H·A·D NEWS

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

Number 99 * May 2022

In This Issue

The June 2022 HAD Meeting

Ken Rumstay, Valdosta State University

In our last (November) issue, I stated:

As you know, we will be meeting in person in conjunction with the 239th meeting of the American Astronomical Society.

A month later, the AAS cancelled the meeting as a result of renewed Covid-19 concerns. I'll be more cautious this time, and simply state that, as of this writing, we are planning to meet in-person in Pasadena on June 14th and 15th, in conjunction with the summer AAS meeting. Our HAD meeting was scheduled for the middle of the week to avoid, as much as possible, conflicting with the Fifteenth Biennial History of Astronomy Workshop, which

The Pasadena Convention Center, site of the June 2022 AAS and HAD meetings.

had been scheduled for June 8-12 at the University of Notre Dame. Unfortunately, that meeting has been postponed until next year.

As a wise precaution against possible cancellation (given the uncertainties regarding the pandemic) the June AAS/HAD meeting will be hybrid, with all sessions and plenary lectures (and many workshops) accessible remotely. Here is a preliminary listing of HAD events:

Tuesday, June 14th

8:10 am	LeRoy E. Doggett Prize Lecture: HAD *Presented by William H. Donahue*
10:00 am	HAD I Special Session *A New Observatory Is Coming to Your Neighborhood*
2:00 pm	HAD II Special Session *Centennial of an Eclipse: The 1922 Expedition that Clinched the Case for General Relativity*
6:00 pm	Working Group for the Preservation of Astronomical Heritage meeting

Wednesday, June 15th

10:00 am	HAD III Contributed Oral Presentations
12:45 pm	HAD Town Hall
3:00 pm	Exhibitor Theater: A HAD Overview
4:40 pm	HAD IV iPoster Presentations
7:00 pm	Dinner, Mijares Mexican restaurant

Meeting abstracts can be downloaded as a pdf. at https://had.aas.org/sites/had.aas.org/files/HAD%20meeting%20schedule%20and%20abstracts%20(June%202022).pdf .

For those attending the meeting in person, some other events may be of interest. The AAS will host its annual 40+E reception on Tuesday evening. There will be an excursion to the Mount Wilson Observatory on Friday. And the exhibition hall will, no doubt, host many publisher's booths with books of interest to historians of astronomy.

I would like to thank all of those individuals who plan to attend June's meeting, and especially those who will present their research. Barring unforeseen circumstances, the Historical Astronomy Division will next meet in Seattle in conjunction with the 241st AAS meeting. That meeting is scheduled for January 8-12 at the Washington State Convention Center, one of my favorite meeting venues.

I'm looking forward to seeing many of you in Pasadena. If you can't make the trip to California, please consider registering for the virtual meeting!

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From the Chair

Kevin Krisciunas, Texas A&M University

In 2002 a Cuban-born professor of medieval culture and history at Yale University named María Rosa Menocal published a wonderful book called *The Ornament of the World: How Muslims, Jews, and Christians Created a Culture of Tolerance in Medieval Spain.* The title "the ornament of the world" was the description of Cordoba by the tenth-century Saxon writer Hroswitha. A strong case could be made that at that time Cordoba, one of the city-states of what later became modern-day Spain, was the most advanced city in the western world. Whereas the largest library in Christian Europe held a few hundred volumes, the caliphal library in Cordoba contained 400 thousand!

In Cordoba, Grenada, and Toledo (which became a Christian city-state starting in 1085), mathematicians, astronomers, and translators who were Muslims, Jews, and Christians worked together. Many manuscripts from ancient Greece had been translated into Arabic in Baghdad in the early ninth century. Three hundred years later a "school of translators" was active in Toledo. The four most significant translators there were Gerard of Cremona (1114-1187), Alvredus Anglicus (Alfred of England), Michael Scotus (Michael Scot), and Heremannus Alemannus the Bishop (Hermann the German).

Gerard's motivation to move from Lombardy to Toledo was specifically to work on a translation from Arabic to Latin of Ptolemy's *Almagest*. This was carried out in collaboration with a man named Galib. He was a Mozarab, an Arabized non-Muslim. Mozarabic was a Romance dialect similar to Castilian that was spoken in Spanish territories under Arab domination. According to Menocal (p. 197), "The common model was for a Jew to translate the Arabic text aloud into the shared Romance vernacular, Castilian, whereupon a

Christian would take that oral version and write it out in Latin." We have from an eyewitness, an Englishman named Daniel of Morley, that Gerard and Galib worked on the translation of the *Almagest* this way, but Galib is not named as a collaborator on any of Gerard's other translations (roughly seventy in number).

Gerard's translation of the *Almagest* was used by Georg Peurbach and Johannes Regiomontanus for their *Epitome of the Almagest*, finished in 1462 and published in Venice in 1496. This was not a commentary or a translation but a detailed, sometimes updated, overview of ancient and medieval astronomy. It was written in Latin and has never been translated into English. Copernicus used it extensively. Thus, Ptolemy's *Almagest* passed from ancient Greece to Baghdad, to Cordoba and Toledo, to the *Epitome*, and finally to Copernicus's book *On the Revolutions of the Heavenly Spheres* (1543), which led to the Renaissance of astronomy. Without a culture of toleration that existed in medieval Spain at various times and in various cities, the Renaissance in astronomy would have been delayed and taken a much different path.

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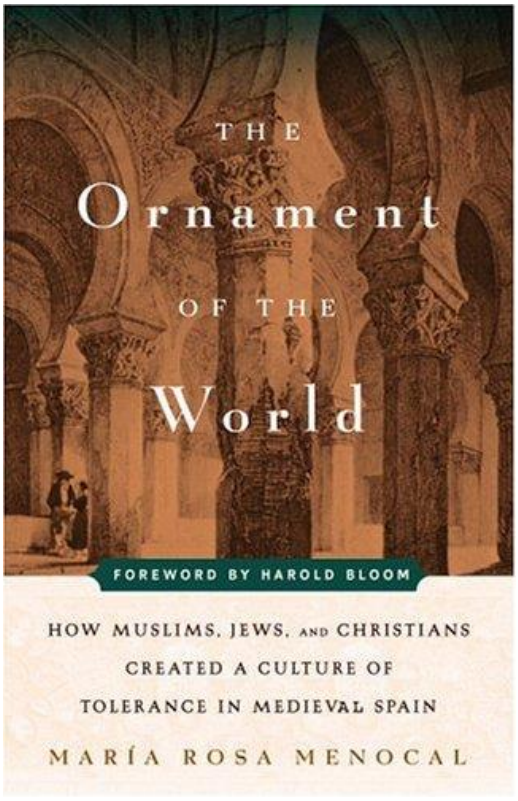

The Ornament of the World, by Maria Rosa Menocal, published in 2002 (ISBN 9780316566889).

From the Vice Chair

Terry Oswalt, Embry-Riddle Aeronautical University

At the risk of tempting fate, at long last we will be meeting in person at an AAS meeting soon. I'm looking forward to our first HAD banquet in several years, too!

As you know, my primary duty as HAD Vice Chair is soliciting obituaries for our astronomical colleagues who have passed on. I am happy to report that significant progress has been made on shortening that long list of former colleagues who have not yet received a proper tribute (https://had.aas.org/obituaries/outstanding-obits). At the time of the previous *HAD News*, 101 obituaries were still needed. Presently, 76 former colleagues still deserve to have a proper AAS tribute. Sincere thanks to those of you who provided an obituary.

The figure on the following page provides a few more details on the AAS obituaries posted since 2010 (once again, thanks to Peter Williams and Crystal Tinch of the AAS, who compiled the data prior to my start as Vice-Chair). In this figure, a solid black line traces the year of death among *published* AAS obituaries. A solid green line traces the actual number of obituaries posted in each year up to the present (May 2022). The year of death and year of posting is often not the same, so these two curves do not necessarily track one another. The red line represents the carried over (i.e., "still needed") number of obituaries each year. These have been accumulating by about a half dozen or so each year, to the current total of 76.

A short dotted green line between 2021 and 2022 represents the anticipated addition of 14 obituaries for which authors are currently committed. The dot-dash green line segment represents an optimistic estimate of where we *could* be by the end of 2022 if our current rate of obituary publications is maintained through the remainder of 2022.

Since 2010, an annual average of 29 and a total of 373 obituaries have been published. We hit something of a milestone early this year: the 750th AAS obituary. However, among the 76 "missing" obituaries mentioned above are 48 colleagues who died more than five years ago. AAS obituaries are an important part of the history of astronomy and I especially appeal for your help to give these colleagues the much overdue recognition they deserve.

Please, will you consider writing an obituary over the summer for someone on the list? A concise summary of the person's scientific accomplishments, with a few personal anecdotes if desired, is all one entails. Most are between 750-1000 words in length. The postings at https://baas.aas.org/obituaries will give you a good idea of how to craft one.

I'm ready to help you get a raw manuscript into the proper format so it can be posted in timely fashion. A simple MS Word, email or text file is sufficient. The turn-around time between approval of your draft and publication is usually just a matter of days. Note that AAS obituaries are referenced in the NASA ADS.

See you in Pasadena!

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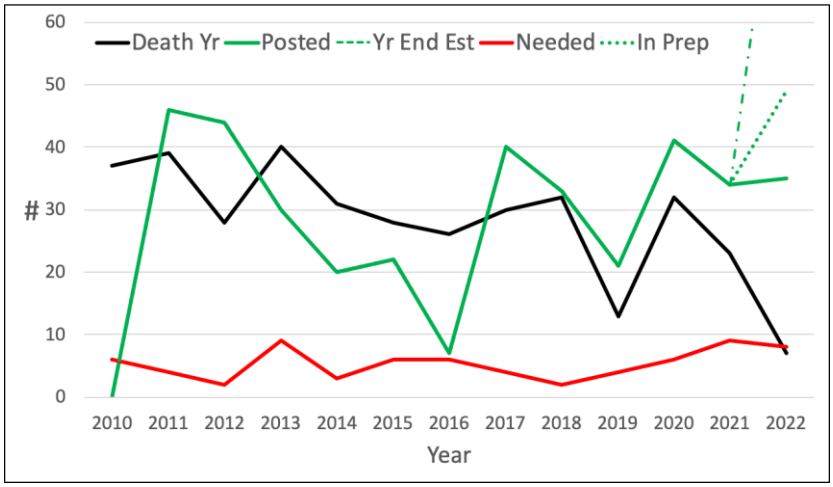
From the Secretary-Treasurer

Ken Rumstay, Valdosta State University

Greetings, everyone! I hope this finds you all in good health and good spirits. I'm looking forward to seeing many of you in person in Pasadena this June; I've grown a bit tired of Zoom meetings!

We were greatly saddened to learn of the passing of Michael Hoskin on December 5th, at the age of 91. A famed Cambridge historian of science, Dr. Hoskin founded the Journal for the History of Astronomy. He and our own Owen Gingerich organized a symposium on Archeoastronomy at Queens College Oxford in 198l; these developed into a recurring series of "Oxford" Conferences on the subject. Long-time HAD members will recall that Dr, Hoskin won the fourth LeRoy E. Doggett Prize in 2004 (https://had.aas.org/awards_and_prizes/doggett_prize/2004). His contributions to our field were many, and he will be sorely missed.



AAS obituaries, 2010-2021. See text for details.

We have of course lost other valued members of our Society, and need your help in seeing that they are properly remembered. Please look at Terry's request (on the previous page) for assistance in preparing obituaries, and help however you can.

Failing to hold our annual Town Hall in January, I'd like to say a few words about the state of the AAS Historical Astronomy Division. At the end of 2021 our total membership stood at 538, distributed over thirteen membership categories. At the time of writing we have 471 members (see the list at right), a decline of 12%. The biggest decreases were in the undergraduate and graduate student categories, somewhat surprising in light of the fact that we do not charge dues for student members.

Financially we are in good shape, an audited summary for 2021 appears below. We ended the year with an increase in the balances of all three accounts, with a total increase of 16%. Thanks to Steve Maran and J. Allyn Smith for serving as this year's HAD Audit Committee!

I suppose we should be glad that our funds have shown significant increases over the past year. But the fact of the matter is that this is, for a large part, simply a result of many of our normal activities having been curtailed by the pandemic. I for one look forward to a return to normalcy.

157	F	AAS Full Member
132	E	AAS Full Emeritus Member
60	GR	AAS Graduate Student Member
36	JR	AAS Undergraduate Student Member
35	AM	AAS Amateur Affiliate
21	ED	AAS Educator Affiliate
19	HAD	HAD Division Affiliate only
2	DA	Division Affiliate (two or more divisions)
3	IA	AAS International Affiliate
1	P	AAS Patron Member
0	AL	AAS Alumni Affiliate
4	Staff	AAS staff member
1	SPS	SPD Member (?)

Finally, I would like to thank the following for their financial support of HAD in 2021 and 2022:

Jennifer Bartlett, William Bridgman, Bella Chiu, Edward Churchwell, Thomas Corbin, Brenda Corbin, Harold Corwin, Donald Davis, David DeVorkin, Denis Elliott, Thomas English, Donald Groom, Arnold Heiser, David Jenner, Carol LePage, Julie Lutz, Liam McDaid, Alice Monet, Terry Oswalt, Robert Parker, Kenneth Rumstay, Woodruff Sullivan, Joseph Tenn, Thomas Williams, and Robert Wing

Their contributions have helped us to fulfill our mission, and we are very grateful!

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Historical Astronomy Division
For the Twelve Months Ending Friday, December 31, 2021

	Operating Budget	Doggett Prize	Osterbrock Prize	Totals
Revenue				
Individual Dues	3,698.68			3,698.68
Contributions	2,450.00	486.00	1,547.51	4,483.51
Interest	797.02	1,127.76	889.17	2,813.95
Investment Expense Offset	(62.21)	(88.02)	(69.41)	(219.64)
Distributed Market Value	3,076.30	4,352.82	3,431.95	10,861.07
Total Revenue and Transfers	**$9,959.79**	**$5,878.56**	**$5,799.22**	**$21,637.57**
Expenses and Transfers				
Bank Fees	153.72	12.15	38.69	204.56
Grant Awards			750.00	750.00
Prize Certificates			221.27	221.27
Transfer (Division Affiliate)*	105.00			105.00
Transfer to General Fund§			58.28	58.28
Total Expenses and Transfers	**$258.72**	**$12.15**	**$1,068.24**	**$1,339.11**
Surplus/(Deficit)	**$9,701.07**	**$5,866.41**	**$4,730.98**	**$20,298.46**
Begining Balance (Yr.)	**$36,952.63**	**$51,385.62**	**$41,224.53**	**$129,562.78**
Ending Balance (Yr.)	**$46,653.70**	**$57,252.03**	**$45,955.51**	**$149,861.24**

** $5 per Division Affiliate Member*
§ 6 percent of expenses

Monthly Celebrations from the History of Astronomy

Michael E. Marotta
Editor, Historical Astronomy Division

The Historical Astronomy Division webpages deliver brief essays chronicling significant events and commemorating the people who created them. You will find "This Month in Astronomical History" under the **Resources** tab by selecting **This Month in History**. The monthly feature column was launched in July 2016 by Dr. Teresa Wilson who wrote the first nineteen installments. Following her, contributors have come from across the spectrum of academic professionals and researchers and amateur astronomers.

So far this year, the entries have been:

- *Strange Comet: William Herschel, His Telescopes, and Uranus*, by Amy Oliver (January)
- *Abd al-Rahman al-Sufi*, by Aneka Kazlyna (February)
- *Planets Have Rings*, by Michael Marotta (March)
- *The First Lady of Harvard's Observatory Hill: Cecilia Payne-Gaposchkin*, by Stephen Spears (April)
- T*he First Telescope on the Moon*, by Rick Fienberg (May).

Amy C. Oliver, BA, MS, FRAS, currently serves as the Public Information & News Manager at the National Radio Astronomy Observatory (NRAO), and as the Public Information Officer for the Atacama Large Millimeter/submillimeter Array (ALMA) in North America. She is a Board Member At-Large for AAS's Historical Astronomy Division (HAD), a NASA/JPL Solar System Ambassador, and an International Dark-Sky Association Ambassador. In 2021, she was formally appointed to the Tucson-Pima County Outdoor Lighting Code Committee and was elected as a Fellow of the Royal Astronomical Society.

She said: "As a young violinist in 1997, the first symphony I played in a full orchestra was William Herschel's No. 17 in C Major; at the time, I had not yet discovered my love of space and had no idea he was also an astronomer. As we approached AAS239, I decided to write about Herschel as a complement to the hard work of the HAD membership in building a special session dedicated to his many varied accomplishments. It was also an opportunity for me to revisit the musician and explore more deeply his connection to the stars."

Aneka Kazlyna is a graduate student at Columbia University in both the Middle Eastern Studies and the History and Philosophy of Science and Technology programs. She holds a BA (with honors) from Bowdoin College. Her February 2022 essay about Arabic observational astronomy and Al Sufi's *Book of the Constellations of the Fixed Stars* was informed by her interest in the paths that scientific knowledge traveled within and across cultural and linguistic borders in Eurasia and North Africa.

She said: "I found an entire astronomical tradition after Ptolemy that combined the earlier Greek tradition and Arabic astronomical tradition and updated it in a way that was not done before. I found al-Sufi's work compelling because it shows a conversation between multiple astronomical traditions. Many of these Arabic star names from this tradition were picked up during the Renaissance and remain with us today."

Her research has been supported by the Foreign Area and Language Fellowships and a Columbia GSAS fellowship. This summer Kazlyna will join an astrobiology project to bridge fundamental questions about life in the universe with the context of historical paradigms from the Copernican Revolution that affect astrobiology.

Michael E. Marotta, BS, MA, is the editor of This Month in Historical Astronomy. Having joined the AAS in 2020, he recently served on the AAS Amateur Affiliate Membership Advisory Task Force. He is a sustaining member of Astronomers Without Borders and a patron member the Astronomical League. He previously served as vice president of the Austin Astronomical Society.

Stephen Spears, BS, MEd, served as the mathematics department chair at East High School in Cleveland, Ohio, for 30 years. Since retiring, he continues to pursue his passion for the

spectroscopic analysis of Wolf-Rayet stars. (See "Low Resolution Spectroscopy of Wolf-Rayet Stars," *Amateur Astronomy*, Summer 2015 Issue 87, 46-52 and "Wolf-Rayet Stars: Low Resolution Spectral Analysis and Terminal Wind Velocity " *Amateur Astronomy*, Spring 2017 Issue 94, 50-57.) He is currently working on an article about how Vera Rubin and W. Kent Ford found a relationship of rotational velocities of HII regions in Andromeda by measuring their distances from the center of the galaxy via the Doppler shifted emission.

He said: "I am interested in the history of astronomy from a people perspective, especially women, such as Annie Jump Cannon, Henrietta Leavitt, Cecilia Payne-Gaposchkin, and Vera Rubin. They made monumental discoveries while enduring much in terms of gender bias."

Richard Tresch Fienberg, PhD, FAAAS, is currently the project manager for the AAS Solar Eclipse Task Force. He served as the AAS press officer from 1 September 2009 until his retirement on 1 September 2021. Previously, he was the editor of *Sky & Telescope* and president of Sky Publishing. On 3 August 2019, at the annual Stellafane amateur telescope makers convention in Springfield, Vermont, Fienberg was honored with the Walter Scott Houston Award of the North East Region of the Astronomical League (NERAL), for his long and abiding commitment to the amateur astronomy community. He received the NASA Exceptional Public Achievement Medal on 8 November 2018, at NASA Headquarters in Washington, DC. On 1 May 2003, the Minor Planet Center officially designated carbonaceous asteroid 1995 DA, discovered on 19 February 1995 by American astronomer Dennis di Cicco at his private observatory, 9983 Rickfienberg.

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Drawing by Jason E. Ybarra for the *This Month in Astronomical History* website.

New Views of William Herschel

Woodruff T. Sullivan

"New Views of William Herschel (1738-1822)" was intended to be two "live" sessions at the January 2022 HAD meeting in Salt Lake City. After that meeting was cancelled, we decided to present it as a webinar on Saturday, March 5th.

This webinar marked the occasion of the 200th anniversary of the death of William Herschel, one of the greatest astronomers in history. "New Views" refers to Herschel's non-astronomical life, in particular musical and other aspects of his life in Hanover, Yorkshire, and Bath before he became an astronomer upon his discovery of Uranus in 1781 at the age of 42. One presentation included a performance of one of his viola concertos; another looked at how Herschel's fame and discoveries led to his inclusion in poetry. Two looked at his close research connections with his sister Caroline and his son John. The session was dedicated to the memory of preeminent Herschel scholar Michael Hoskin (1930-2021), who died on December 5th.

The entire webinar may be viewed on YouTube at https://www.youtube.com/watch?v=f7D8jWU2Nww and the program, with abstracts of the six talks, is available at https://tinyurl.com/herschelwebinar .

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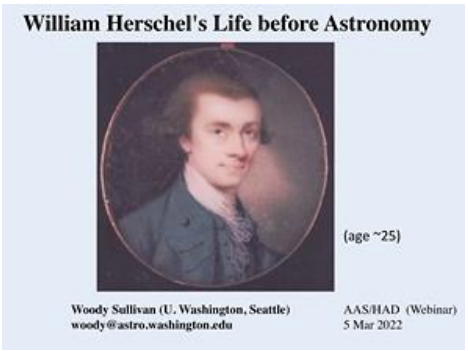

Title image from "New Views of William Herschel".

"SKA ≥ Karoo Radio Telescope" at 2021 Sigma Xi Art & Film Festival

Jarita C. Holbrook, The University of Edinburgh

The Square Kilometre Array is the subject of my 2017 film "SKA ≥ Karoo Radio Telescope". The film focuses on SKA stakeholders and their expectations; it is one of the outputs of a grant funded by the South African National Research Foundation focused on the interplay of astronomy and astrophysics with the wider South African society. The SKA will be the largest radio telescope ever built when it is completed over the next five years. The SKA has two cores that focus on different parts of the radio spectrum. The Australian core covers 50 MHz to 350 MHz; the South African core covers 350 MHz and 14 GHz. The design of the receivers are different with the South African ones the more classical giant dishes. The South African core is located in the Karoo desert region about 80 kilometers from the town of Carnarvon. This sets the stage for the film.

Jarita filmed the documentary between 2014 and 2016. Astrophysicists, science communicators, and government official were interviewed along with people living in Carnarvon. The tension of the film is the mismatch between what people thought the SKA would bring to their communities and what has actually happened. The long term beneficiaries of the SKA will be astrophysicists, but at the time, there was only one person from Carnarvon that was involved with the science end of the SKA. The film attempts to give voice to the various stakeholder communities connected to the SKA South Africa.

There are two version of the film. The original is just shy of 40 minutes and includes English and Afrikaans speakers; the second version is just over 20 minutes and focuses on some of the English speakers. The original was an official selection of the Las Cruces International Film Festival in 2017; whereas the English-only version was an official selection of Sigma Xi's 2021 Art & Film Festival. Though it did not win any awards, it is still an honor to be selected.

It is a good film for teaching about some of the issues between observatories and local communities. The English-only version is freely available but unlisted on YouTube. I am happy to share it with our HAD members!. You can find it here: https://youtu.be/ly3shX2qRuI .

If you use the film or have comments about the film or audience responses, please let me know!

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Scenes from "SKA ≥ Karoo Radio Telescope".

Agnes Mary Clerke: Historian of Astronomy

Michael E. Marotta

Agnes Mary Clerke (1842-1905) was a historian and journalist of astronomy. She wrote five books about astronomy and another on Homer, and hundreds of articles for popular magazines (among them, *Nature*) in addition to authoring entries for the *Encyclopedia Britannica* and the *Catholic Encyclopedia*. Her works informed a public that was fascinated by the cascade of astronomical discoveries in the 19th century. She also identified unsolved problems to be investigated in the 20th century with her penultimate book, *Problems in Astrophysics* (1903). Several of Clerke's astronomical works can be found in modern reprint editions. Others are available from online archives such as Google Books, the Hathi Trust, and Project Gutenberg.

Agnes Clerke was born in Skibbereen, County Cork, Ireland on 10 February 1842. Her father, John William Clerke, managed the local branch of the Provincial Bank of Ireland. (Founded in 1825, it merged with others to form the Allied Irish Banks, p.l.c., in 1966.[1]) When he was promoted to manage the Dublin office, the family moved there. His career provided a comfortable lifestyle. Like her father, her brother, Aubrey St. John Clerke, earned his degree at Trinity College Dublin. Agnes and her sister, Ellen, were educated at home. Her mother had benefited from formal education at a Catholic school and therefore supported and advanced the otherwise informal educations of her daughters. Like Agnes, Ellen also became a popular author for periodicals. Her chief interests were in geology and biology. In 1867, Agnes and Ellen moved to Italy and lived among the English in Rome, Naples, and Florence. Ten years later their father retired and the family moved to London eventually establishing their home in Kensington.

H. S. Mendelssohn.

AGNES MARY CLERKE.

Agnes Mary Clerke from Lady Huggins's *Appreciation.*

Clerke's first article for the quarterly *Edinburgh Review*, "Brigandage in Sicily" appeared in the April 1877 issue. Her second article, "Copernicus in Italy" came out in July. She soon became so prolific an author that her primary biographers—Margaret Lindsay and Lady Huggins in the 20th century and Mary Teresa Brück in the 21st—simply state that her publications were "innumerable." *Edinburgh Review* published 55 of her essays, *Nature* 27, and *The Observatory* 42. For the *Encyclopedia Britannica* ninth edition, Clerk contributed biographies of Galileo, von Humbolt, Lavoisier, Huygens, Kepler, Lagrange, and Laplace among many others.[2] For *The Catholic Encyclopedia* Clerke wrote the entries on "Astronomy" and "Astronomy in the Bible."[3,4]

Her major astronomical books were:

- A Popular History of Astronomy During the Nineteenth Century (1883)
- The System of the Stars (1890)
- The Herschels and Modern Astronomy (1895)
- Problems in Astrophysics (1903)
- Modern Cosmogonies (1905)

It is important to understand that in the years between each of those publication dates, Clerke placed dozens of essays for periodicals. Most of those were about astronomy though she also reported on other topics of interest to herself, her editors, and their readers. For one example, the *Edinburgh Review* for July 1884 carried her 37-page exposition, "The Future of the Congo." In addition, she prepared new editions of the books.

Her *Popular History* went through four editions, the last one running two printings. *The System of the Stars* (1890) was updated in 1905.

As popular as she was with the general public, professional astronomers also lauded her books. In order to secure her facts she began correspondences with Edward Holden, David Gill, and George Ellery Hale, among others, and those continued throughout her life. So her books received positive reviews from *The Observatory*, *Publications of the Astronomical Society of the Pacific*, *The Sidereal Messenger*, *Bulletin Astronomique,* and *Science,* among very many others. Only *Nature* stood aloof.

Initially supportive because she was one of their own contributors, editors at *Nature* became partisans of J. Norman Lockyer and his theory that stars are born from the massive aggregation of meteoric material. Clerke found better contrary evidence in the spectroscopic calibrations carried out by William Huggins. Lockyer himself had encouraged Clerke early on and they remained friends. Nonetheless, *Nature* denigrated her books, damning them with faint praise. That finally changed in 1903 with *Problems in Astrophysics*.

The full story (and very much more) is in M. T. Brück's *Agnes Mary Clerke and the Rise of Astrophysics*. As an astronomer (MSc 1946), Brück wrote her brief 270-page biography from Clerke family archives and local records in Skibbereen as well as deep library resources including Harvard, Cambridge, the University of California, and the Library of Congress.

Clerke remains important for modern readers. First, of course, in the late 19th century, she was an eminent historian and popular reporter on astronomy of her time. Literate in German, French, and Italian, her summaries were always supported by references to original, peer-reviewed publications. Beyond that, her erudition included studies that we have since lost. *Familiar Studies in Homer* (1892) included a chapter on astronomy. We too easily project our knowledge back in time. Nobel laureate Steven Weinberg said in *To Explain the World* that the ancient Greeks called the planets Hermes, Aphrodite, Ares, Zeus, and Cronos. They did not. Clerke demonstrated that before the Classical era, in the time of Homer, circa 800 BCE, and as late as 500 BCE, they did not even perceive the planets as apart from other stars.

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References

[1] https://aib.ie/investorrelations/about-aib/history

[2]. *Edinburgh Review* count from Brück, page 34; Huggins says 55. *Observatory* and *Nature* tallies from database searches in the SAO/NASA Astrophysics Data System.

[3] Clerke, A (1907). "Astronomy", *The Catholic Encyclopedia* New York: Robert Appleton Company. Retrieved March 16, 2022 from New Advent: https://www.newadvent.org/cathen/02025a.htm

[3] Clerke, A. (1907). "Astronomy in the Bible," *The Catholic Encyclopedia,* New York: Robert Appleton Company. Retrieved March 16, 2022 from New Advent: http://www.newadvent.org/cathen/02029a.htm

[4] Fox, W. (1908). "Agnes Mary Clerke." *The Catholic Encyclopedia*. New York: Robert Appleton Company. Retrieved March 16, 2022 from New Advent: http://www.newadvent.org/cathen/04051b.htm

Further Reading

Briick, M. T. (1994). "Mary Agnes Clerke, Chronicler of Astronomy," *Quarterly Journal of the Royal Astronomical Society*, 35, 59-79.

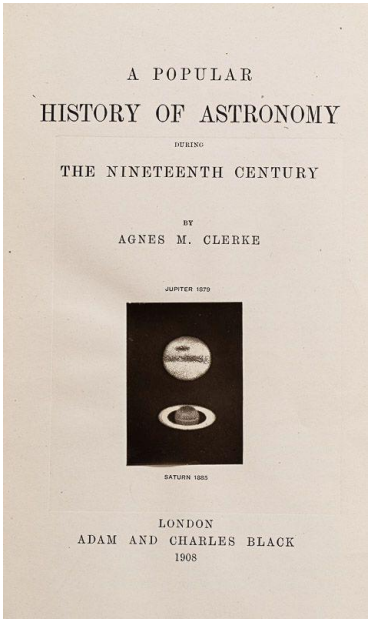
Brück, Mary Teresa (2002). *Agnes Mary Clerke and the Rise of Astrophysics*, Cambridge University Press.

Mary T. Briick (2003). "Agnes Mary Clerke: Ever-popular historian of astronomy," *The Antiquarian Astronomer*, Issue 1, 2004.

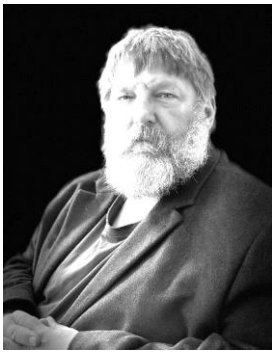
Edward W Cliver 2007). "Agnes Mary Clerke: Real-time historian of astronomy," *Astronomy & Geophysics*, Volume 48, Issue 3, June 2007, Pages 3.25–3.26.

-- [anonymous: attributed to Huggins, Huggins, Margaret Lindsay (Lady Huggins)]. (1907). "Minor Contributions and Notes: Agnes Mary Clerke," *Astrophysical Journal*, vol. 25, April 1907, p.226

Huggins, Margaret Lindsay (Lady Huggins) (1907). *Agnes Mary Clerke and Ellen Mary Clerke: an appreciation,* printed for private circulation.



Title page of *History of Astronomy During the Nineteenth Century*, perhaps Agnes Clerke's most famous publication.



The Alliance of Historic Observatories

John W. Briggs, Interim Secretary
Alliance of Historic Observatories

For those of us fortunate to know Mount Wilson Observatory, any excuse to visit is a welcome one. The beauty of the place is obvious. If one knows even a little bit about what's been accomplished there, it's a wondrous place filled with a compelling spirit of astronomical history. Every spot where we might walk, stand, or sit has been occupied before us by heroes of 20th century astronomy. Their work revolutionized our understanding of our world and our Universe.

Of Mount Wilson's many special places, arguably the most compelling is the library of the Monastery – the room where astronomers gathered to relax, read, and converse before meals, in front of a grand stone fireplace. There could have been no place more appropriate and inspirational for a particular small gathering one June weekend in 2019. The event, hosted by Sam Hale of the Mount Wilson Institute, was the inception of a new organization that the group named Alliance of Historic Observatories. The meeting brought together people concerned with "legacy observatories," and the proposal was that a new organization form to serve the needs of such institutions.

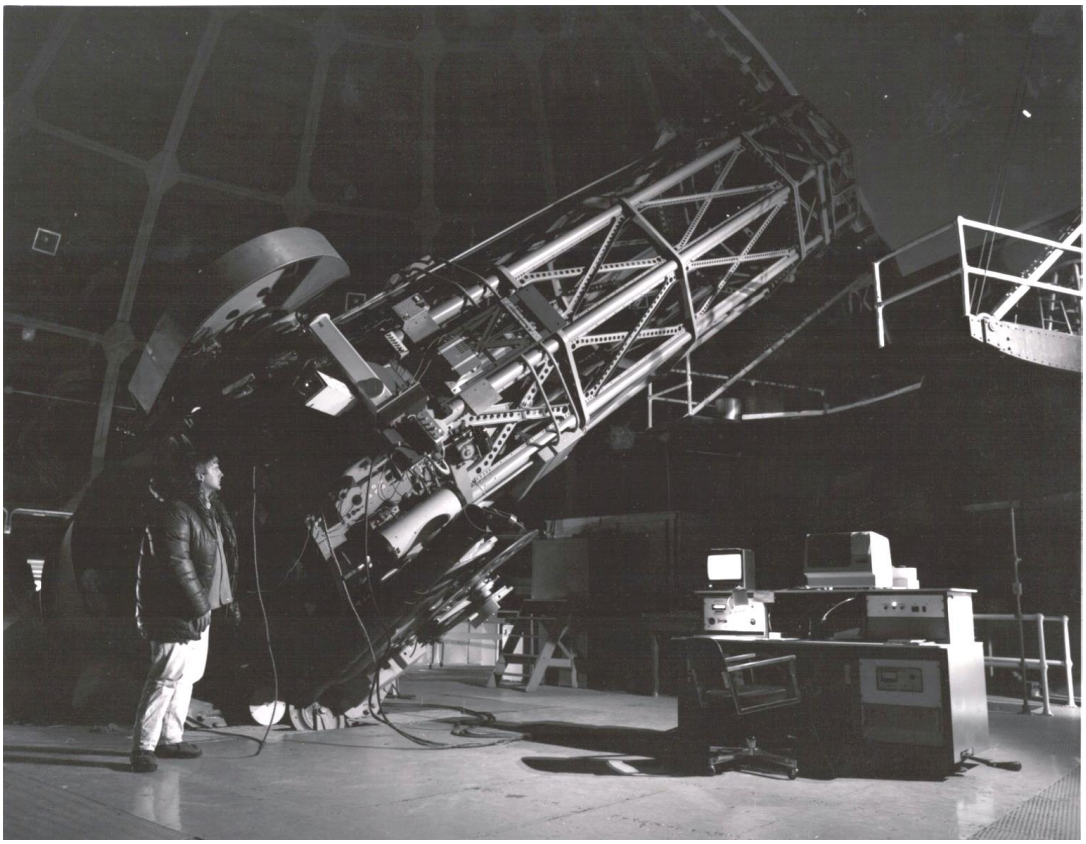
The meeting resulted in considerable brainstorming, taking advantage of initial considerations written down by a small group of senior astronomers who had gathered informally at a prior meeting of the American Astronomical Society. Among the first resolutions at Mount Wilson was the working name for the new organization. Three participants agreed to lead an effort to refine a draft mission statement and other key wording, and the group planned follow-up discussion which ran later in a gathering at Palomar Observatory.

The participants included Scott Roberts of Explore Scientific, he having provided a major effort organizing the Mount Wilson event; Sam Hale as mentioned above; Dr. Ed Krupp, Director of Griffith Observatory; Dr. Sandra Faber of Lick Observatory; Tony Misch, Director of the Lick Historical Collections Project; Dr. Jeffrey Hall, Director of Lowell Observatory; Tom Meneghini, Director of Mount Wilson Observatory; Dr. Jonas Zmuidzinas, Director of Caltech Optical Observatories; Dr. Andrew Boden, Deputy Director of Caltech Optical Observatories; Jean Mueller, Caltech Astronomer; Dr. Fr. Paul Gabor, S.J., Vice Director of the Vatican Observatory Research Group; and Ian McLennan of Vancouver, Canada, representing the Yerkes Future Foundation that is now steward of Yerkes Observatory. Speaking Saturday night and participating in some of the summit's activities was Dr. John Mulchaey, Director of Carnegie Observatories. Dr. Krupp also represented the Working Group on Preservation of Astronomical Heritage of the American Astronomical Society. I represented the Antique Telescope Society, an organization with a special appreciation for historic observatories.

The group's initial discussion ran with a catered meal in the dome of the 100-inch reflector. Further consideration ran in the intimate setting of the Monastery library. After brainstorming involving the whole group, Dr. Hall, Dr. Boden, and Mr. McLennan agreed to lead an effort refining draft documents for the proposed organization. Of many extremely interesting points raised, it's notable that the intangible *spirit* of astronomical observatories, and of their grand historic instruments, was not overlooked. The group recognized the power of this for education.

All of us interested in preserving astronomical heritage and exploiting it for education and engagement can be pleased that development of the Alliance of Historic Observatories will continue. The pandemic descended upon us all shortly after these first steps, but the organizational effort is now picking up again. We look forward to reporting progress to everyone interested as the mission of the organization is fully resolved. The next in-person gathering will be later this year at Lowell Observatory.

john.w.briggs@gmail.com



John W. Briggs, shown here as a staff observer on the Mount Wilson 60-inch in the long-running HK Project that monitored chromospherically active stars, is serving as the first secretary of the Alliance of Historic Observatories. Mount Wilson is a founding member of the Alliance. Photograph recorded by Steve Padilla, solar observer with Mount Wilson's 150-foot tower telescope.

News from HAD Members

Ken Rumstay, Valdosta State University

We are always glad to hear from our members, and have recently received the following items of information which we are glad to share.

First and foremost, in late April Virginia Trimble learned that she had been elected to the American Academy of Arts and Sciences! Founded in 1780, this institution honors excellence and convenes leaders from every field of human endeavor to examine new ideas, address issues of importance to the nation and the world, and work together, as expressed in its charter, "to cultivate every art and science which may tend to advance the interest, honor, dignity, and happiness of a free, independent, and virtuous people." Its founding members included George Washington, Benjamin Franklin, John Adams, and Alexander Hamilton; Virginia is certainly in good company!

A list of Fellows and International Honorary Members of the American Academy of Arts and Sciences who are active in the areas of Astronomy, Astrophysics, and Earth Sciences may be found at https://drive.google.com/file/d/1qpl33cICAokRgY_UyrsCZ17HveljFJBV/view. Congratulations to Virginia Trimble on this great honor!

A newly expanded and updated Guide for Educators about Women in Astronomy is now available. This guide to resources for teaching about the challenges that face women in astronomy, and the achievements that women have made despite those challenges, was compiled by Andrew Fraknoi, Emeritus Chair of Astronomy at Foothill College and the former executive director

of the Astronomical Society of the Pacific.

The materials have been selected so they can be assigned to students at the Astro 101 level. After sections listing resources on general history and issues related to women's roles in astronomy, the guide features more specific books, articles, videos, and webpages on 19 women of the past and 21 women of today. At the end of the 28-page document, there is a listing of one or two resources about 27 other women whose work students may be interested in.

Andy notes that, given the growing number of women who are making important contributions to astronomy, this guide could only be representative, and not comprehensive. One important criterion for inclusion was that non-technical materials about each woman had to be available for non-science majors.

The revised Guide for Educators about Women in Astronomy may be downloaded free of charge at http://bit.ly/womenastronomers .

It is always a pleasure to hear from member Hans Haubold, Professor of Theoretical Astrophysics at the UN Office for Outer Space Affairs in Vienna! He and coauthors A.M. Mathai and Lewis Pyenson have just published an article titled "Promoting global education, teaching, and research in space science" in the December 21st issue of the online journal *Research Features*. The article may be viewd online or downloaded as a pdf file at https://researchfeatures.com/promoting-global-education-teaching-research-space-science/

On February 13th Sethanne Howard presented a wonderful online lecture for The Friends of the David M. Brown Planetarium (in Arlington, VA). In "The People in Early Astronomy" Sethanne traced the early history of astronomy, beginning around 4000 BCE. Her talk may be viewed at https://www.facebook.com/watch/live/?ref=watch_permalink&v=1155189801890278

Finally, we've heard once again from America's favorite umbraphiles, Jay and Naomi Pasachoff! Jay sent some impressive statistics: He's observed 75 solar eclipses to date (36 total, 19 annular, and 20 partial), while Naomi follows close behind with 47 (22 total, 12 annular, and 13 partial).

The partial solar eclipse of 2022 April 30 was viewed from Viña del Mar, Chile, by Jay and Naomi, accompanied by Patricio Rojo (of the University of Chile in Santiago) and Veronica Noguer. Jay sent the two photographs which appear on the following page.

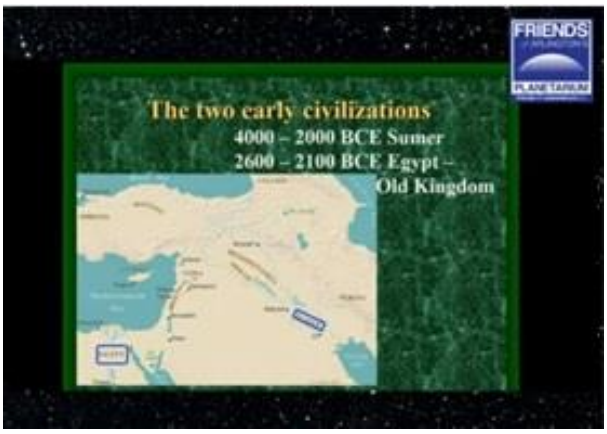
Talks by Jay Pasachoff, Fred Espenak, Xavier Jubier, Ralph Chao, Jay Anderson, and Michael Zeiler will be among those to be featured at the International Solar Eclipse Conference to be held at the Parador of the Bishops of Sigüenza in Spain on 2022 September 1-2. For information on this meeting please see www.sec2022.com .

I've never had the nerve to tell Jay or Naomi that I, in fact, have never seen a total eclipse of the Sun. But I hope that will change on 2024 April 8; my sister-in-law's house lies right in the middle of the path of totality!

That's all the news for now; please write if you have anything of interest to share!

hadsec@aas.org

Four of the astronomers featured in Andy Fraknoi's Guide for Educators about Women in Astronomy



Two slides from Sethanne's talk, available on YouTube

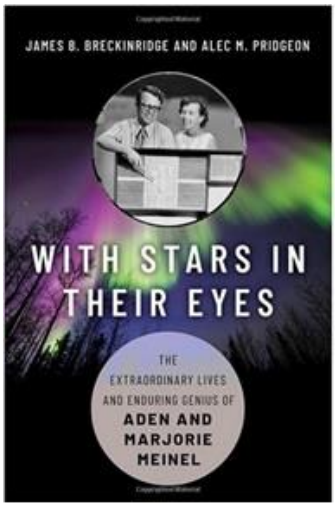
Photographs of the partial solar eclipse visible over Chile in 2022 April 30. The wide-angle image at top was obtained with a Nikkor 500-m f/8 mirror lens using a Questar solar filter and a Nikon D750. The image at bottom was made with a Celestron 1250 telephoto lens and a Nikon 750, with the image sharpened by Robert Vanderbei (Princeton University) on a Vixen mount.

New Books

Ken Rumstay, Valdosta State University

It is always a joy to learn of new books which will be of interest to our readers! Three have recently been published by HAD members, and we would like now to bring them to your attention. The descriptions which appear in italics are provided by the publishers.

If you would like to suggest a book for inclusion in this column, or (better yet) review a book, please contact me at hadsec@aas.org !

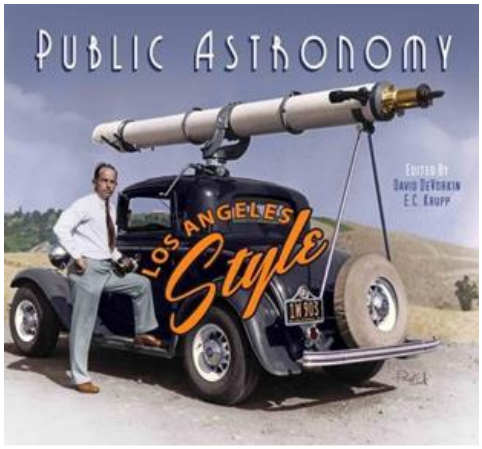


With Stars in Their Eyes: The Extraordinary Lives and Enduring Genius of Aden and Marjorie Meinel, by James B. Breckinridge and Alec M. Pridgeon (Oxford University Press, 2022, ISBN-13: 978-0190915674). Also available as a Kindle e-book.

This book details the lives of Aden and Marjorie Meinel, who helped to pioneer modern optics and solar energy in the United States. Coauthor Alec Pridgeon will present a brief overview of their lives and careers at the June meeting in Pasadena. The publisher notes:

Aden B. Meinel and Marjorie P. Meinel stood at the confluence of several overarching technological developments during their lifetimes, including postwar aerial surveillance by spy planes and satellites, solar energy, the evolution of telescope design, interdisciplinary optics, and photonics. Yet, their incredible stories and their long list of scientific contributions have never been adequately recognized in one place. In this book, James Breckinridge and Alec M. Pridgeon correct this oversight by sharing the story of this powerful duo.

The book follows their lives and covers large scientific developments between World War II to the Cold War. James B. Breckinridge, a previous advisee and later colleague to the Meinels, and historian and scientist Alec M. Pridgeon collected more than 200 hours of oral interviews with those who worked closely with the Meinels and some who built their careers around the findings made possible by their work. The book shares and analyzes the work done by the Meinels, and it also includes incredible insights from an unpublished Meinel autobiography.



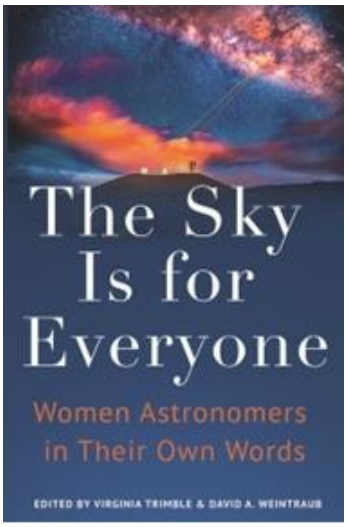
Public Astronomy, Los Angeles Style, edited by David H. DeVorkin and Edwin C. Krupp (Griffith Observatory, 2021, ISBN-13: 978-0-578-78941-5).

At the January 2013 HAD meeting in Long Beach Peter Abrahams, Thomas Williams, and David DeVorkin organized a special session titled "Making Astronomy Public, Los Angeles Style". The abstracts from this session may be found at https://had.aas.org/membership/had_meetings/2013/january-abstracts . From that session comes this book. The Griffith Observatory website states:

For more than a century, Los Angeles has been changing public perspective on life, the universe, and everything through scientific research, space exploration, the entertainment industry, and public astronomy.

Public Astronomy, Los Angeles Style includes a set of six original articles by six experts on different aspects of public astronomy. Richly illustrated, this publication shows how wealthy philanthropists, world-class observatory developers, famous astronomers, enthusiastic amateurs, local telescope makers, astronomical educators, public observatories, and everyday people all made sure the moon and stars really are for everyone.

Edited by Griffith Observatory Director E.C. Krupp and NASM Curator David DeVorkin, this fascinating book may be purchased online at https://8993.blackbaudhosting.com/8993/Purchase-Public-Astronomy-Los-Angeles-Style .



The Sky Is for Everyone: Women Astronomers in Their Own Words, edited by Virginia Trimble and David A. Weintraub (Princeton University Press, 2022. ISBN-13: 978-0691207100). Also available in Kindle and audiobook formats.

This book features writings by over three dozen trailblazing women astronomers from around the globe. The publisher describes this compilation:

The Sky Is for Everyone is an internationally diverse collection of autobiographical essays by women who broke down barriers and changed the face of modern astronomy. Virginia Trimble and David Weintraub vividly describe how, before 1900, a woman who wanted to study the stars had to have a father, brother, or husband to provide entry, and how the considerable intellectual skills of women astronomers were still not enough to enable them to pry open doors of opportunity for much of the twentieth century. After decades of difficult struggles, women are closer to equality in astronomy than ever before. Trimble and Weintraub bring together the stories of the tough and determined women who flung the doors wide open. Taking readers from 1960 to today, this triumphant anthology serves as an inspiration to current and future generations of women scientists while giving voice to the history of a transformative era in astronomy.

Book Review

Virginia Trimble, UC Irvine

Shapley's Round Table: A Memoir by the Astronomer's Daughter, by Mildred Shapley Matthew; edited by June L. Matthews and Thomas J. Bogdan (BookBaby, 2021, ISBN-13: 978-1098383565)

The round table had space for twelve paper-based tasks, and corresponding shelf-space for books and such. It rotated so that its occupant could move various tasks to self rather than self to tasks, and was first constructed for Edward Pickering. Harlow Shapley (frequently HS) inherited it along with the directorship of the Harvard College Observatory in 1921. His 1952 successor, Donald Menzel consigned the table to the scrap heap, whence it was rescued by James G. Baker (whose copy of the Transactions of the 1958 Moscow General Assembly of the International Astronomical Union I now own). After some time in the home of HS's son Alan Shapley, in Colorado, it was transported in pieces, back to Cambridge MA and is now in the custody of Harvard curator of astronomical instruments Sara Schechner.

Now about HS, his life, work, and numerous avocations. On top of all the rest, he and Martha Betz Shapley (herself a trained mathematician and author of many astronomical papers) were clearly, like Margaret and Geoff Burbidge, absolutely marvelous parents, with a handful of offspring: eldest and only daughter Mildred and four sons (one a Nobel Prize winner in Economics). Considerable portions of the book deal with family games, meals, excursions, and other homely affairs. For those you must acquire and read the book for yourself, because we turn now to science and related activities.

Shapley is firmly part of astronomical lore of the "great men" sort, with credit for getting us out of the center of the Milky Way in parallel to Copernicus getting us out of the center of the solar system. His tool was distances to the globular clusters as determined from apparent magnitudes of Cepheid variables. The explanation of how this works (statistical parallax goes undefined), why Cepheids pulsate (phasing of velocity and light curves), and what went wrong with Shapley's calibration of the period-luminosity relation (not just neglect of dust absorption) are all incomplete or a bit misleading. The recounting of the 1920 (Heber Doust) Curtis - Shapley debate confounds three different events and can profitably be skipped (though the implication that HS had retained some but not much of his childhood German is probably correct). Einstein appears as a better musician in these reminiscences than in some other sources, but the description of the *Observatory Pinafore* (though written in 1879, it was finally performed in 1929 under Shapley) is much more informative than accounts elsewhere. Though Cecilia Payne-Gaposchkin herself has written that having to sing the soprano roll of Josephine ruined her lower-lying voice, author Mildred takes her for a natural lyric soprano.

We are told that author Matthews (whom you may recognize as an enormously productive editor of volumes for the University of Arizona Lunar and Planetary Laboratory) started and stopped work on this memoir several times, interviewing her father for the purpose in the 1960s. Most of the words are hers, lightly edited by her daughter June (an MIT professor emerita of nuclear physics) and with annotations by atmospheric researcher Thomas Bogdan. But there are a couple of extensive, verbatim extracts from his books (the only references cited) and lectures (these make clear why he was so enormously popular in that roll, especially after his retirement from Harvard), and three lists he compiled:

- In 1929: Of unsolved mysteries in the universe, revisited in 1962. These were originally described as motivations for the 200-inch Palomar telescope. Some he recognized as solved by 1962 (source of stellar energy) some partly solved (sources of comets and meteors, now under control), and some as wholly unsolved (and arguably still so, the size and long term future of the universe).
- In 1944: Of his 11 major, 23 middle-sized, and 20 minor assignments, where presidency of the American Astronomical Society counted as "major;" vice-chairman of the foreign policy division of the National Research Council counted as middle; and Associate Editor of the

Astrophysical Journal counted as "minor." Each list is more or less equally divided between items related to astronomy and other sciences and items connected with his enormous contributions to international and humanitarian issues (which a bit later made some trouble for him with the House UnAmerican Activities Commission). A slightly earlier photograph (1939) shows fourteen foreign-born members of the Harvard College Observatory staff, including his “rescues” Richard Prager and Luigi Jacchia. Three of the fourteen (Shirley Patterson, Paris Pishmish, and Cecilia Payne-Gaposchkin) are women, which was a lot for the time.

- In 1962: Of what HS regarded as his 11 most significant contributions to astronomy, ranging from that Cepheid calibration to writing *Of Stars and Men in 1958*. A couple, like the discovery of the halo star population of our Galaxy and the demonstration that all wavelengths of light travel at the same speed in the vacuum of interstellar space, we might think of as shared credit, but on balance an honest and enormously impressive list.

It is clear in passing at various points that HS endorsed the common views of his time: the Russell giant-and-dwarf theory of stellar evolution, the Chamberlain-Moulton picture of planet formation from a close stellar encounter, and the interpretation of Cygnus A as a colliding galaxy pair. He was also, rightly, described as the man who put the S in UNESCO, had no use for UFOs or astrology, and complained that publisher Macmillan should have had Velikovsky's *Worlds in Collision* refereed!

In the process of reading the published version of *Round Table*, I marked at least 200 items to be mentioned in a review. They won't all fit, but here is one per Harvard decade: In 1925, he declined to go to Dayton Tennessee to testify "for science" at the Scopes' trial. In 1935 he appeared on the cover of *Time* magazine (preceded only by Eddington in 1934). And in 1946, he did go to Copenhagen to help re-establish the IAU. He had also been in Copenhagen in 1926, for a meeting of the Astronomische Gesellschaft. He was both scientific and social host when the IAU came to Cambridge MA in l932, and had the additional problem of preventing the General Assembly from being drowned in American astronomers!. The IAU was indeed one of the few organizations he was never president of (unlike the AAS, the American Association for the Advancement of Science, Sigma Xi the Research Honor Society, and so forth), though he skippered Commission 28 (variously Nebulae, Nebulae and Star Clusters, Extra Galactic Nebulae, and Galaxies), and was a firm opponent of abolishing the old Commissions after 1946 and a firm supporter of the idea (which did not pan out) of an international telescope, to which astronomers from all nations would have access. There were actually three Shapleys at the 1958 IAU General Assembly: son Alan, from the National Bureau of Standards in Colorado, HS himself, and Martha B. Shapley (the latter two from their retirement home in New Hampshire). All three were members, and every one was on a commission or two - Alan (10, Solar Activity), Martha (42, photometric Double Stars), and HS 33 (Structure and Dynamics of the Galactic System) and 37 (Star Clusters and Associations).

Altogether a remarkable astronomer and world citizen, a remarkable family (nearly all in addition long-lived), a remarkable book. Three cautions: if you read it and come across an item you want to revisit, make a careful note (the index is VERY skimpy); approach with caution any astronomical fact you might want to carry away; and a conflict of interest statement - I scanned a manuscript version of the volume and appear briefly on the back cover with the usual suspects Dava Sobel, David DeVorkin, and Marcia Bartusiak.

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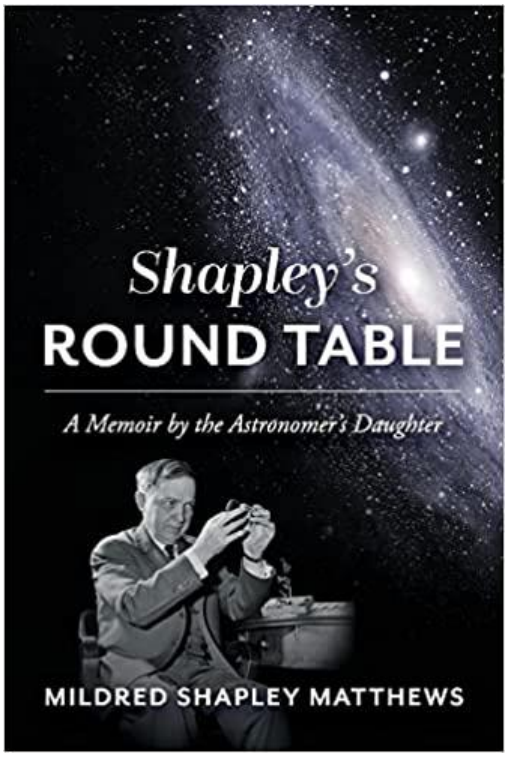


What's New in the *J.A.H.H.*

Ken Rumstay, Valdosta State University

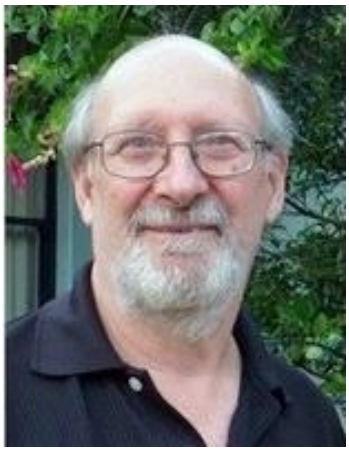
As a service to our members, we share in each issue of *HAD News* the contents of the *Journal of Astronomical History and Heritage*. Founded in 1998 by Wayne Orchiston and John Perdrix, this online journal was, until recently, published by the National Astronomical Research Institute of Thailand (NARIT) in Chiang Mai. The journal publishes research papers (all of which are refereed), review papers, short communications, IAU reports, and book reviews on aspects of astronomical history and heritage. This includes studies that place the nature and evolution of astronomy in a political, economic, social, historical, and cultural context. As an example of typical content, the contents.

The *JAHH* is completely open-access; all papers are freely available on the journal's website (https://www.jahh.org/) and also on the SAO/NASA Astrophysics Data System and on the NARIT website. And, until now, there were no page charges; authors could publish their work at no cost whatever,

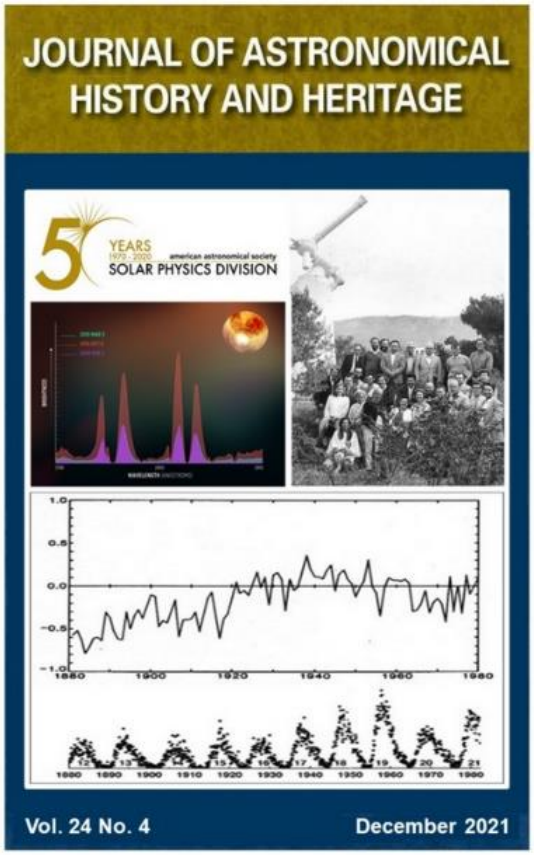
However, unfortunate circumstances now require the *JAHH* to do so. The reasons are described in Wayne's editorial which appeared in the March 2022 issue, and which is reproduced on the following page. Following that, the contents of the January 2021 and March 2022 issues appear on pages 20 through 22.

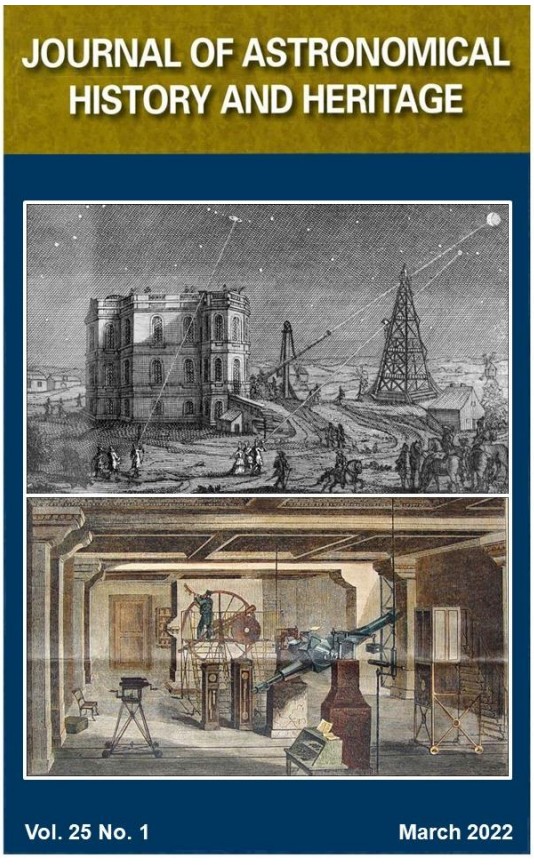
The *Journal of Astronomical History and Heritage* has been a valuable resource for nearly a quarter of a century. Please continue to support it!

hadsec@aas.org



Wayne Orchiston, founder and Managing Editor of the *Journal of Astronomical History and Heritage.*





Covers of the December 2021 and March 2022 issues of the *Journal of Astronomical History and Heritage*.

EDITORIAL

Readers need to know about a major change that has occurred: starting with the March 2022 issue there have been Production Fees for papers published in *JAHH*.

Until 30 September 2021 I was employed by the National Astronomical Research Institute of Thailand, and my outputs in each year's contract included publication of *JAHH*. However, for reasons they have not divulged, NARIT decided not to renew my contract, even though I once again exceeded all output targets. Notwithstand-ing the presence of COVID and lack of any research funding whatsoever, during the 2020–2021 Thai fiscal year I

- produced 4 issues of *JAHH* totalling 1182 pages, which contained 54 research papers and 52 book reviews;
- published 2 books (about SE Asian history of astronomy and Australian radio astronomy);
- published 19 research papers (about aspects of Australian, Cambodian, Indian, Indonesian, Laotian, Malaysian, Myanmar, New Zealand, Philippines, Singapore, South African, Thai and Vietnamese astronomy);
- presented 5 oral papers and displayed 11 poster papers at 4 different international conferences (in the Czech Republic, Greece, New Zealand and the USA);
- continued as the only Thai-based astronomer who was the President of an IAU Commission (C3 – History of Astronomy), until my triennial term of office came to an end on 31 August 2021; and
- supervised one part-time off-campus Internet-based history of astronomy PhD student through the Centre for Astrophysics at the University of Southern Queensland in Toowoomba, Queensland, Australia.

NARIT's decision to terminate my employment notwithstanding this prodigious output immediately placed *JAHH* in jeopardy.

The fallback position was for the Department of Earth and Space Sciences at Rizal Technological Univer-sity in the Philippines to appoint me to a Chair in Astronomy, part of my new job being to continue producing *JAHH* in conjunction with one of the Associate Professors in that Department, Ruby Dela Cruz. However, on 25 November 2021 I was informed that that appointment could not go ahead at that time. Subsequently, an attempt to secure a position in Astronomy at the Bandung Institute of Technology in Indonesia was also unsuccessful.

Without any income, and with no superannuation or retirement pension, I could no longer afford to spend most of my time producing *JAHH*, so in the absence of any alternative job offer I had to think carefully about what to do with *JAHH*: whether to persevere, in the hope that a new job offer would soon emerge; whether to close down the journal; whether to sell it to a commercial publisher; or whether to continue as Managing Editor and introduce a Production Fee for published papers (whilst making sure that published papers could still be downloaded free of charge).

After discussing this situation with Ruby and the Associate Editors we agreed on this last-mentioned option, and to introduce the following charges:

Size of Paper	US$
01–10 pages	100
11–20 pages	180
21–30 pages	250
31–40 pages	300
41–50 pages	350
>50 pages	negotiable

Note that these are per paper, as published, and are not individual page charges. Production Fees will give me a small income (far less than NARIT was paying me), but at least I should be able to survive, while devoting time to finding other work.

That said, I am deeply saddened by this state of affairs. From the time that John Perdrix and I launched *JAHH* in 1998 I have promoted research on local, regional and national history of astronomy at an international level, and provided *JAHH* as an outlet where such research can be published free of charge, and where all published papers (plus book reviews and IAU reports) are freely available and not hidden behind 'pay walls'. Now, with the introduction of a Production Fee I know that some retired astronomers from more affluent nations and many of our regular contributors from less affluent nations will no longer be able to publish in *JAHH*.

I live with the hope that this is merely a temporary state of affairs, that I will find employment once COVID no longer rears its ugly head, and that my new employer will happily support *JAHH* and we can abandon Production Fees and make our journal free of charge once more. But only time will tell …

Professor Wayne Orchiston
1 January 2022

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Historical Astronomy Division
of the American Astronomical Society

HAD News #99, May 2022, edited by Ken Rumstay. Please send contributions for the next issue, comments, etc. to hadsec@aas.org.

A complete version of this newsletter, with color photographs and active links, may be found at https://had.aas.org/sites/had.aas.org/files/HADN99.pdf .

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