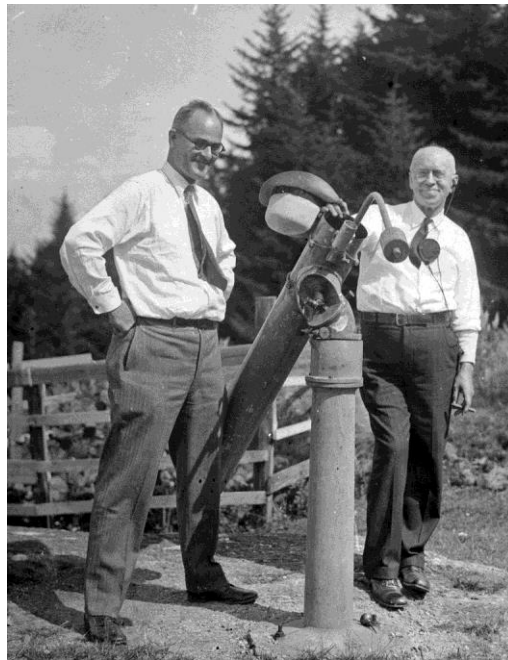


*The Springfield Telescope Makers &  
The Antique Telescope Society  
Present*

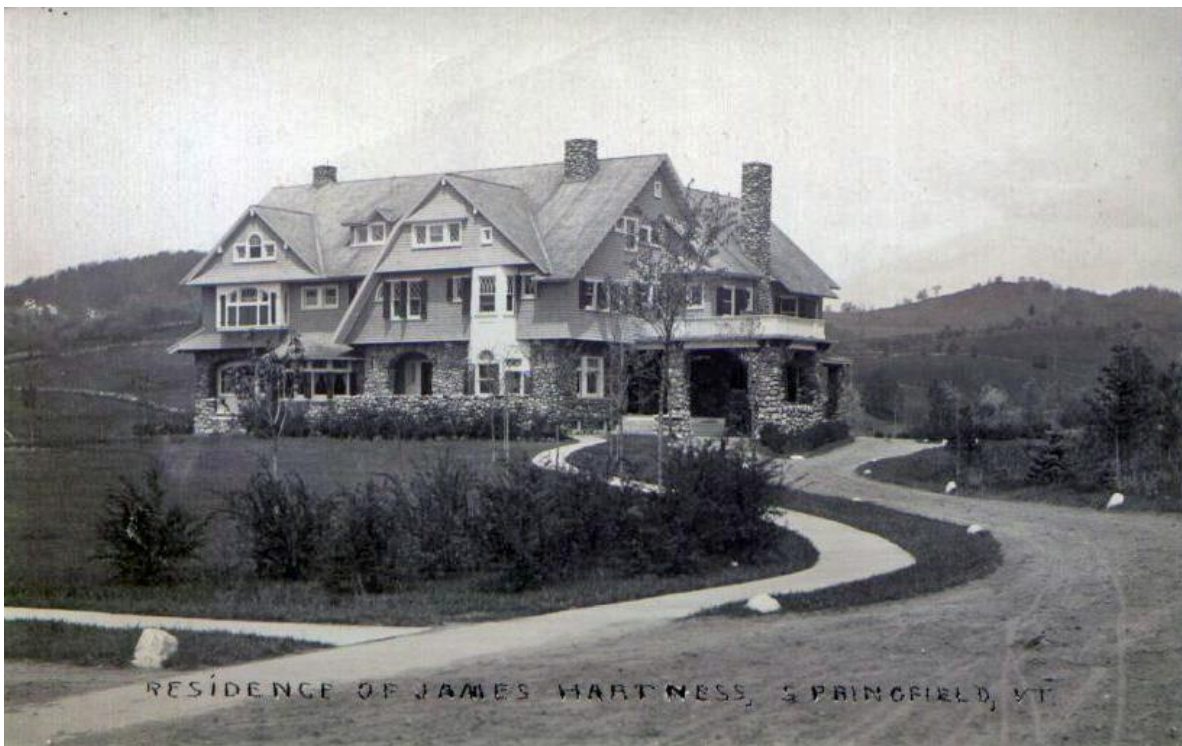
Antique Telescopes, Observatories and  
Related Equipment

Thursday August 9, 2018



*Welcome to the 2018  
Hartness House Workshop*

Antique Telescopes, Observatories and  
Related Equipment



Dave Tabor, President Springfield Telescope Makers  
John W. Briggs, President Antique Telescope Society  
Dr. Thomas Spirock, Workshop Chair  
Daniel W. Lorraine, Workshop Co-Chair & Registrar

**Hartness House Workshop, August 9, 2018**  
**2018 Annual Meeting of the Antique Telescope Society**

*Paper Sessions Dedicated to the Memory of Peter Abrahams, 1955-2018*

8:30 – 8:55 **Registration and Coffee**

8:55 – 9:00 **Words of Welcome**  
*David Tabor, President, Springfield Telescope Makers*

9:00 – 9:10 **Introduction**  
*John W. Briggs, President, Antique Telescope Society*

*First Session Chair John W. Briggs*

9:10 – 9:40 **James Hartness and His Underground Observatory**  
*Berton C. Willard, Historian and Museum Curator, Springfield Telescope Makers*

A summary of the major events in the life of James Hartness will be presented. The Hartness Observatory is now the site of the Porter-Hartness Museum of Amateur Telescope Making. The presentation will include the story of how the museum in the underground rooms was brought into being by the Springfield Telescope Makers and the problems encountered in restoring the Hartness turret telescope, which features a 10-inch objective by John A. Brashear.

9:40 – 10:00 **The Stellafane Spectroheliograph: New Light**  
*Matthew Considine and David M. Groski, Springfield Telescope Makers*

The Andrew T. Simoni Observatory spectroheliograph, a historic example of the instrument invented by George Ellery Hale and commissioned at Hale Solar Laboratory in collaboration with Russell W. Porter, is running as major new addition at Stellafane. We shall review the long-running project including the latest adventures in the instrument's recent successful refurbishment and activation.

10:10 – 10:30 **Coffee Break**

*Second Session Chair Bart Fried, Antique Telescope Society*

10:30 – 11:10 **Tangible Things of American Astronomy**

*Sara J. Schechner*, Curator of the Collection of Historical Scientific Instruments, Harvard University

As a science that studies celestial objects situated at vast distances from us, astronomy deals with few things that can be touched directly. And yet, astronomy has many tangible things—scientific instruments, observatories, and log books, for example—which link the past to the present. There is little question about maintaining things still valuable for scientific research purposes, but why should we care about documenting and preserving the old and obsolete? One answer is that material things, when closely examined, enhance our knowledge of astronomy's history in ways that written texts alone cannot do. A second answer is that learning about the past helps us live critically in the present. In brief case studies, this talk will find meaning in objects that are extraordinary or commonplace. These will include a sundial, an almanac, telescopes, clocks, a rotating desk, photographic plates, a tea set, and fly spankers.

11:10-11:30 **Sometimes the Crates Do Get Opened: The Historic Bruce Astrograph Re-emerges**

*Ken Launie*, Antique Telescope Society and Launie Design

Most will recall the final scene of *Raiders of the Lost Ark*, where the Ark was wheeled into a vast warehouse filled with countless boxes. Such was the fate of the 24-inch Bruce astrograph. Images from this telescope were used by Henrietta Leavitt to discover the period-luminosity relationship of Cepheid variables, establishing a yardstick for the universe. They also revealed Saturn's moon Phoebe. Tens of thousands of objective-prism spectra were taken of stars and galaxies. When finished by the Clarks and Harvard Observatory in 1893 it was state-of-the-art, and it was used to photograph the southern hemisphere for 30 years at Arequipa, Peru. It then continued its work in Bloemfontein, South Africa, for another 30 years, until it was replaced on the same mounting by the A.D.H. Baker-Schmidt in the 1950s. The optics and tube were disassembled, crated and shipped back to storage buildings at Oak Ridge Observatory, where they sat for the next 60 years. Harvard's Collection of Historical Scientific Instruments hoped to feature the Bruce in a special exhibit, so my talk will cover the process of going from the idea to an exhibit. I'll show images of the restoration process, some construction details, and how the four lens elements and full-aperture prism were remounted in their cells. All were assembled on a special display stand to give a close-up view not possible when it was in use. The optical design was never published, so I constructed a 3D *Solidworks* model of the tube and optics based on my measurements. 125 years later, you can now see that cross-section.

11:30 – 12:10 **A Tale of Two Observatories Which Became One**

*David DeVorkin*, Senior Curator of History of Astronomy and the Space Sciences, Smithsonian National Air and Space Museum

The Harvard-Smithsonian Center for Astrophysics is today one of the largest and most complex astronomical observatories in existence. The two came together in 1955 when the old Astrophysical Observatory of the Smithsonian closed in Washington and moved to Cambridge to become the Smithsonian Astrophysical Observatory directed by Fred Whipple and housed within the Harvard College Observatory. In my talk I'll outline how this move came to be, hint at the reasons why, and then concentrate on how it resulted in the creation of some of the oddest and most fascinating telescopes to dot the landscape, and the heavens.

12:10 – 1:00 **Lunch**

1:00 – 2:20 **Open House at the Hartness-Porter Museum of Telescope Making**

*Berton C. Willard*, Historian and Museum Curator, Springfield Telescope Makers

*Third Session Chair Ken Launie, Antique Telescope Society*

2:20 – 2:50 **Update on the Status of Shattuck Observatory of Dartmouth College**

*Richard L. Kremer*, Associate Professor of History, Dartmouth College

Established in 1854, Shattuck Observatory is among the nation's oldest and included among its staff Charles A. Young, a pioneering solar spectroscopist, and Edwin B. Frost, later director of Yerkes Observatory. The facility was recently threatened during consideration of a new dormitory construction project. We shall review Shattuck's history and its significance for Dartmouth and for American astronomy.

2:50 – 3:30 **Angelo Secchi, Natural Philosopher and Innovator to the Pope**

*Kevin Johnson*, Society for the History of Astronomy, United Kingdom

Angelo Secchi is today remembered as a pioneer of early astronomical spectroscopy, initially using naked-eye observations, a technique that was to be revolutionized by photography with the advent of more sensitive dry plate emulsions. His death at a relatively young age curtailed his career, but in a short period he was an instrument innovator configuring types of spectral and meteorological equipment along with an early form of bolometer and a tool for measuring the clarity of water.

3:30 – 4:00 **Coffee Break**

*Fourth Session Chair Roger Ceragioli, Steward Mirror Laboratory and Antique Telescope Society*

4:00 – 4:30 **William Kitchiner, M.D. (1775-1827), An English Gentleman's Life of Avocation**  
*W.P. (Phil) Fleming*, Albuquerque Astronomical Society and Antique Telescope Society

Dr. Kitchiner's road to fame began with his 1811 book, *A Companion to the Telescope*, written in an age when astronomy as an avocation was still quite rare. He is more widely recognized today as the author of *The Cook's Oracle*, a cookbook which became a best-seller in England as well as the United States. This presentation will present a brief overview of Dr. Kitchiner's life and works with emphasis on his writings for observational amateurs.

4:30 – 5:00 **Salvation and Reactivation of the Princeton University 95-cm Boller & Chivens Telescope**  
*Alan Sliski*, Antique Telescope Society

A Boller & Chivens observatory telescope originally housed at Princeton University, after elaborate preparation, modernization, and ongoing commissioning, has seen a new first light at a new observatory in Mayhill, New Mexico. The project was led by our late fellow ATS member, David Mittelman. The effort continues with the support of the Mittelman Family Foundation. The nominally 36-inch telescope carries a lightweight 95-cm mirror made by J. W. Fecker. The instrument looks forward to a new life in research and education.

5:00 – 5:30 **Break**

5:30 – 6:30 **Cocktails at the Telescope Tavern, Hartness House Inn**  
Fruit and Cheese hosted by the Antique Telescope Society

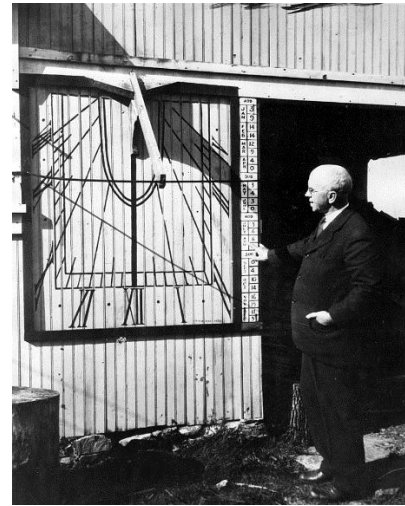
6:30 – 7:30 **Banquet at Hartness House Inn**

7:30 – 8:45 **Galileo's Antique Telescopes**  
*Owen Gingerich*, Professor Emeritus of Astronomy and History of Science, Harvard-Smithsonian Center for Astrophysics

8:45 PM **Evening Open House at Hartness Observatory**

Weather permitting, this event will include evening observing and will be open to workshop participants, members of the Springfield Telescope Makers, and guests. Our hosts are Berton C. Willard, Curator of the Hartness-Porter Museum of amateur Telescope Making, and David M. Groski from the Springfield Telescope Makers.

# Enjoy the Stellafane Convention



Thanks for supporting the Hartness House Workshop