Hartness House History of Astronomy Workshop 2009

Cosponsored by the Springfield Telescope Makers, the Antique Telescope Society, and the Hartness House Inn

Program Schedule

9:00 – 9:05 Welcome and Introductory Remarks
John W. Briggs, Springfield Telescope Makers and Antique Telescope Society

9:05 – 9:35 James Hartness and His Underground Observatory
Bert Willard, Historian and Museum Curator, Springfield Telescope Makers

Abstract: 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.

9:35 – 10:05 The Telescopes of the Early "Springfield Telescope Makers"
Matt Considine, Antique Telescope Society and Springfield Telescope Makers

Abstract: Beginning in 1919 when he arrived in Springfield, Vermont, Russell W. Porter provided the inspiration for a number of amateurs to build their own telescopes. This initial group evolved into the "Springfield Telescope Makers," and a number of their instruments are preserved in the Museum of Amateur Telescope Making at the Hartness House. I shall review some of the material associated with these telescopes and trace how the club's activities evolved to create "Stellafane."

10:05 – 10:30 Coffee Break

Please note the display of the supremely artistic and famous Porter Garden Telescopes as now recreated by *Telescopes of Vermont* in Norwich, Vermont. Weather permitting, a new-generation Garden Telescope will be available for use outdoors. An original Garden Telescope will also be displayed from the collection of Kenneth J. Launie.

10:30 – 11:00 Telescopes in Colonial and Federal America, 1620-1820
Sara J. Schechner, Curator of the Collection of Historical Scientific Instruments, Harvard University

Abstract: Focusing on the British and Dutch colonies along the eastern seaboard, this paper will examine the distribution and use of the telescope in America from colonial times until the end of the Federal Period (1780-1820). It will also consider who made, repaired, and sold these telescopes; how telescopes were marketed; and who the buyers were. The findings shed light not only on the history of the telescope but also on the rise of the optical instrument trade in early America.

11:00 – 11:30 Amateurs No Longer: The Growth of Telescope Making in 19th Century America
Kenneth J. Launie, President, Antique Telescope Society

Abstract: Very few telescopes were made in America in the 18th century; astronomers needed to rely on distant European makers. While there is evidence of a few American amateur-made telescopes that were shown at early to mid-19th century Mechanics' Fairs, until the 1830s they generally weren't being offered for sale. The first American commercial makers were largely self-taught, starting by building telescopes for their own use, later finding they could compete against the very expensive imported European instruments. I will show some newly-found newspaper notices and advertisements that document these early efforts.

11:30 – 12:30 Buffet Lunch at Hartness House

12:30 – 2:00 Open House at the Porter-Hartness Museum of Amateur Telescope Making
***Host**:* Bert Willard, Historian and Museum Curator, Springfield Telescope Makers

Note that the Museum is on the grounds of the Hartness House Inn, in an underground complex integral to the historic Hartness Observatory and turret telescope. Access to the Museum is through an underground tunnel connecting to the Inn.

Afternoon Paper Session
Chair: Kenneth J. Launie, President, Antique Telescope Society

2:00 – 2:30 How "American" were the First American Observatories?
Richard L. Kremer, Associate Professor of History, Dartmouth College

Abstract: Between about 1830 and 1856, an “observatory movement” swept North America as universities, colleges, high schools, corporations, private individuals and the U.S. Navy rushed to build astronomical observatories. Often representing a town's or city's first buildings constructed specially for science, these observatories did more than house permanently mounted equatorial and transit telescopes and clocks. They also provided spaces in which new patterns of sociability among lay and professionalizing astronomers, students, and popular audiences could emerge. Like the local museum, athenaeum, town meeting hall, or church building, the American observatory provided public space for Americans who saw themselves as practical, democratic, and self-made. Yet in the early years, their observatory instruments and architecture seemed to come mostly from Europe. This talk explores the architecture of American observatories before 1856.

2:30 – 3:15 Transit Shadows: Warner & Swasey, Amateur Astronomy, and the Lick 36-inch
Edward Jay Pershey, Vice Pres. Museums and Historic Properties, Western Reserve Hist. Society, Ohio

Abstract: In 1886 Warner & Swasey, two Cleveland-based mechanical engineers, contracted with the University of California’s Lick Trust to build the mount for the great 36-inch refractor at the new observatory on Mount Hamilton. This short presentation will connect Warner & Swasey’s development as the world’s premiere instrument builders to their interest in amateur astronomy from its origins on a farm in New England, to Connecticut, Washington D.C., Chicago, Wisconsin, and finally Cleveland.

3:15 – 3:30 Coffee Break

3:30 – 4:15 Stars, Dinosaur Tracks, and Love Affairs: The History of Astronomy at Amherst College
Richard Sanderson, Curator of Physical Science, Springfield Science Museum, Springfield, Mass.

Abstract: The presentation will focus on two of the most colorful scientists in the history of Amherst College, Edward Hitchcock and David Todd. Both were instrumental in establishing a long tradition of observational astronomy at the college. Hitchcock's interests ranged from the stars to the strange prehistoric footprints found in the rocks of the Connecticut River Valley. A generation later, David Todd was traveling around the world to witness total solar eclipses while building a large observatory on the campus of Amherst College. Soon after the observatory's completion, he disassembled the massive 18-inch Clark Corporation refractor and brought it to a foreign land in an attempt to prove that life exists on Mars. This talk will offer a fascinating glimpse at the pursuit of astronomy during an earlier era.

4:15 – 4:45 The Yerkes Objective: Debunking the Myth of the Large Refractor Limit
Steven Tomczyk, Solar Physicist, High Altitude Observatory, Boulder, Colorado
John W. Briggs, Faculty Astronomer, Dexter School; Springfield Telescope Makers
Peter G. Nelson, Research Engineer, High Altitude Observatory

Abstract: The conventional wisdom related in many astronomy textbooks is that the 40-inch objective of the great Yerkes refractor, to this day still the world's largest successfully in use, represents a practical aperture limit. Large refracting optics continue to play an important role in astronomy, and at least two proposals for future telescopes contain lenses in excess of 60 inches. This paper will examine the myth of the large refractor in light of the historical record and a recent series of modern quantitative tests of the Yerkes 40-inch objective.

4:45 – 5:45 Cocktail Hour at the Hartness House "Telescope Tavern"

6:00 Preconvention Evening Membership Meeting
Members of the Springfield Telescope Makers gather at Stellafane for a final pre-convention meeting.

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The Hartness House Inn, a landmark in Springfield, Vermont, is located at 30 Orchard Street, telephone 802-885-2115. John W. Briggs will be available at 575-491-6113 (cell), but please leave a message if necessary, because cell reception is irregular at the Stellafane observatory site.