Allseits, John, "A Moving Experience: 850 Miles From Alabama to Illinois"

The speaker will present a brief, illustrated account of retrieving and transporting a 1950 vintage, 10-inch f/15 J.W. Fecker refractor from its original home atop the University of Alabama, to rural northwest Illinois, with lessons and recommendations gleaned from the project. He will also outline a perhaps radical concept for a "halfway house" facility for telescopes in urgent need of temporary storage, when the owners of an observatory's land have decided the bulldozers must roll...

John Allseits has been an avid ATM (amateur telescope maker) and amateur astronomer since 1967. He has been collecting and restoring vintage telescopes since 1985. He has been active in several astronomical groups, including as historian for the Chicago Astronomical Society. John is currently working on constructing his personal observatory/planetarium facility on 40 acres in rural northwest Illinois. A charter member of the Antique Telescope Society, John is married to fellow ATS member Lisa; they have one son, Patrick, age 8.

Augustine, John, "How Far to Go in an Instrument Restoration: Some Thoughts from Personal Experience"

All material things are temporary because time marches on and takes its toll. Optical instruments such as antique telescopes are not exempt. However, those responsible for an antique optical instrument surely would like to know how to keep the instrument in their care looking and working great without doing any technical or historical harm through maintenance. Whether to do extensive restoration, less drastic preservation work, or possibly nothing at all to instruments are options that often depend on various circumstances. John Augustine will discuss such circumstances and how one might decide which route to travel when considering future work on an old instrument. Examples will be shown from instruments actually worked on over the years.

John Augustine, an Antique Telescope Society member since l998, and is now Member-at-Large on the ATS board of directors. He has had a long-time interest in optics, telescope making, and restoration. He has restored various small instruments, most recently a beautiful antique slide telescope for a private individual in Nebraska. For the Maria Mitchell Observatory, he restored an 8-inch Clark tube assembly and a Brashear helioscope; and for the Cleveland Museum of Natural History, he cleaned and corrected both optical and mechanical problems with the 10.5-inch Brashear refractor. He also enjoys research projects in herpetology, and working in his West Farmington, Ohio, vegetable garden.

Barnell, Ron, "Dudley Observatory, Schenectady, New York: Seeking to Revive a Telescope" (for "Observatory 'Makeover'" session) [see "Schwab, Janie" for abstract]

Ron Barnell's interested in astronomy began as a young boy when his father took him to the Hayden Planetarium in New York City, where talked with its first director, the famous Dr. Clyde Fisher. A family move to upstate New York led him to acquire a first small reflecting telescope in time for the 1956 opposition of Mars. Many telescopes and Mars oppositions later, he studied astronomy at the State University of NewYork in Albany, where the dean of the astronomy program was Dr. Curtis

Hemenway, director of Dudley Observatory. After graduation, Barnell worked at Dudley's off-campus facility, involved in high-altitude micrometeorite/cometary particle research. He obtained a master's degree in film and media studies from Syracuse University. As a professional photographer and video producer, including a stint working for film studios in Hollywood and Arizona, cemented a belief that the publicity methods can have a direct benefit for the advancement of locally produced astronomy programs for the public, especially with today's modern computer technology and high-definition recording. Barnell remains an active volunteer for Dudley Observatory.

Bell, Trudy E., "Making the Thematic Workshop and Reference Binder Work for *You*"

The thematic workshop is intended to introduce participants to 1) the resources and expertise within the Antique Telescope Society, especially for the restoration of telescopes and astronomical observatories; 2) other well-known or lesser-known but important resources for documenting an instrument's or institution's history; and 2) to one another so as to benefit from the collective wisdom of a community concerned about the preservation of our astronomical heritage. Key resources in the reference binder will be highlighted briefly.

Trudy E. Bell (M.A., history of science, New York University) is technical writer for the Networking and Information Technology Research and Development program (www.nitrd.gov), a 15-year-old $3.5 billion program that coordinates all unclassified high-end computing R&D for the Federal government. A former editor for *Scientific American* and *IEEE Spectrum* magazines, she has written a dozen popular-level books on science and history, plus more than 400 articles for magazines and websites including *Air & Space*, *Astronomy*, *Journal for the History of Astronomy*, *Nature*, Science@NASA, and *Sky & Telescope*. She has served as an ATS board member (2002–2006) and managing editor of the *Journal of the Antique Telescope Society* (2003–2006). She has received the American Astronomical Society's David N. Schramm Award for science writing (2006) and twice received the Dudley Observatory's Herbert C. Pollock Award supporting research in history of astronomy (2004, 2007). Her long-term research interest is compiling a complete census of nineteenth-century U.S. astronomical observatories and their instruments.

Bolton, Rick "Smith Observatory, Geneva, New York: In Need of a Secure Future" (for the "Observatory 'Makeover'" session)

The Smith Observatory is an unusually well preserved example of a small, moderately important late 19th-century refractor telescope observatory. It houses a rare 10-inch John Clacey refractor that has been tested to be of excellent optical quality, which still works, and is in almost original condition. The renowned comet-finder William Brooks was for many years professor of astronomy at the Hobart and William Smith College in the Finger Lakes city of Geneva, New York. After Brooks's death and during the Great Depression, the observatory became neglected and suffered deterioration. About 1965 the college removed to storage all portable instrumentation and parts, expecting the observatory's poor condition to require its demolition. However a few years later local developer Jack Mulvey acquired the telescope with his purchase of the associated Brooks's mansion and undertook successful preservation efforts. Mulvey's interest in

historical preservation has kept the observatory extant for over 30 years. All ancillary equipment (including a 4-inch transit instrument, a 2-inch brass refractor on a tripod, a filar micrometer, a Brashear spectroscope, and several of Brooks's bellows cameras), much in pristine condition, has been recently returned from storage at the college. Although the observatory is in workable condition it is not actively used by astronomy groups or the college, and lies largely dormant. The college's active physics department is currently reinvigorating its astronomy program; it has created a new professorship and a benefactor has been found to endow an observatory. Although the Smith Observatory is perceived to be useful for community outreach and for historic interest, there is strong opinion within the administration and some professional astronomers that only a brand new facility is germane for the bulk of student instruction. Thus the future of the Smith Observatory is clouded, especially as Mulvey is now advancing in years. Although preservation is universally regarded as important, a future plan needs formulation that would either integrate the observatory with the new construction and curriculum, or provide a private foundation endowment. New York State has now nominated the observatory and mansion for inclusion in the National Registry of Historic Places. Advice and guidance are sought from the Antique Telescope Society to help secure the best future for this irreplaceable asset, the Smith Observatory.

Rick Bolton (B.S. Physics, University of Rochester) is a retired Eastman Kodak opto-mechanical product design engineer now working in the physics department at Hobart and William Smith College. His interest in the preservation of antique telescopes resulted from his unanticipated discovery of the Smith Observatory and related equipment in storage at the college.

Clifton, Eric J., "Northmoor Observatory, Peoria, Illinois: Caught in a Grants Catch-22" (see "Tennis, Richard" for abstract)

Eric Clifton is a systems analyst at Caterpillar Inc. in Peoria. A member of the Peoria Astronomical Society for 45 years, he has held the positions of Chairman of both of the Society's observatories: the NorthMoor (9-inch refractor) and Decker-Grebner-VanZandt Observatory (24-inch reflector and 14-inch Schmidt-Cass) , noting that "Chairman" means you get to mow and sweep a lot!" Eric served five terms as the society's President; he is now an Honorary member of both the Society and the Peoria Academy of Science. He has also served on the Board of Trustees of Lakeview Museum and the Peoria Area Arts and Sciences Council. His real interests are astrophotography, computer applications to astronomy, and giving 'astro-virgins' their first views through a telescope! (See www.astronomical.org.)

Considine, Matthew (for panel on Documenting an Observatory's History)

Matt Considine is a Chartered Financial Analyst and investment manager for Dupont Capital. He also is a Fellow of the Royal Astronomical Society, interested in the history of amateur telescope making, in particular the efforts of amateurs prior to Albert Ingalls's first volume of Amateur Telescope Making published in the 1920s. He is also interested in the history of optical design, specifically in Ludwig Schupmann's development of the medial telescope and the speculum construction efforts of Sir William Herschel. When not wondering why he didn't do as he had originally planned and majored in astronomy as an undergraduate, he spends time with his wife and two cats in Vermont.

Fried, Bart, "The Antique Telescope Society: Its History and its Members"

This brief introduction to the Antique Telescope Society will give workshop attendees a look at the society's background—why it exists, how it came about, evolution of its mission, past accomplishments, and its diverse membership.

Fried, Bart, "Three Case Histories: Brooklyn College, Adelphi College, and Allegheny Observatory"

This talk focuses on three college observatories, their problems and outcomes. Brooklyn College houses a guano-covered 7-inch Fecker refractor in a dome on campus. Adelphi College recently sold its historic telescope and replaced it with a modern instrument for its campus observatory. Allegheny Observatory, a working observatory of the University of Pittsburgh, suffers from continuous pressure to close, but has used new technology to fend off the naysayers. Common themes and problems plague these observatories. We will examine these problems and compare solutions which may help other institutions in similar situations.

Bart Fried is the founder and first president of the Antique Telescope Society; he is currently the "list janitor" (moderator) of the ATS's Oldscope Yahoo-groups e-mail list. His area of personal research is the life and work of Pittsburgh-based telescope-maker John A. Brashear, as well as the general history of the telescope and the history of astronomy. His articles have appeared in *Sky & Telescope*, *Rittenhouse*, the *Journal of the Antique Telescope Society*, and other publications. Professionally, Bart is a consultant for business development in the glass industry; he and his wife and 6-year-old son live in New York City and his daughter is a college student.

Gegen, Doug, "The 'Wow!'s in the Dome: Inspiring Young Minds with the 23-inch Clark Refractor at Roper Mountain Science Center"

This presentation will provide a brief history of the 23-inch Clark-Fecker refractor in its role as catalyst to future astronomers. For more than two decades, the Charles Daniel Observatory at the Roper Mountain Science Center has provided a pathway to visitors of all ages toward an increased understanding of the universe. Whether for leisure time or in pursuit of a future career, students and their families have been inspired by the "War of the Worlds" telescope. The learning continues, with "That's the biggest telescope I ever saw!" ringing through the observatory dome for years to come.

Doug Gegen is currently Staff Astronomer at the Roper Mountain Science Center in Greenville, South Carolina. He has taught students of all ages utilizing the 23-inch Clark-Fecker refractor (relocated from the Halsted Observatory in Princeton, New Jersey), and other instruments of the Charles Daniel Observatory. Arriving at Roper Mountain nearly 22 years ago, Mr. Gegen led the effort to install the historic Princeton University telescope at RMSC in 1986-87. Prior to his coming to South Carolina, Gegen served as Astronomer at the Land Between the Lakes park in western Kentucky, where he built a small observatory housing a telescope designed for solar research.

Goetzman, Bruce E., "An Observatory is a Building, Too: Preserving the Bricks and Mortar"

A dome, transit house, and other facilities are as much a part of an observatory as the astronomical instruments—in fact, the soundness of the observatory building can affect the aging of the instruments. This talk will literally cover nuts and bolts of saving as much of the original fabric of an observatory building as possible: masonry cleaning and repair, roof/dome and gutter repair and replacement, epoxy repair techniques for woodwork, considerations for repairing windows, etc. Also covered will be the removal of pests (such as beehives), the handling of hazardous materials (such as pigeon dung), and the addition of ahistorical features necessary for a public place in the 21st century (such as handicapped accessibility). Attention will be given to restoring an observatory by materials and techniques that meet the Secretary of Interior's standards for rehabilitation and restoration.

Bruce E. Goetzman, M.S., founder of the architectural firm Preservation Architecture Services Team (PAST), has been in practice principally in the field of preservation since 1965 and has helped guide the completion of more than 100 restoration and renovation projects. His academic degrees are a bachelor of architecture (Carnegie-Mellon), a master's in architecture (Columbia University, and a master's in community planning (University of Cincinnati); he is also a professor emeritus at the University of Cincinnati.

Groshek, Matthew, "Traveling Exhibitions as Effective Communication Solutions for Small Institutions"

Creating a traveling exhibition can be an effective way for a number of smaller institutions to share costs, collections, staff time and other resources while maximizing audience exposure. By co-creating exhibitions a broader, cost effective and more balanced exhibit communication solution can emerge that can reach larger, more diverse audiences.

Matthew Groshek is a specialist in information and communication design for nature and environmental centers, arboretums and museums. He is the principal of Education Design Link (EDL). Many of Matt's projects include design of information and interactive exhibits, interpretive signage and print materials. He is also Public Scholar of Exhibition Planning and Design Herron School of Art and Design in the School of Liberal Arts at Indiana University/Purdue University-Indianapolis (IUPUI), where he teaches exhibition planning and design. He holds an MFA in visual art from the University of Wisconsin, Milwaukee. Matt is also involved in community place-making initiatives, sustainability mapping, and advocacy. An observer of the sky and its phenomenon and one-time telescope maker, he is actively interested in how people observe and represent the world.

Hand, Greg, "Understanding Publicity for Vintage Observatories"

Do you really need publicity? This brief introduction to basic publicity concepts will assist you in understanding how the news media function, how publicity can assist your strategic plans, and how publicity functions within your overall communication plan. The presentation will culminate in advice on pitching stories to news media.

Greg Hand is associate vice president for public relations at the University of Cincinnati. He has been associated with the university since 1978 in various capacities, including editor of the faculty/staff newspaper, science writer, news bureau manager, university spokesperson and public relations instructor. Before his employment by the University of Cincinnati, Hand was a reporter and editor for several weekly newspapers. He is co-author, with Kevin Grace, of *The University of Cincinnati*, a pictorial history of the university, and *Bearcats! The Story of Basketball at the University of Cincinnati*. Beyond his university duties, Hand consults on public relations planning and crisis communication.

Hoffman, Matie; Seitzer, Patrick, *et al.*, "The Boyden Observatory and the Boyden Science Centre in South Africa"

Boyden Observatory, near Bloemfontein in South Africa, was originally founded in 1889 in Peru by Solon Bailey from Harvard College Observatory. The observatory's move from Peru to South Africa and its high days as the first "international observatory" in the world are discussed. Some attention is paid to the history of the famous Bruce telescope (a 24-inch refractor) as well as the 13-inch Boyden refractor by Alvan Clark, which was first used on Mt. Wilson near Los Angeles in 1889. Today Boyden is one of only three significant optical observatories on the continent of Africa. Its longitude is almost mid-way between Australia and South America, important for studying time-critical astronomical phenomena visible in the southern hemisphere. The most important instrument at Boyden is the UFS-Boyden 1.52-meter reflector, once known as the Rockefeller telescope. Until the 1940s, it was the largest telescope in the southern hemisphere; it is still the third largest operational optical telescope in Africa. After being closed down as a research facility in 1989, the observatory has been revitalized as a combined research and educational institution since 2002—including refurbishment of the 1.52-meter telescope. The Friends of Boyden Observatory and the Bloemfontein Branch of the Astronomical Society of Southern Africa played an important role in turning the tide in the observatory's favor. The first phase of the new public and educational facilities was officially introduced to the educational community on 5 October 2004. Boyden's new facilities were partly sponsored by Africa's first astronaut, Mark Shuttleworth, through the Shuttleworth Foundation.

Matie Hoffman, Pieter Meintjes, Dawie van Jaarsveldt, and Hendrik van Heerden are all with the Department of Physics, University of the Free State, South Africa (in fact, Hoffman, presenting the paper, has the distinction of having traveled the farthest of any participant to the thematic workshop!). Patrick Seitzer is associate research scientist in the Department of Astronomy at the University of Michigan, Ann Arbor as well as a patron of the Friends of Boyden Observatory. Aylva Schoch is chairman of the Friends of Boyden Observatory, Bloemfontein, South Africa. Gerrit Penning is web master of the Astronomical Society of Southern Africa (ASSA) as well as secretary of the Bloemfontein Branch of ASSA.

Hutchins, Roger, D.Phil., "British University Observatories: Private Instruments Given New Life" (presented by Craig B. Waff, Ph.D.)

There were six British university observatories that undertook research in the period from 1772 to 1939. This paper identifies them as a group sharing distinctive characteristics that shaped their history differently from that of the small group of national observatories, or those of the Grand Amateurs. Their present condition, and that of their most important instruments, is noted. A hand-out table shows how, as a consequence of the critical test of engaging with astrophysics, the group eventually absorbed by gift the instruments from 18 private observatories. From this dynamic, and the multi-disciplinary training of the generation of professional astronomers who held the key British posts after World War II, the importance of this group of observatories may be properly appreciated for the first time. Identifying a number of historic individual instruments, the paper offers a brief sketch of this previously neglected aspect of the British astronomical heritage in the year after the Royal Astronomical Society established a Heritage Committee.

Roger Hutchins, D.Phil., F.R.A.S., has a long-standing interest in the history of astronomy and of science, and for a time owned and observed with an Alvan Clark 5" refractor. Sometime Secretary of the South-east Essex Astronomical Society, he attended the NASA Voyager encounters and back home lectured on their missions. He left a career in shipping to go up to Magdalen College, Oxford, in 1989 to read History. In his first term he stumbled on the fact that in 1839 the University had carelessly lost the use of the Radcliffe Observatory, and did not remedy the situation until 1875. This led Roger into researching all six comparable observatories, work for which he received his D.Phil in 1999. Recommended to Ashgate of Aldershot for publication, while employed by Magdalen from 1999 to 2006 he revised his thesis. This included researching and adding an analysis of the then recently available papers on the Neptune furor, and a description, tables of observatories and instruments, and analysis of the comparable groups of observatories in Germany, France, Italy and the United States. This is believed to be the first attempt at such a comparative overview. Roger's book *British University Observatories 1772-1939* is published this month (May 2008). He now enjoys being a freelance historian but much regrets being unable to attend this ATS workshop, and warmly thanks Dr. Craig B. Waff for generously offering to present his paper.

Kirkpatrick, Elaine, "A 1909 Clark Telescope in a Modern Teaching Facility"

In 1990, a 6-inch Clark refractor optical tube assembly was donated to Rose-Hulman Institute of Technology in Terre Haute, Indiana. Because there was no mount for the telescope it was placed on a wall in the physics department as a decoration. Several years later a new observatory director realized the value of this instrument and placed it on a temporary mount in the campus observatory. It was immediately apparent that the optics were still in excellent condition, so a Meade LX750 mount was purchased so that the telescope could be used. When a new campus observatory was erected, the building was designed with the Clark telescope in mind. In the new facility the Clark was first mounted

on a Paramount GT-1100 mount with a Hargreaves strut, and is now on a Paramount ME. The telescope is used primarily for visual observing. The laboratory associated with the astronomy class now uses the Clark extensively. In one lab the students perform binary stars observations and compare the resolving power of the Clark against 11 and 14 inch Celestron Schmidt-Cassegrain telescopes. In a second lab the students have the opportunity to obtain visual estimates of the brightness of selected variable stars which they then report to the AAVSO. Occasionally the telescope is also used for high resolution, color CCD imaging.

Elaine Kirkpatrick received her B.S. in Physics in 1992 from the University of Dayton, and her M.S. (1994) and Ph.D. (1997) in Physics from Carnegie Mellon University. After a post-doctoral position at the University of Nebraska, Dr. Kirkpatrick joined the physics faculty at Rose-Hulman Institute of Technology in 1999. That year, she was the co-advisor of the astronomy club with Dr. Richard Ditteon and became involved with astronomy. Her asteroid astrometry research has been published in the *Minor Planet Bulletin*. In addition, she has played an important role in observatory open houses and helping to teach the laboratory portion of the astronomy class using the Clark telescope.

Lattis, James, "The Washburn Observatory—127 years of Continuous Operation"

The Washburn Observatory of the University of Wisconsin-Madison and its 15½-inch Clark refractor have been in continuous service since October 1881. Except for the replacement of the original Clark mounting in about 1930, the equatorial telescope itself is essentially original. The remainder of the instruments—including the original transit instrument, and auxiliary structures, including the adjacent student observatory and Watson solar observatory—have been removed. The main observatory building has been reconfigured from its original state in multiple stages, culminating in a major renovation now underway and scheduled for completion in summer 2009. This talk will review the evolution of the observatory to its present state, describe its normal functions in education and public outreach, and give an overview of the rationale and progress of the current renovation work.

James (Jim) Lattis is co-founder and director of UW Space Place, the outreach and education center for the Department of Astronomy of the University of Wisconsin - Madison; he is also a faculty associate in the department. He teaches astronomy in many contexts, from the university campus to state parks, and uses historic Washburn Observatory as a teaching tool whenever possible. Lattis has a B.S. in astrophysics and Ph.D. in the history of science. His special interests include astronomy in the age of Galileo, astronomy in Italy, astronomy in Wisconsin, and early astronomical instruments. Lattis has authored two books and many shorter articles. He served recently on the Yerkes Study Group, which was convened to envision possible futures for Yerkes Observatory, and is incoming Chair of the Working Group on the Preservation of Astronomical Heritage (WGPAH) of the Historical Astronomy Division of the American Astronomical Society.

Launie, Kenneth J., "Why Now is the Time: the Antique Telescope Society, the International Year of Astronomy, and Opportunities for Vintage Observatories"

Highlights will be given of IYA 2009, including important conferences, anniversaries, and astronomical events which may provide vintage observatories occasions for education and public outreach within their communities.

Launie, Kenneth J. "It Doesn't *Have* to be Astronomically Expensive: Using Enthusiastic Local Experts to Help with Observatory and Telescope Care and Restoration"

A full, ground up restoration of even a modestly-sized telescope and observatory can cost hundreds of thousands of dollars, and in the current economic climate, such large sums are rarely available for this sort of work. Even less ambitious projects can be very expensive, and it's often hard to find qualified professional assistance when constrained by a very modest budget. Enlisting the aid of enthusiastic local experts such as are found within the Antique Telescope Society is an alternative that has been effective. I plan to highlight some of the work done by Antique Telescope Society members and local amateurs, talk about how one might find such help, and how to avoid some of the potential pitfalls.

Kenneth J. Launie of Cambridge, Mass, a charter member of the Antique Telescope Society, is currently its President. A past president and workshop chairman of the Boston ATMs, he has an avid interest in the history of telescope making. He collects telescopes, telescope catalogs, correspondence and literature relating to telescope and observatory history. Ken also enjoys working on telescope restoration, preferring to avoid the "make it shiny enough to attract raccoons" approach. To pay the bills, he did camera design as a mechanical engineer for the Polaroid Corporation for nearly 30 years, and now works on inkless printing technology for Zink Imaging, a startup spun off from the R&D groups at Polaroid.

Marsteller, Lyn, "Crash Course in Fundraising for Vintage Observatories"

Where do charitable contributions come from and how do you get a piece of the pie for your view of the night sky? Veteran nonprofit fundraiser Lyn Marsteller will outline where American philanthropy comes from, who gets it, and how you can do better at presenting your case for funding education programs, restoration, and other programs. Be prepared to share your successes and challenges as we learn from each other during this dialogue with ATS members and members-to-be.

Lyn Marsteller, CFRE, is Fundraising Coach for Marsteller & Associates in Cincinnati, Ohio, and a veteran fundraising professional with 28 years of experience in effective nonprofit management, donor communications, and development. In working with local, regional and national organizations, she analyzes current fundraising effectiveness, and collaborates with both staff and volunteers to recommend donor-focused communication strategies for improved fundraising and donor relations. Marsteller & Associates (M&A) was founded in 1998 to address frequent requests for assistance in fundraising strategy by small to medium-sized nonprofits with small, new, or nonexistent development departments. The M&A

tools and training programs are designed to build confidence with the organization so that fundraising skills are improved (and fears are reduced) and the individuals are poised to "fish" for themselves, rather than rely on outside professionals to do it for them.

Murphy, Edward M., "Preserving and Restoring the Leander McCormick Observatory at the University of Virginia"

The Leander McCormick Observatory at the University of Virginia in Charlottesville, Virginia, is home to a 26-inch Alvan Clark refractor. At the time of its dedication in 1885, it was the largest telescope in the United States and the second largest refractor in the world. Beginning in 1914 under the direction of Samuel Alfred Mitchell, the telescope was used for measuring parallaxes of nearby stars, eventually measuring the distances to a third of all stars with ground-based distance measurements in the 20th century. However, the parallax program ended in 1994, and McCormick Observatory has since served as a facility dedicated to undergraduate and graduate education, and public outreach. In 2004, both the Observatory, and the adjacent Director's Residence, were named to the National Register of Historic Places and are Virginia Landmarks. In the past decade, the Astronomy Department has undertaken to preserve and restore McCormick Observatory. The ultimate goal is to restore the telescope and observatory to their historic appearance while maintaining the functionality needed for a modern education and outreach center. We report on the progress made to date, plans for the future, and open questions on best practices.

Edward M. Murphy earned his B.S. at the University of Illinois and his M.A. and Ph.D. from the University of Virginia, all in astronomy. He is now associate professor of astronomy at the University of Virginia.

Niemi, Craig "The Cincinnati Observatory – Its History and Story of an *Ongoing* Rescue"

Every institution has unique challenges and opportunities: "Ongoing Rescue" highlights the Cincinnati Observatory's particular case. It weaves our history, preservation and restoration efforts into a story illustrating where the observatory is now and what it faces in the future. The history, current funding situation, ongoing restoration work, and other hands-on information about the Cincinnati Observatory Center will be covered. This presentation will be given while on a detailed walking tour of the observatory.

Craig Niemi is Executive Director of the Cincinnati Observatory Center. He and his travel-agent wife Valerie (and fellow workshop co-organizer) joined the observatory 10 years ago with a shared interest in astronomy. Both became active in the Friends of the Observatory as board members, history docents and outreach volunteers. Two years ago, Niemi was hired as the observatory's Executive Director. His vision for the observatory is to make it both the local resource for astronomical inquiry and also nationally recognized for education and teacher training.

Pasachoff, Jay M., "Williams College's Hopkins Observatory: The Nation's Oldest Observatory, Updated for the 21st Century"

The Hopkins Observatory was built at Williams College by Prof. Albert Hopkins and his students during 1836-1838, following earlier purchases of telescopes as far back as 1802. The observatory was dedicated on June 12, 1838. The building is the oldest extant astronomical observatory in the United States. Williams College Trustees commissioned a young and then relatively unknown optician from eastern Massachusetts, Alvan Clark, to build them a telescope; indeed, Clark used the commission to set up his own business. Williams College's 18-cm (7-inch) Clark telescope, installed in 1852, is the earliest known from that now-famous maker. Changes have been few in the old observatory. It incorporated a 6.5-meter (20-foot) domed ceiling, originally with stars painted on it to make a sort of early planetarium; a Spitz A3-P projector was installed in 1963 and a Zeiss Skymaster ZKP-3B replaced it in 2006. In 1972-74, renovations added display cases in the wings, and the 1834 Troughton and Simms transit and the 1876 Repsold meridian transit were also placed on display. The Clark telescope was renovated in the 1980s, in time for the 1988 sesquicentennial, which was honored by an International Astronomical Union Colloquium on the teaching of astronomy. This talk will describe the modern uses of the historic observatory and associated facilities.

Jay M. Pasachoff is Field Memorial Professor of Astronomy and Director of the Hopkins Observatory at Williams College. He has his A.B., A.M., and Ph.D. from Harvard; he had postdoctoral fellowships at Harvard and at Caltech before going to Williams College in 1972. He is now Retiring President of the International Astronomical Union's Commission on Astronomy Education and Development and Chair of the IAU's Working Group on Solar Eclipses, of which he has seen 46. He received the Education Prize of the American Astronomical Society. He is an Honorary Member of the Royal Astronomical Society of Canada and, in 2008, received the Shield of the University of Cairo.

Patterson, Richard J., Ph.D., "Preserving and Restoring the Leander McCormick Observatory at the University of Virginia" [see "Murphy, Edward M." for abstract]

Richard J. Patterson ("Ricky") received his Ph.D. in astronomy from the University of Virginia in 1995. His current research is focused on the formation of the galactic halo, but he has spent several decades doing astrometry with long-focus refractors, including the Yale-Columbia 26-inch at Mount Stromlo and the Leander McCormick 26-inch in Virginia. He has been involved with preservation/restoration work at McCormick Observatory for over a decade.

Potvin, Robert L., "The Bates Observatory: A *Terrestrial* Observatory—Seeding Donations?" (for the "Observatory 'Makeover'" session)

In 1893 and 1894, Senator Theodore Cornelius Bates constructed a brick tower atop Bell Hill in North Brookfield, Mass. The Bates Observatory, as it became called, became a great tourist attraction in Worcester County because its 1,200-foot elevation gave a

spectacular view of the surrounding countryside. Although Bates also donated a silver-plated telescope and several sets of binoculars, there is no apparent record of celestial observations. In the last century, Bates Observatory fell into disuse. However, local interest has revived because two years ago George Doane willed $90,000 to see it restored. The speaker now envisions a small museum and visitor center and hopes to raise $250,000 to that end, and has applied for a HamburgerHelper.com "Help my Hometown" grant. He now seeks other ideas both for fundraising and restoration.

Robert L. Potvin, a member of the North Brookfield Historical Commission, is one of the fifth generation of Potvins in North Brookfield, Mass. After earning a B.S. in geography from Saint Louis University in Missouri, he served in the U.S. Army as an x-ray technician at the 345th Medical Dispensary in Vung Tau, Vietnam. His professional background ranges from being a National Park Service ranger at the Cape Cod National Seashore to being a claim representative for Aetna Life and Casualty. He founded his own antique and estate auction business in West Brookfield in 1978. In the '80s and '90s, he dealt in trading silver and gold and rare coins and staged major estate auctions in Worcester County. His books include *Starting An Antique Business*, *Basic Auctioneering*, and *Rooftops - Secrets of Home-Ownership.* Bob has also restored several antique homes. In his spare time, he's a weather enthusiast and an ardent baseball fan, and enjoys being dad to Ben and Josh and granddad to Chase and Lily.

Ray, Chris, "Evaluating a Restoration—With Thoughts from Recent Projects"

The first task in any restoration project is evaluating what needs to be done in the context of the telescope's 21st-century use. Will it be devoted to student observing, astronomical research, or museum display? Approaches may differ. Also covered will be some aspects of taking a telescope apart, working on it, and "triage" in desperate cases, as well as techniques for lifting heavy precision parts, and safe storage of an objective lens if kept separate from the telescope tube. Highlighted will be the two main secrets of restoring a telescope: proper alignment of the optics, and proper lubrication of the mechanical parts (with some thoughts about lubricants).

"Celestial mechanic" Christopher Ray is the founder of Ray Museum Studios in Swarthmore, Pennsylvania, where he divides his time almost equally between making scale models and dioramas for museums, crafting indoor and outdoor sculptures, and restoring antique telescopes. Since founding his studio in 1983, he has cleaned and restored lenses, wooden tubes, brass mounts, clock drives, domes, and many other optical and mechanical parts for 28 telescopes ranging in diameter from 2-3/4 inches (the pre-1847 Dollond refractor famous for having been used by Maria Mitchell to find her comet) to 26 inches (at the Leander McCormick Observatory at the University of Virginia). Among others, his fingers have helped rejuvenate the 12-inch Fitz refractor at the Detroit Observatory at the University of Michigan, the 24-inch Brashear refractor of the Sproul Observatory at Swarthmore, and the pre-factory 5-inch Alvan Clark refractor at the Maria Mitchell Observatory that dates back to 1859. His bachelor's degree from Reed College (Portland, Oregon) was in physics and biology; before founding his studio and getting into telescope restoration, he was an exhibit designer at museums in the U.S. and Canada, including at the American Museum of Natural History in New York City.

Remaklus, Perry W. (for panel on Documenting an Observatory's History)

Perry W. Remaklus holds both bachelor's and master's degrees in business administration from the University of Michigan at Ann Arbor. He, along with his wife Patricia (also a Michigan graduate), founded the publishing company Willmann-Bell, Inc. in 1973. In the 35 years since then, Willmann-Bell has published nearly 100 astronomical related titles ranging from digital image processing, photometry, and mathematical astronomy to observing handbooks and catalogs, telescope making, optical design, and high precision state-of-the-art sky atlases. In addition to print media, they publish astronomical software and have done works in association with the Smithsonian Institution, Jet Propulsion Laboratory, and the U.S. Naval Observatory. Two titles of particular interest to historians of astronomy are *Epic Moon* by Thomas A. Dobbins and William P. Sheehan and the second edition of *Alvan Clark and Sons, Artists in Optics* by Deborah Jean Warner and Robert B. Ariail.

Schechner, Sara J., "Working Together to Preserve Our Shared Astronomical Heritage"

In January 2007, the American Astronomical Society (AAS) established a Working Group on the Preservation of Astronomical Heritage (WGPAH) in response to a report by the AAS Historical Astronomy Division (HAD). The Working Group is charged with "developing and disseminating procedures, criteria and priorities for identifying, designating, and preserving astronomical structures, instruments, and records so that they will continue to be available for astronomical and historical research, for the teaching of astronomy, and for outreach to the general public." Members of the Working Group are selected on the basis of their professional qualifications and include historians, archivists, curators, astronomers, and those representing the concerns of active research observatories. This paper will describe the background and current activities of the WGPAH and answer questions about its mission.

Sara Schechner, Ph.D., is the David P. Wheatland Curator of the Collection of Historical Scientific Instruments, Harvard University, and the Secretary of the Scientific Instrument Commission of the International Union for the History and Philosophy of Science. She is the chairman of the Historical Astronomy Division of the American Astronomical Society, and a member of the AAS WGPAH and Commission 41 of the International Astronomical Union. Schechner has curated more than 20 major exhibitions for the Adler Planetarium, the Smithsonian Institution, the AAS, the American Physical Society, and Harvard. On the museum studies faculty at Harvard, Schechner is mindful of the importance of outreach between scholars and the public. Astronomy outreach projects have included interactive sundials for outdoor learning centers (including one for the blind), a hands-on astrolabe kit (with Jim Lattis), a Transit of Venus Festival using historic instruments, and programs for the Girl Scout Councils of the Nation's Capital and Patriots' Trail. Her books include *Comets, Popular Culture, and the Birth of Modern Cosmology* (1997) and *Western Astrolabes* (1998). Current research focuses on sundials, science, and social change; and the impact of Revolutionary politics on astronomy in colonial America.

Schwab, Janie, "Dudley Observatory, New York: Seeking to Revive an Observatory" (for the "Observatory 'Makeover'" session)

The "observatory without a telescope" has its library, archives, artifacts, and one employee in a small office in a building that is primarily senior housing. Our mission is to support astronomy and history of astronomy. We use astronomy and its interdisciplinary manifestations to attract people who might not normally enjoy science, and to promote science literacy. Most programs are done off-site, often in collaboration with other organizations. When we recently tried to move to a facility that would have only a telescope, we realized how important the history aspect is to our identity.

Our vision for the future seems to include an observatory in a relatively dark urban setting, with a modern telescope for student research and public observing. Our 12" Brashear refractor (in storage) would be wonderful for public observing and has historic value, but would be expensive to erect.

Schwab, Janie, "Using Historic Collections to Promote and Enhance Science Literacy"

Students need to have some comfort with science if we are to build a capable and competitive workforce. In particular, misconceptions about scientists and what they do can deter students from pursuing, or even appreciating, science. Using history as a vehicle allows us to reach students who might not otherwise be lured by science. Dudley Observatory's resources include 150 years of archives, a priceless collection of historic instruments, and a long association with eminent scientists. Using these in combination, we appeal to a wide range of participants with different interests and strengths, and find that students who see the human side of science have a higher comfort level with it.

Janie Schwab has been the Executive Director of the Dudley Observatory since 2004. She received a B.A. in astronomy and music from Wellesley College, and has published many articles in astronomy and atmospheric science journals. Her current interests include observational astronomy and science education. Her interest in history of astronomy has been fueled by the incredible collections of archives and historic astronomical instruments at the Dudley Observatory. She has also worked at Rupprecht & Patashnick, the Harvard University Atmospheric Research Group, and the Harvard-Smithsonian Center for Astrophysics, and has been an active volunteer in school and community groups.

Seitzer, Patrick, ""The Boyden Observatory and the Boyden Science Centre in South Africa" [see "Hoffman, Matie" for abstract]

Patrick Seitzer is associate research scientist in the Department of Astronomy at the University of Michigan, Ann Arbor as well as a patron of the Friends of Boyden Observatory.

Tennis, Richard "NorthMoor Observatory, Peoria, Illinois: Caught in a Grants Catch-22" (for the "Observatory 'Makeover'" session)

The Peoria (Illinois) Astronomical Society, Section of the Peoria Academy of Science (PAS), is the proud caretaker of an historic Gaertner 9-inch refractor with flint-forward lenses ground by precision optician Octave Petitdidier. Since 1955, the volunteers from PAS have maintained the NorthMoor Observatory where this telescope is housed. For 52 years, the NorthMoor Observatory has been open to the public each clear Saturday evening during the warm-weather months. More than 2,500 visitors come to view the heavens through this historic telescope during an average season. We also open the Observatory on other nights when special astronomical events occur. During the near-approach of Mars in 2004, the observatory drew more than 2,000 people during 10 consecutive nights. The observatory also holds classes at all academic levels. The PAS's 105 members have assumed all maintenance costs and volunteered countless hours to make such opportunities available to the citizens of Central Illinois. However, despite careful maintenance, the rotating dome of the Observatory has rusted beyond repair and must be replaced. The PAS engaged an architect and after much study, the cost has been determined to be $115,000. We began fund raising in 2005 and have raised some $64,000 to date; if two pending grant requests are approved, they would add perhaps another $2,000. Along the way, however, the PAS has learned some disheartening facts. It is

- not eligible for educational grants because it does not offer a curriculum. The telescope is made available to classes year round, but the teachers who bring their students are using their own curricula.
- not eligible for historical preservation grants because the observatory is not an historic building. The fact that it houses a historic scientific telescope does not meet the granting guidelines.
- not eligible for most scientific grants because we are not doing research and because we are an all-volunteer group and therefore do not have a salaried administrator.
- not eligible for community grants, because many specifically exclude capital and construction projects.

At this point, the PAS is fearful that 2008 may be the last year it can make this historic telescope available to the public. It would be tragic to be forced to dismantle the telescope and put it in storage because it cannot remain safe in its current location. We are seeking suggestions, information, and guidance about any funding sources that may be appropriate to help us with this project.

Richard Tennis is a member of the Peoria Astronomical Society, (PAS) in Illinois and is chairperson of the PAS Light Control Committee. He also serves as District Chairperson of the Central Illinois International Dark-Sky Association (IDA). As an amateur astronomer, he has received the Messier Award and the Hershel Award from the Astronomical League. Richard is a graduate of the University of Minnesota (BSME 1963). He retired from Caterpillar Inc. after 38 years with engineering responsibilities for fastener and sealing applications. He is presently serving as a technical consultant to Fontana Luigi S.p.A. and Caterpillar Inc. He resides in rural Woodford County where he has a backyard observatory housing a 200-mm SCT and a 450 mm truss-style Dobsonian telescope to probe the dimmer objects.

Ventre, John E., "The Cincinnati Observatory – Its History and Story of an *Ongoing* Rescue" (see "Niemi, Craig" for abstract)

John E. Ventre, retired as a standards engineer from General Electric's Aircraft Engines Division, is Historian for the Cincinnati Observatory—a volunteer role that also includes converting the Cincinnati Observatory into an authentic working 19th-century astronomical observatory. He has taught various astronomy courses for over 30 years at the University of Cincinnati as an adjunct professor. John was one of the Chairs to save the Cincinnati Observatory, one of the Cincinnati Observatory Center's (COC) incorporators, and the first administrator/director of the COC. He also instituted its educational program.

Waff, Craig B., "Failure *is* an Option: Lessons from Observatories that Did Not Survive"

A dome tottering on its side about to fall to the ground or laying among the ruins of a once-proud structure—such are the iconic images of observatories that failed to avoid the wrecking ball. Yes, it can happen. This paper briefly recalls the history of three observatories—the Warner Observatory in Rochester, New York; the Cunningham Observatory on the campus of Tulane University in New Orleans, Louisiana; and the Flower and Cook Observatory of the University of Pennsylvania—and examines the circumstances leading to their demolitions. Hope is expressed that lessons drawn from those sad demises may aid in the saving of other historic observatories elsewhere.

Craig B. Waff is a staff historian at the Air Force Research Laboratory at Wright-Patterson AFB in Ohio. He earned his Ph.D. degree in history of science from Johns Hopkins University and formerly worked as a contract historian at NASA's Jet Propulsion Laboratory. Waff's telescope-related publications include an annotated collection of early letters (1847-1851) of Alvan Clark to Boston newspaper editors and a tabulation of Clark's pre-factory telescopes (both in the *Journal of the Antique Telescope Society,* Summer-Fall 2006), and a study of the origin (1848) of Amherst College's Lawrence Observatory and the acquisition (1854) of its 7.25-inch Clark refractor (*Griffith Observer,* August 2007). His research proposal to study Ormsby MacKnight Mitchel's popular lectures on astronomy (1842-1860), based especially on the use of searchable online historical newspaper databases, received the Dudley Observatory's 2008 Pollock Award.

Warminski, Margo, "National Register Designation for Your Historic Observatory: Advantages, Considerations, Requirements"

The National Register of Historic Places is the official list of properties recognized by the Federal government as worthy of preservation for their local, state, or national significance in American history, architecture, archaeology, engineering, or culture. National Register listing is a great honor that provides official recognition of the value of

an architecturally or historically significant building, such as a historic observatory. This presentation will explain the process of listing a building on the Register, as well as the advantages for owners.

Margo Warminski is Preservation Director of the Cincinnati Preservation Association, a private, nonprofit advocacy organization. In addition to many other duties, she helps owners and consultants with the process of National Register listing. In over 20 years in the preservation field, she has prepared more than 50 National Register nominations.

Wight, Karen, "Restoration of the Detroit Observatory—a Quick History"

Built in 1854, the Detroit Observatory was the first building erected in President Henry Tappan's campaign to transform the University of Michigan from a small frontier college to a leading research institution. When the instruments aged and viewing conditions deteriorated, UM astronomers turned their attention to bigger, better, newer, faster instruments elsewhere. After decades of benign neglect, Detroit Observatory was restored in the late 1990s under the direction of Patricia Whitesell. Today it is preserved as an archive of UM history by the Bentley Historical Library. Karen Wight will be sharing images and anecdotes illustrating Detroit Observatory's history and its restoration.

Karen Wight is Project Coordinator for the Detroit Observatory, which, despite its name, is located in Ann Arbor, and is a division of Bentley Historical Library, University of Michigan. Her studies have focused on art history, American material culture, and museum practice, and she has degrees from Delta Community College, the University of Michigan, and Yale. The Joys of Homeownership and School of Hard Knocks have offered extension courses in facilities management and historic preservation. For several years Karen served as executive director for a nonprofit that provided architectural and planning services to neighborhood revitalization efforts in and around Birmingham, Alabama. She has been taking care of and providing access to Detroit Observatory and its collections since 2002.