Chair: Kate Bracher

- (1) K. H. Olsen (GCSI) "Beginning Computer Modeling for the Structure and Evolution of the Stars"
- (2) J. P. Mutschlecner (LANL) "Marshal Wrubel and the Electronic Computer as an Astronomical Instrument"
- (3) D. H. DeVorkin (Smithsonian) "Where to Put It? The East-West Split over the Site for the 200-inch Telescope"
- (4) D. Osterbrock (UCSC/Lick) "The Great Spherical Aberration Fiasco of 1902 and its Aftermath: Testing a new Big Telescope in San Diego"
- (5) Yuri N. Efremov (CIS) "The 6-meter Russian Reflector"

Session 3: Monday afternoon "The *AJ*
Sesquicentennial"
Chair: Paul Hodge

(1) W. Sullivan (Washington) Introduction

(2) M. Rothenberg (Smithsonian)
"Observers, Publication and Surveys:
Astronomy in the United States in 1849"

(3) O. Gingerich (CfA) "Benjamin Apthorp
Gould and the Founding of the *Astronomical
Journal*"

(4) D. Hoffleit (Yale) "The *Astronomical
Journal* at Yale"

(5) K. Bracher (Whitman) "The
Astronomical Journal: A
Mirror of Astronomy"

News from the Archeoastronomy Committee

Austin, January 1999: A Call for Papers

The session "Tools and Techniques of Data Collection and Reduction in Archaeoastronomy" will highlight the various methods used by scientists to collect data at a site that is claimed to have astronomical significance. Data-reduction techniques also will be considered.

David G. Iadevaia, Chair

News from the Obituary Committee

The Chair reminds nominees for the office of HAD Vice-Chair that the Vice-Chair also is responsible for coordinating *BAAS* obituary notices during the two-year term.

Virginia Trimble, HAD Vice-Chair

News from the Doggett Prize Committee

Doggett Prize Nominations Sought

The Doggett Prize Committee is seeking nominations for the second award (to be announced in 1999) of the Prize; the first award was given in January to Curtis Wilson of St. John's College. The Prize is given for extraordinary contributions to historical astronomy and is open to all, whether or not AAS members or citizens of North America. Please send a letter of nomination and a *C. V.* to Thomas Hockey, HAD Secretary-Treasurer and also Secretary of the Prize Committee.

Woody Sullivan, Chair

From the HAD Chair

At the January AAS Council meeting I reviewed the history of HAD activities, emphasizing the number of papers given at HAD sessions and trends in the types of papers presented. From the following listing, one can readily see that although we have maintained strong interests in modern history, mainly through carefully planned thematic sessions, our level of activity in archaeoastronomy has dropped off, and we must take positive steps to reverse that trend. I also concluded the no matter what the area of history, our best sessions have been those that have been designed along clear thematic lines.

David DeVorkin

Table: History of HAD Activities

Meeting	Date	Tot Pap	Arch	Classical	Modern	Appl	Misc	AAS Inv.	Public
157	Jan-81	19	10	3	5	1			
158									
159	Jan-82	22	7	5	8	1			
160									
161	Jan-83	27	8	8	10	1			
162									
163									
164	Jun-84	18	7	8	1	1	1 DEO		
165	Jan-85	24	9	4	10		1		
166	Jun-85	1							1 OG
167	Jan-86	22	6	6	9		1 MAH		
168									
169	Jan-87	15	4	2	7	2	1 KH		
170									
171	Jan-88	~27	4	5	9				Lick Cert. Panel
172									
173	Jan-89	30	7	3	19		1 BW		HCO/SAO ann
174	Jun-89	7	1		6				
175	Jan-90	29	1	5	22	1			National Obs
176	Jun-90	5	5						Albuq. Archaeo. Conf
177	Jan-91	11	1		9	1			
178	Jun-91	9		1	8				
179	Jan-92	10	1	2	6		1 RWS		
180	Jun-92	21	4	5	11				1 OG Adler meeting
181	Jan-93	17	7	1	9				Archaeo Crit Probs
182	Jun-93	20	1	5	14				Huntington
183	Jan-94	17		4	10	2	1 VA		Astro/State
184									
185	Jan-95	12	1	2	7	1			1 EK
186									
187	Jan-96	14	2	2	0	10			Applied Conf.
188	Jun-96	18		1	17				Radio history
189	Jan-97	12		3	9	0			Canadian astron
190									

From the HAD Secretary

Notice that with this issue of *HAD News*, your envelope has disappeared. This was done to reduce mailing costs. Please let me know if any "unprotected" copies arrive in poor condition.

A red stamp on your address label indicates that your HAD dues are unpaid. Please excuse and disregard this reminder if you have sent in your dues since the last AAS list was provided (February 1998).

Thank you to fourteen HAD members who responded to my request concerning the date on which their *News* arrived *via* bulk mail. Sent on February 18, 1998, the dates of receipt ranged from February 27 to March 23! No geographical trend was evident. Clearly, a March 23 date is unacceptable for a "February" issue. Hopefully, an earlier mailing date for the current issue will mean that all members get their May *HAD News* in May.

A copy of the revised HAD By-laws is attached to this issue. Thanks to Don Osterbrock and Sara Schecher Genuth for straightening out the situation regarding affiliate status.

Thomas Hockey
(address on your envelope)
Phone: (319) 273-2065
Fax: (319) 273-7124
I: hockey@uni.edu

News from the IAU, Commission 41

[Commission 41 celebrates its 50th anniversary this year. Its first (somewhat reluctant!) President was Otto Neugebauer.]

IAU Commission 41 On the Web

Steven Dick, President

Thanks to the efforts of C 41 OC member Dr. Wolfgang Dick and the kindness of Prof. Peter Brosche in supplying space, Commission 41 is now on the WWW. You may access it directly at <http://www.astro.uni-bonn.de/~pbrosche/iaucomm41>. Or you may link to it from the IAU Web site Commission page at <http://www.intastun.org/commissions.html>. For now the C 41 site contains C 41 officers, members and their current addresses, and newsletters. We have plans in the future to post the Bibliography on History of Astronomy, compiled by Ruth Freitag of the Library of Congress. The C 41 site also links to the history of astronomy site maintained for several years by the History of Astronomy Working Group of the Astronomische Gesellschaft, and now also maintained on behalf of Commission 41.

Progress Report on the New *Journal of Astronomical History and Heritage*

John Perdrix (Managing Editor)
Wayne Orchiston (Papers Editor)

We are making good progress with the *JAH2*, and expect to see the first issue off the press on schedule, in June. It will feature the following research papers:

Bruck, Mary T.: "Mary Ackworth Evershed nee Orr (1867-1949), solar physicist and Dante scholar"

Dick, Steve: "Observation and interpretation of the Leonid meteors over the last millennium"

Orchiston, Wayne: "Mission impossible: William Scott and the first Sydney Observatory directorship"

Pasachoff, Jay: "Williams College's Hopkins Observatory: the oldest extant observatory in the United States"

We are happy to announce that in addition to papers and book reviews, each issue of *JAH2* will feature Ruth Freitag's on-going bibliographies on the history of astronomy.

The composition of the Editorial Board has been finalized, and comprises: Dr. Dave Andrews (Northern Ireland), Dr. Alan Batten (Canada), Dr. Allan Chapman (England), Dr. Steve Dick (USA), Dr. Wolfgang Dick (Germany), Professor Ben Gascoigne (Australia), Professor Bambang Hidayat (Indonesia), Commander Derek Howse (England), Professor Rajesh Kochhar

(India), Professor Don Osterbrock (USA), and Professor Brian Warner (South Africa).

Subscriptions information is available from the Managing Editor on astral@psinet.net.au, while enquiries regarding papers should be directed to the Papers Editor at: Wayne.Orchiston@vuw.ac.nz. A "Guide for Authors" is on the WEB at: <http://www.vuw.ac.nz/~bankst/software.html>.

News from the AIP Center for History of Physics

AIP Center for History of Physics Announces New Grants to Archives

Joe Anderson, Center for History of Physics

The Center for History of Physics of the American Institute of Physics is pleased to announce a new program of grants to archives to make accessible records and papers that document the history of modern physics and allied fields (such as astronomy, geophysics, and optics). Grants can be up to \$10,000 each and can be used only to cover direct expenses connected with preserving, inventorying, arranging, describing, or cataloging appropriate collections. Expenses may include acid-free storage materials and staff salary/benefits but not overhead.

The AIP History Center's mission is to help preserve and make known the history of modern physics and allied fields, and this new grant program is intended to help

support significant work to make original sources accessible to researchers. Preference accordingly will be given to medium size or larger projects for which the grant will be matched from other sources or by the parent organization. To apply, send a letter of no more than three pages describing the research significance of the collection(s), plan of work, and budget, along with preliminary inventory (if available) and staff *vitae* to: Joe Anderson, Center for History of Physics, American Institute of Physics, One Physics Ellipse, College Park, MD 20740; Fax (301) 209-0882, e-mail rja@aip.org.

For grant guidelines or for more information on the Center and its programs, check our Web site at <http://www.aip.org/history/grntgde.htm>, or call (301) 209-3165. The deadline for receipt of applications is July 1, 1998. The program will be offered annually if funds permit.

Book Review

Dictionary of Minor Planet Names by Lutz D. Schmadel (Springer-Verlag, Third Revised and Enlarged Edition, 1997; ISBN 3-540-61747-7; xi + 939 pp.; \$119.00.)

Dorrit Hoffleit, Yale University

In the Foreword to this massive volume, Dr. Brian Marsden, Director of the Minor Planet Center, states:

"It is not just a catalogue or dictionary in the usual sense. One can in fact read the book like a novel from beginning to end. In so doing, one could certainly draw some conclusions about astronomers."

I have not read the book in its entirety from cover to cover. However, I have scanned the Index extensively and sampled very many individual items and many whole pages. Thus I can appreciate the first of the two of Brian's statements and certainly agree with the second. The variety in the choices of asteroid names is often fantastic.

The *Dictionary* lists 7,041 asteroids for which orbits have been determined. (Modern rules require that an asteroid must have had an orbit determined before it can be assigned a final serial number and name.) The arguments for assigning names is primarily that numbers are often inadvertently permuted, causing much subsequent confusion. The names assure that only the correct number can be propagated. Of the 7,041 asteroids listed, names are assigned in the *Dictionary* for only 5,249. Subsequently, in the *Ephemerides of Minor Planets* for 1988, names are given for at least 110 more of these minor planets, while the total of numbered asteroids has increased to 7,316.

The first minor planet discovered was Ceres, in 1801 by Piazzi. Three more, Pallas, Juno and Vesta, were found by 1807, but then no more until 1845. Thereafter the numbers kept proliferating, with steadily increasing frequency. Schmadel points out that by the turn of the century only 6% of the numbered asteroids had been discovered; the number 1,000 was reached in 1921, while half of all those catalogued were found in 1986. Schmader, with sense of humor, quotes Brian Marsden in 1979 as having predicted, "At the present and anticipated rate of growth, it is not unreasonable to suppose that there will be 4,000 numbered minor

planets by the end of the century." In fact Schmadel reports that during the past decade as many minor planets were numbered as during the preceding 185-year span.

Through number 3,080 all of the asteroids have been named. Up to 4,000 names are still lacking for 72 or 8%. Then the fractions per thousand keep decreasing. Between numbers 6,000 and 7,000, names have been assigned to only 103 objects, about 10%.

The first discoveries were named after classical mythological characters. As the numbers grew, that source for names became insufficient, and it was decided to give new discoveries female names. As some wished to honor the names of men, perhaps that is why some male names were feminized, for example, Mussorgskia, Pickeringia, Shapleya, Stroobantia, and Joella for Joel Metcalf (who also had another asteroid named for him, Metcalfia). The history of the development of rules for naming asteroids is clearly described in the Introduction.

The discoverer of an asteroid for which an orbit has been determined (by himself or another) may have priority for naming the asteroid for a period of ten years. Thereafter anyone may suggest a name, which must be approved by a committee of the I.A.U. For a time, no restrictions were put on the category of the name assigned. Then Jim Gibson named an asteroid he discovered after his cat, his faithful companion at the telescope. Objections arose, and subsequently names of pets were forbidden. The cat had been named Mr. Spock, after a character in the television show, Star Trek.

If only Gibson had simply stated his cat and the asteroid were both named for the Star Trek character, nobody would have lifted an eyebrow.

There are ample examples of unusual names that camouflage the identity of a person being honored. Gibson named another of his discoveries Osita. He was honoring his wife Ursula, and Osita is the Spanish equivalent of Ursula. If you knew Mrs. Gibson were being honored in the asteroid belt, would you look for her name under O?

Margaret Walton Mayall, former Director of the AAVSO, might also be hard to find in the *Dictionary*. She has been honored by the name Fivesparks. Could this mean the five points of a sparkling star? No. It is the address in Cambridge where Margaret lived approximately the last fifty years of her life, 5 Sparks Street.

A few other choice names are Bobhope, Eureka, Lucifer, and Franceswright. If you are looking for a particular person in the *Dictionary*, and you cannot find it under the surname, try first names. Like the last one cited, they frequently run first and last together as one word. Mira is also included, but it does not refer to the famous variable star; it is named for a USNO astronomer, Hugo Mira.

The Committee on Names had decreed that no name should require more than 16 characters or spaces. Most of the names use six or seven spaces. But then there appeared a valid reason for an exception, a comet/asteroid with an unusual history. On a Palomar plate taken November 19, 1979, E. F. Helin at Palomar discovered an Apollo-type asteroid. (Apollo-type are

asteroids that closely approach the Earth.) A search by others for prediscovers plates revealed that this object was in fact a rediscovers of a comet, Wilson-Harrington, originally found 30 years before (on a Palomar plate of November 19, 1949) and showing a faint, short tail. This remarkable coincidence justified the combined name of 17 digits.

Two famous names are unfortunately not honored with named asteroids: the great Konigsberg philosopher, Immanuel Kant, and Isaac Newton. The latter came close. A telescope maker, Joel Metcalf, had discovered a minor planet in 1908, and Zaccheus Daniel at Princeton University pondered whether to name the object in honor of Issac Newton or Hubert A. Newton, meteor expert at Yale. Instead of resolving this quandary, according to Brian Marsden, Daniel instead named the asteroid Newton after the city of Newton, Massachusetts, a suburb of Boston.

These samples might well encourage a reader to enjoy making a passtime of looking up names that might conceivably be included in the *Dictionary*. Thus I found that at least 37 astronomers at sometime associated with the Yale Department of Astronomy are included. (In view of the somewhat queer names selected, one easily could overlook some honorees.) I then made a list of people somehow associated with the Nantucket Maria Mitchell Observatory, a small observatory on a small island 30 miles south of Cape Cod. I included not just employees but officially invited advisors on instrumentation and research, and in particular the guest lecturers at the public open nights. It is not a long list, but surprisingly it includes 53 honored

in the *Dictionary*.

The Introduction and eleven Appendices of the *Dictionary* provide numerous statistics, especially on rates of discovery, and the relative distribution of various discoverers of the minor planets. Unfortunately there is no listing of the names of the various honorees, making it somewhat difficult to ascertain if some particular person has or has not been honored by an asteroid name.

Appendix 6 gives 19 categories of minor planet names, including writers, historical figures, artists, cities, rivers and mountains, plants and animals. The most numerous are men (2,551), astronomers (1,147), women (684) and mythological terms (542). In his Introduction, Schnabel states (page 14) that the anti-feminine character shows "the clear preponderance of male names to female names, in the ratio of 15 to 4: As far as naming minor planets is concerned, emancipation has not yet been very successful."

Obviously the *Dictionary of Minor Planets* is a valuable reference source for all professional and amateur astronomers dealing with the discovery, observation, and interpretation of asteroids. Moreover, it can be a welcome "coffee table" book to provide entertainment and discussion. Some may facetiously brag that while most people end up in an earthly cemetery, these honorees will spend their post-mortal years roaming around the Sun on their new asteroid homes!

Upcoming Meetings

Next NASS Meeting in Seattle 11-13 September 1998

The fourth annual meeting of the North American Sundial Society (NASS) will be held for the first time on the West Coast. A group of Seattle diallists promise to put on a great meeting in the beautiful Pacific Northwest. The meeting will begin with an informal get-together on the evening of Friday, 11 September, and continue with activities the entire weekend of 12-13 September (the weekend after Labor Day). September is a lovely month in Seattle, one of the three months that are *not* part of the 9-month Seattle rain festival. The meeting will be held in the new Physics/Astronomy Building of the University of Washington. (Check <http://www.washington.edu> to set the scene and www.phys.washington.edu/Department/tour/ for the building, including its large wall dial.) The University is on the shore of Lake Washington and about five miles from downtown Seattle, five miles from Puget Sound, and two hours' drive from the Olympic and Cascade Mountains. Detailed plans are still developing, but preliminary ideas include a Swap Meet and Show & Tell session, a bus tour of approximately 10-12 dials in Seattle (for a list as of 1996, see www.sundials.co.uk/~seattle.htm), a banquet with live Renaissance music on the topic of time and sundials (!), a software demonstration session, and the usual talks on all aspects of gnomonics. For further information, contact Woody Sullivan at 206-543-7773 (daytime) or 206-784-1052 (evenings) or woody@astro.washington.edu or 6532 Palatine Ave. N., Seattle, WA 98103 USA.

Proposals for papers are now being accepted, whether in oral or display format. The final deadline will be July 15, but expressions of interest at this time will greatly aid in planning. Please send your title, a brief summary (100 words max.), proposed length of time (if oral) or required display space, and any audio-visual needs other than an overhead projector, VCR, or slide projector (all of which will be available). We also plan on having a swap/sales session of gnomonica (dials, books, gadgets)--please let us know if you plan to bring more than a small amount to this session. We will try to accommodate all who wish to contribute, but time constraints may mean that some proposed oral papers will have to become display-type, and others will have to be shortened.

This meeting is open to nonmembers, but we encourage you to join. NASS was established in 1994, currently has several hundred members (including many outside of North America), and publishes a quarterly journal, *The Compendium*. For more information about NASS and membership, contact Sara Schechner Genuth (Secretary), sgenuth@aip.org or 1142 Loxford Terrace, Silver Spring, MD 20901.

The Inspiration of Astronomical Phenomena II

Dear Colleague:

With this note, we wish to inform you of the up-coming Second International Conference on The Inspiration of Astronomical Phenomena ("INSAP II"), to be held 7-14 January 1999 on the Mediterranean Island of Malta.

The sky makes up half of mankind's world; the Earth around us makes up the other half. This meeting will explore mankind's fascination with the astronomical phenomena that define the sky--the lights in the sky, by day and by night--which have been a strong and often dominant element in human life and culture. Scholars from a variety of disciplines (including Archaeology, Art, Classics, History and Prehistory, Mythology and Folklore, Philosophy, the Physical Sciences, and Religion) will attend "INSAP II" to discuss the impacts astronomical phenomena have had on mankind.

Presentations by attendees will be grouped under four main topics: Literature; Art; Myth and Religion; History and Prehistory. The Conference will allow the attendees to address the many and variegated cultural impacts of the perceptions of the day and night skies, providing a mechanism for a broad group of artists, historians, philosophers, and scientists to meet, compare notes, and have the chance to ask those questions of each other about their work, which may have been lying fallow for decades. Attendance will be by invitation from among those applying. Full information on the Conference and an application form can be obtained by contacting the Organizing Committee, or from our Website (URL: <http://ethel.as.arizona.edu/~white/insap.htm>)

This Conference is the second to be held on this general theme. Details of the first meeting (held at Castel Gandolfo, Vatican State, 27 June-2 July 1994), and the publication references that include many of the papers presented there, may be found also at the above Website (URL as given).

This Conference is sponsored by the OTS Foundation and the Vatican Observatory. Please circulate or post this announcement.

The Organizing Committee:

Professor Raymond E. White, Steward Observatory, University of Arizona (Chair)
(rwhite@as.arizona.edu)

Reverend George V. Coyne, S. J.,
The Vatican Observatory
(gcoyne@as.arizona.edu)

Dr. Rolf M. Sinclair, National Science Foundation, Arlington, Virginia
(rsinclair@nsf.gov)

Professor Frank Ventura, Malta
(fven@cis.um.edu.mt)

mail = otsf@aol.com rsinclair@nsf.gov

Recent Discussion "Threads" on the History of Astronomy Discussion Group (HASTRO-L)

- The Historical Influence of Astrology
- Leo Couvoisier (1873-1955)
- Measured Drawings in the Development of Astronomical Instrumentation
- Solar Eclipses Falling on Friday the Thirteenth
- Uses of Archival Data in Astronomy
- Astronomy History Texts
- Norse Views of the Flat Earth
- Eclipses in Shakespeare's Sonnets
- The Origin of the 60 Base
- Christopher Hansten (Observatory of Oslo)

- Einstein's "Greatest Blunder"
- Early Representations of the Earth
- Crater Da Vinci
- Astronomical allusions in Russell Hoban's *Riddley Walker*
- Identification of the Elements in Meteorites
- The date of the Orthodox Easter

HASTRO-L is provided by Stephen McCluskey at the University of West Virginia. Subscribe by send the following e-mail message:

SUB HASTRO-L [your name]

to:

listserv@wvnm.vwnet.edu

Web Page of the Spring

History of Celestial Cartography

<http://www.bo.astro.it/~biblio/atlas/atlas-in.htm>

Daive Neri (a physicist and high-school teacher) has put together pages dedicated to famous celestial atlases housed in the Museum of Physics, University of Bologna. They span the sixteenth, seventeenth, and eighteenth centuries, and include the work of Bayer, Flamsteed, and Bode. Entries are in chronological order. For each, there is a brief description of the atlas and its significance (written by Neri). The reader then can "click" to an image showing a representative chart. Both English and Italian version are available. (While there are flaws, the English is better than on many web pages.) The author promises more

scanned charts, including ones from sources outside the Museum, upon request.

Current Activities of HAD Members of the West

Brian Hynek (University of Northern Iowa)

I am in my last semester as an undergraduate at the University of Northern Iowa. *HAD News* editor Dr. Tom Hockey and I asked the HAD members of the western United States what they currently were working on in terms of historical astronomy. We were amazed at the varied responses and thought other HAD members might be interested in what their colleagues are up to. Here are the intriguing replies to our request.

Numerous HAD members of the west are actively engaged in projects dealing with archaeoastronomy. Alexander Gurshtein (Mesa State College) is working intensively on the origin of the constellations and the zodiac (and the history of Russian astronomy). Look for Ed Krupp's (Griffith Observatory) monthly column on astronomy and culture in *Sky & Telescope*, which routinely includes historical material. His current research projects involve refutation of pseudoscientific neo-Atlantean claims about Egyptian pyramid astronomy and studies of prehistoric rock art, constellation origins, and celestial connotations in the symbolic landscape. Bob Preston (JPL) is studying sunlight interactions on prehistoric rock art over a large region of the U. S. Southwest. He is investigating the use of this rock art in marking the Sun's yearly motion. Robert Stencel (University of Denver) has collaborated on archaeoastronomy studies of ancient China

(Niuheliang site) with Professor Nelson at DU but is currently reviewing diaries of the original Director of Chamberlin Observatory (20-inch Clark refractor, 1894), Professor Herbert Howe.

Several HAD members are working on or have just finished books. Karl Hufbauer (UC Irvine) is writing a book about the stellar-energy problem from 1900 to 1942. He also is winding up an article on Hans Bethe's path to, and solution of, the problem and this solution's immediate reception. Joann Eisberg (UC Santa Barbara) is authoring a biography of Beatrice Tinsley (1941-81), who is known for her contributions to the study of the evolution of galaxies. She also is hoping to develop a more historically- minded physical science course, to be offered for natural science credit to non-majors. Andrew Fraknoi (Foothills College) has recently completed a textbook in introductory astronomy (with David Morrison and Sidney Wolff) entitled *Voyages through the Universe* (Saunders College Publishing, 1997). It includes historical profiles on a number of important astronomers from Goodricke to Barnard to Hubble.

Historical study of solar-system observations have been undertaken by some HAD members. Myles Standish (JPL) is looking at Galileo's observations from 1610-1613. In particular, there seem to be a couple of observations of a "star" where there does not appear to be one that's bright enough for him to have seen! Possibly, it is an asteroid. A long-term study of Percival Lowell's and W. H. Pickering's trans-Neptunian planetary predictions has been completed by Gibson Reaves (University of Southern California). Although Ray

Newburn (JPL) admits to being just an enthusiastic *consumer* of astronomical history, as head of the STARDUST imaging team, he hopes to make a bit of history of his own in the encounter with Comet P/Wild 2 on Jan. 2, 2004.

Additional HAD members had these interesting responses: Past Chair of HAD, Woody Sullivan (University of Washington), is dutifully trying to finish the last 10-15% of his monograph on the worldwide development of radio astronomy for the period up until approximately 1953. Roy Garstang (University of Colorado) is involved with the history of the development of light pollution at the Mount Wilson Observatory. He is initially considering population growth and smog and hoping to include changes in lighting technology in the near future. J. W. Briggs (University of Chicago Engineering Center) is pursuing the study of 19th and early 20th Century astronomy, with a special focus on the history of related instruments and technologies. Virginia Trimble (UC Irvine) continues to be responsible for coordinating all AAS obituaries and is presently preparing talks on Cosmology Since 1948 and the history of the struggle to find more-distant objects. Joe Tenn (Sonoma State University) spends his time (among other things) chairing the committee organizing the history sessions at the annual Astronomical Society of the Pacific meetings.

From the Lucubratory

Woody Sullivan, University of Washington

I just discovered a marvellous resource: *Ancient Egyptian Science (Vol. 2): Calendars, Clocks, and Astronomy* by Marshall Clagett (Philadelphia: American Philosophical Society, 1995). Its 600 pages of text and 100 illustrations are a fascinating and authoritative journey into Egyptian astronomy from the times of the earliest pharaohs to the Hellenistic era (but not Ptolemy)--it is as close as any of us will get without learning how to read hieroglyphics. Learn the ins and outs of the system of 36 10-degree-wide *decans* by which the Egyptians divided the night sky and the year! This was probably (but the relation is not straightforward) the origin of the 24-hour day to which we still subscribe. Get straight fascinating details of the famous heliacal rising of Sirius (Sothis) and its relation to the calendar! Consort with voluptuous Nut, the sky goddess who vaults across the heavens. Discover the oldest (from the reign of Tuthmosis III in the 15th c. BC) extant sundials, or "shadow clocks" (Fig. 1 page 15)--they worked fine, but did require someone to reorient them at noon each day . . .

Perhaps the most memorable inscription studied by Clagett is that accompanying the statue of one Harkhebi from the 3rd c. BC. As astronomers today, we often complain about other duties that we would rather not have (budget committees, grading, grubbing for grants, *etc.*). But it seems that it has always been so:

"Hereditary prince, count, sole friend [of the king], skilled in sacred writings, one who observes everything observable in the heaven and on earth, skilled in observing the stars with no erring, one who announces risings and settings at their times, . . . one who foretells the [heliacal] rising of Sothis at the beginning of the year, . . . one knowledgeable in everything which is seen in the sky, . . . one who does not disclose [anything] at all concerning his report [to the king], discreet with everything he has seen, . . . one who pacifies scorpions and understands the removal of serpents . . ."

The next time you are at a boring administrative meeting, consider that you could be out pacifying scorpions and charming snakes!

Question of the Vernal Quarter: Today the heliacal rising of Sirius is approximately on 1 August, well after the summer solstice. When approximately was it (relative to the solstice) in ancient Egypt ca. 3000 BC? First person with the correct answer wins great fame.

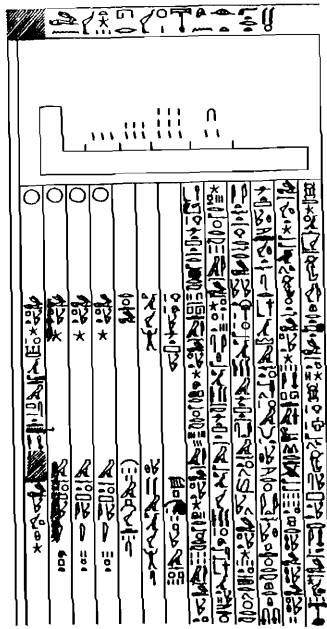


Fig. 1. (Top) Earliest Extant Description and Drawing of a Sundial, from the Cenotaph of Seti I at Abydos (ca. 1300 BC). At the Top is a Side View of the Dial, the Hour Marks Shown by Ticks and Labelled with Numbers (3, 6, 9, 12) for the Lengths in Fingers between the Marks. (Bottom) Modern Drawing, Based on this Description.

The *HAD News* is supported in part by the Department of Earth Science, University of Northern Iowa

Layout by John Alexander

BY-LAWS OF THE HISTORICAL ASTRONOMY DIVISION

American Astronomical Society

May 21, 1979
revised October 31, 1979
revised January 31, 1986

[Adopted by the Organizing Committee in Accordance with Procedures Given in Article VII of the AAS By-Laws. Members of the Organizing Committee: Dr. Kenneth Brecher (B.U.), Dr. John Eddy (H.A.O.), Dr. Owen Gingerich (C.F.A.), Dr. P. Morrison (M.I.T.), Dr. R. Berendzen (American U.), Dr. W. Sullivan (U. of Washington)].

BY-LAWS OF THE HISTORICAL ASTRONOMY DIVISION

American Astronomical Society

21 May 1979

Article I - Name and Purpose

1. **Name.** - This Division of the American Astronomical Society (hereinafter called "the Society"), existing in accordance with Article VII of the By-laws of the Society, as revised in 1973, shall be known as the Historical Astronomy Division (hereinafter called "the Division").
2. **Enabling Authority.** - Article VII of the Society By-laws, as revised 1973, and as said Article may be subsequently revised or amended, is hereby incorporated in these By-laws by reference.
3. **Purpose.** - The Division shall exist for the purpose of advancing interest in topics relating to the historical nature of astronomy. By historical astronomy we include the history of astronomy, what has come to be known as archaeoastronomy, and the application of historical records to modern astrophysical problems. Meetings shall be organized to promote adequate discussion among participants and shall attempt to provide a forum for discussion of recent developments in these areas. The Division will assist the Society in the commemoration of important historical anniversaries and in the archival preservation of current materials of importance to future historians of astronomy.

Article II - Membership

1. **Members.** - The Division shall consist of members, associate members and junior members who hold corresponding membership of the Society and of affiliate members as defined in Section 2.
2. **Affiliate Members.** - The category of affiliate membership shall be open to scientists and scholars who wish to be associated with the Division and who are not members of the Society but who are members of other professional organizations actively concerned with historical astronomy. The Committee will specify the societies in which membership will qualify a candidate for affiliate membership. A person so qualified shall become an affiliate member, if formally nominated by at least 2 AAS members of the Division and approved by the Committee. Affiliate members will pay as dues the regular dues of the Division plus an affiliate member charge, to accrue to the AAS, which will be as specified by the Council of the AAS. Affiliate members will enjoy the same rights and privileges as other members except that they will not be able to hold elective office within the Division.

Article III - Officers and Committee of the Division

1. **Officers.** - The Officers of the Division shall consist of a Chairman, a Vice-Chairman, a Secretary-Treasurer who in addition to the duties specifically assigned to them by these By-laws

shall discharge the other duties usually incident to their respective offices. The Officers shall be Members of the Division.

2. Committee. The Committee of the Division (hereinafter referred to as "the Committee") shall consist of the Officers, the available Past-Chairman whose term has most recently expired, provided he has served his full term, and of two Committee Members of the Division. The management of all affairs of the Division not otherwise provided for shall be entrusted to the Committee. The Chairman and the Secretary of the Division shall serve respectively as Chairman and Secretary of the Committee. Each Officer of the Division shall be responsible to the Committee and shall administer that office in accordance with its instructions. The Committee shall appoint a Secretary-Treasurer whenever such a post falls vacant.

3. Terms of Office and Eligibility. - Terms of office shall begin at the end of the annual business session at which election occurred, except as specifically provided for in these By-laws. The term of office shall be two years for the Chairman, two years for the Vice-Chairman, four years for the Secretary-Treasurer and two years for each of the elected Committee members. The Vice Chairman shall succeed the Chairman in office. The Past Chairman serving on the Committee shall not be eligible for immediate re-election to the Committee. The Secretary-Treasurer shall not serve more than two consecutive full terms.

4. Vacated Offices and Committee Seats. - If the Chairman of the Division should die or resign before the expiration of the term of office, the Vice-Chairman shall act as Chairman for the remainder of the unexpired term and shall then continue to serve the term for which the Vice Chairman was originally elected. If a Committee member should die or resign before the expiration of a term of office, the vacancy for the unexpired term shall be filled by appointment by the Committee.

5. Nominating Subcommittee. - The official ballot shall be prepared by a Nominating Subcommittee. The Chairman of the Division shall, with the advice and consent of the Committee, appoint a Chairman and two members of this nominating committee to serve until the next regular election. The Past Chairman of the Division, when available, shall normally be Chairman of the Nominating Committee. No more than one member of the Nominating Committee shall be a member of either the old or the new Committee of the Division.

6. Election of Officers and Committee Members. - The Officers and Committee Members, excepting the Secretary-Treasurer, shall be elected by ballot in the following manner: The Nominating Sub-Committee, having obtained a statement from each nominee that the nominee is willing to serve if elected, shall prepare and submit to the Committee a slate containing at least two names for Vice-Chairman, and at least four names for the Committee Member vacancies, with members voting for two. This slate is to be sent by the Secretary to each Member of the Division at least three months prior to the annual meeting. During the next 30 days, additional candidates may be nominated by petition of at least 10% of the Membership, or 10 members, whichever is greater. The final ballot, containing the names of all duly nominated candidates, shall be sent to each Member of the Division, with a brief biography of each nominee, at least eight weeks prior to the annual business meeting. Each legally voted ballot must be returned to

the Secretary in the manner specified by the Committee. To be valid, the ballot must be received two weeks prior to the annual business meeting. A plurality of all votes cast shall be sufficient for election, except that the two nominees receiving the largest number of votes for Committee Member shall be declared elected. In case of tie, the Members present at the annual meeting shall choose by ballot among tied candidates. The Secretary shall inform the candidates and the members of the Committee of the results no later than one week prior to the start of the business meeting.

7. Subcommittee Terms. - The terms of office of all Sub-committees appointed or elected by the Division or by the Committee shall end at the annual business meeting next following the appointment unless otherwise specified by the By-laws, by the Division, or by the Committee.

Article IV - Duties of Officers and Members of the Committee

1. Notification of Election. - Members elected to offices in the Division shall be notified of such election in writing by the Secretary within ten days thereafter.

2. Executive Subcommittee. - The Chairman, the Vice-Chairman, and the Secretary-Treasurer shall constitute an Executive Sub-committee to act ad interim upon all such minor matters affecting the Division that in their judgement do not call for submission to the entire Committee. Such actions of the Executive Sub-committee shall be reported to the Committee at its next meeting.

3. Secretary-Treasurer. - The Secretary-Treasurer shall be the purchasing officer and the disbursing officer of the Division and shall pay out monies in accordance with a budget approved by the Committee. Emergency expenditures, above a limit set by the Committee, which are not covered by the approved budget shall require interim approval of the Executive Subcommittee and shall be reported to the Committee at its next meeting. The Secretary-Treasurer shall keep accounts showing all receipts and expenditures of monies belonging to the Division, showing also the indebtedness to the Division of each member thereof on account of dues and actions of the office. The accounts of the Secretary-Treasurer shall be audited by a Subcommittee of not less than two members before being submitted to the Division at each annual meeting. The Secretary-Treasurer shall be responsible for the archives of the Division.

Article V - Meetings of the Committee

1. Regular Meetings. - There shall be a meeting of the Committee at the time and place of each meeting of the Division, except when specifically canceled by vote of the Committee at the previous meeting.

2. Special Meetings. - The Chairman shall convene the Committee in special meeting whenever the affairs of the Division require it. A request in writing from at least two Members of the Committee shall render the convocation of the Committee obligatory.

3. Quorum. - At any regularly called meeting of the Committee, the Chairman or Vice-

Chairman and two other Members shall constitute a quorum. Any action taken by fewer than three Members shall be subject to ratification by a majority vote of the entire committee taken by mail. The Chairman, or in the absence of the Chairman, the Vice-Chairman may invite other persons to sit with the Committee without vote.

Article VI - Finance

1. Dues. - Any changes in dues for Members and Affiliates shall be proposed by the Committee but shall be ratified by the Members in attendance at the subsequent business meeting of the Division.
2. Non-Payment of Dues. - The Secretary-Treasurer may send a written reminder notice to any member whose dues are in arrears. If such dues remain unpaid after a period specified by the Committee, the delinquent Member's name shall be removed from the membership list.
3. Emeritus Members. - Any Member of the Division, on retiring from academic or other duties, may, if (s)he so requests in writing, elect to be transferred to the status of Emeritus Member. Emeritus Members shall be exempt from payment of dues.

Article VII - Meetings of the Division

1. Regular Meeting. - A meeting of the Division to be known as the regular meeting shall normally be held each year at such time and place as shall be decided by the Committee. This meeting shall include a business session, designated the Annual Business Meeting, devoted exclusively to the reports of officers and committees, and to the transaction of business affairs.
2. Other Meetings. - Meetings of the Division other than the regular meeting may be scheduled by the Committee. Special conferences or symposia, when designated as being wholly or jointly sponsored by the Division, shall be announced to all members of the Division and of the Society and shall be open to all individuals who have the right to attend a regular meeting of the Division.
3. Times and Places. - The dates and places of all meetings of the Division shall be chosen in consultation with the Council or the Society, or with an officer designated by the Council.
4. Participants. - All meetings of the Division shall be open to all members of the American Astronomical Society and to such other categories of participants and individuals as designated by the Committee, or by delegation, the Program Committee.
5. Paper Presentations. - Historical papers presented in the historical session at the AAS meetings will not prevent AAS members from presenting a scientific paper at the regular AAS sessions. A HAD member (regular or affiliate) will be limited to one historical paper per meeting, regardless of the number and type (regular or special) of historical sessions that occur at that meeting.

Article VIII - Programs

1. Format. Meetings of the Division may include programs of invited papers, contributed papers, or such other format as designed by the Committee. The Committee may appoint a Program Committee and delegate to it the planning of programs, the selection of papers to be placed on the program, and arrangement of meetings.
2. Abstracts. - The Committee of the Division shall require that abstracts for all papers, except for invited lectures, intended for presentation at a meeting of the Division be submitted in accordance with instructions of the Secretary of the Division. Within five days after each such meeting the Secretary shall transmit in final form the abstracts so submitted to the appropriate officer of the Society for publication.
3. Joint meetings. - The Division may hold joint meetings with other Divisions of the Society as well as with other scientific groups.

Article IX - Amendments

1. Advice of the Council. - These By-laws shall not be amended unless the Council of the Society has been notified of the proposed amendment and given an opportunity to comment on it. Any such comments shall be distributed to the Members when the proposed amendment is submitted to the Members for a vote.
2. Approval of the Committee. - These By-laws may be amended only upon recommendation of the Committee. Should the Council, in its comments on the proposed amendment, recommend against adoption, the Committee shall be advised of the Council's opinion and shall reconsider the amendment at its next meeting or, if so decided by the Executive Subcommittee, through a canvass of the Committee by mail.
3. Ratification by Membership. - Upon recommendation of the Committee and with the advice of the Council, as stipulated above, these By-laws may be amended in a mail ballot by two-thirds of the Members voting.