Third Annual NASS Conference, 1997

Text by Harold Brandmaier
Photos by Ginny Brandmaier & Jim Holland

The setting for the third annual North American Sundial Society conference, held on September 11 to 14, was Chicago on the shore of Lake Michigan, and its environs. It was superbly organized and coordinated by Sara Schechner Genuth and Jim Holland. And also, it is amazing how they arranged for four beautiful days when rain plagued the two previous conferences.

About 45 NASS members attended. Most were from the USA and Canada. However, there was one conferee each from Spain, the Netherlands, and Germany.

The conference format was similar to previous years, consisting of a number of 15 to 20 minute talks at the Adler Planetarium on Friday together with two hours to tour the museum's collection of sundials and astrolabes. The Adler is about two miles from the Holiday Inn where most of the conferees stayed. Many walked to and from the Adler through the beautiful park along Lake Michigan. Saturday was devoted to a trip to the Time Museum in Rockford, IL about 90 miles away with stops in between to examine a few sundials. The conference concluded Sunday morning at the Holiday Inn with the Annual General Meeting (summarized separately by Sara), a few short presentations and many shorter ones on the accompanying show-and-tell exhibits. We had excellent lunches at the Adler Planetarium and the Time Museum, a Saturday banquet dinner and Sunday breakfast at the Holiday Inn. The social events, organized and led by the conference committee, included a trip to Gino's for traditional Chicago deep dish pizza and one to a Chicago blues club for a night of music.

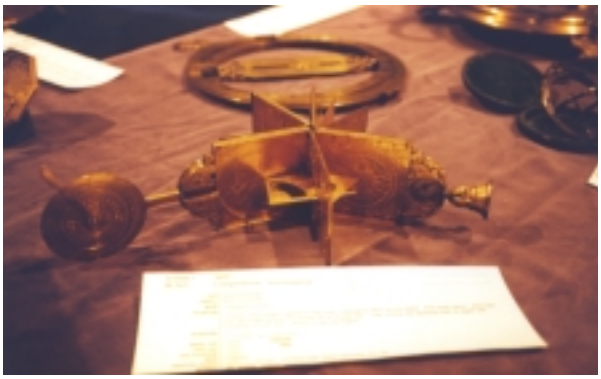
Now to some details of the conference. A reception was held Thursday evening at the hotel. Registration was mostly completed there with a few late comers registering on Friday morning. It was a time to renew acquaintances and review accomplishments during the previous year. Afterwards, Sara and Jim led a group to partake of deep dish pizza, one of Chicago's unique specialties. The pies were so large we could not finish. The decor at Gino's was wall-to-wall graffiti. It should be noted that some conferees preferred steak, for which Chicago is also well known!

Bruce Stephenson and Paul Knappenberger of the Adler Planetarium and Astronomy Museum welcomed NASS on Friday morning and briefly described the Adler's expansion plans that necessitated storing the famous (at least to sundial enthusiasts) Henry Moore sundial usually located at the entrance to the Adler. The first morning session considered historic sundials. Bob Kellogg led off with "The Bede Hour", a discussion of a document written in early English by the Venerable Bede, a monk, cosmologist and historian, between 700-731 AD. Related research by Bob appears in V4-2 of the Compendium. This was followed by Jim Lattis' "Jeffersonian Sundial in Rome". This sundial, whose design is attributed to Thomas Jefferson, used the exterior of a sphere on top of a fence post as the dial surface. However, instead of wood used by Jefferson, the copy used tufa, a soft volcanic rock. A description of this sundial can be found in *The Correspondence and Miscellaneous Papers of Benjamin Henry Latrobe* (Yale University Press, 1988). Frank Barmore finished with a discussion of "Three 19th Century Sundials", one each in the Shaker Museum in Chatham, NY; Fort Union, New Mexico; and Las Vegas, NV. The Shaker dial has three sets of hour-lines displaced slightly from each other for an, as yet, unknown reason. Frank uses machine made rice paper to make rubbings of the dial-faces for subsequent analysis.

An Attentive Audience

A Ring Dial at the Adler

After a delicious, but caloric, snack of bagels and pastries, the meeting resumed with a session on astrolabes, which have many time finding features. Sara opened with a tribute to Roderick Webster, who was cataloguing the Adler's collection of astrolabes at the time of his death and was largely responsible for developing the museum's collection of sundials (the largest collection in North America). Jim Lattis described the parts of an astrolabe and their function in "Time Finding With Astrolabes". Sara then presented "Astrolabes in Social and Cross-Cultural Perspective," which discussed the many uses of astrolabes. The session ended with John Lamprey's "An Introduction to Georg Hartmann (1489 - 1564) and his Practica". To translate Hartmann's book, John had to reconstruct missing diagrams from the text after first learning German!



A Compendium at the Adler

The Adler invited the conferees to a magnificent lunch in their cafeteria. Afterwards, we toured the museum's collection of astrolabes and sundials. Of particular interest was the special sundial exhibit prepared by Sara for the conferees in the History of Astronomy Department. Madge Webster, Bruce Stephenson, Devon Pyle-Vowles, and Sara were there to answer questions and demonstrate how the sundials and related instruments functioned. It was a memorable exhibit of items not currently on display.

Reviewing the special display

The afternoon session on "Sundial Theory and Design" started with John Shepherd describing the theory and design of the vertical declining 56 feet wide by 30 feet high Swensen sundial at the University of Wisconsin, completed in 1995. It is the largest reported vertical in the USA. It is made of solid anodized aluminum with analemmas for hour-lines. Day-lines correspond to eight special days of the megalithic calendar: the equinoxes, two solstices, Beltane (May Day) analemmas combined, and Candlemas (Ground Hog Day) and Martinmas combined. John claims it is the most accurate clock on campus. Details of the design including many photographs can be found at http://www.uwrf.edu/sundial. Warren Thom then presented "Designing Sundials with Zonwplt and Delta CAD". Delta CAD is a computer aided drafting program that can interface with Zonwplt. Warren provided printed copies of his talk and plans a corresponding video to guide program users. After a soda and cookie break, Fred Sawyer described his "Ptolemaic Coordinate Sundials", which he invented in response to a British Sundial Society challenge. Each attendee received a cardboard model of two of these dials and instructions for their use. To end the session, Fritz Stumpges demonstrated his "I See the Light Sundial" that received a great deal of interest.

Fritz Stumpges - “I See The Light”

That evening, Sara led a tour to B.L.U.E.S., a Chicago blues club where Big Time Sarah was performing. Our group sat next to the band and had a great, albeit noisy, time. We were an enthusiastic group. Bob Owendoff joined in Big Time Sarah's renditions and we all clapped wildly. When we told Sarah we were NASS members, she invited us back, and the writer and his wife promised to jam with the drummer on our next visit.

We boarded our bus early on Saturday morning for our dial and Time Museum tour. The first stop was the Chicago Botanical Gardens to examine the large aluminum and stainless steel equatorial dial created by artist Joseph Berlini in 1987. The artist, who was present to greet our tour, was amazed when NASS members proceeded to apply their advanced instruments (Fred Sawyer's GPS sensor, and David Shayt's “Smart Tool” digital angle finder) to his sundial. His design and installation methods were far less advanced! Ginny Brandmaier took the annual group photograph and Joseph presented each attendee with a signed pencil sketch of his sundial and a brief description of his career.

Sculptor Joseph Berlini & his equatorial dial

David Shayt with his digital level

Our next stop was Founders Park in Highland Park, across the street from the railroad station. Stephen Luecking, who designed the polar dial in the park, was there to complete its installation. The cast iron dial represents both the wheel of an

ancient French ox drawn cart used in the area and a more modern train wheel. It is seven feet in diameter, weighs 2100 pounds, and was installed the day before our visit. Steve's wife created the "Staffs" sculpture located near his dial.

Sculptor Stephen Luecking explains Sun Wheel

Jackie Holland inspecting the Sun Wheel

The final stop before reaching the Time Museum for lunch was Time Square, also in Highland Park. Appropriately enough an interactive analemmatic sundial is the focal point of the square. Each gnomon position, on the first, tenth and twentieth of each month is inscribed with the Equation-of-Time to the nearest minute.

Analemmatic Dial with NASS member hour points

At the Time Museum, we were greeted by Pam Prescott, and directed to their dining facility for another superb lunch. Then, for the next half-hour, most of the conferees spent time and money in the bookshop, which is one of the best for time related references. After a brief introduction to the museum, we were given a guided tour. This included their entire collection, not just sundials. Photographs were not permitted and the time available in the museum was too brief to study each dial. However, André Bouchard was not affected since he sketches many of the interesting sundials he encounters in his notebook. The tour ended with an examination of a number of sundials selected by Sara and Fred. Included was the bifilar sundial designed by Fred and Mohamed U. Zakariya and constructed by the latter. Fred included his article "Bifilar Gnomonics" in the conference information package.

Luncheon at the Time Museum

The writer was amused by the museum's model of a quarter spherical dial with a central gnomon point and day-lines for the solstices and equinoxes

Warren Thom examines Ray Lowry's dial

(refer to Gibbs' Greek and Roman Sundials, page 122). It is described as a grinning grid with the instruction "If you put your nose pointed to the Sun

and open your mouth wide you will show all passers-by the time of day".

Enroute back to Chicago we stopped to view the large armillary sphere shaped equatorial dial at the Sundstrand Corporation in Rockford.

D. Shayt & S. Woodbury take measurements

We concluded the day with our traditional dinner at the Holiday Inn and, for those leaving Chicago the next day, packing.

Dinner Revelry

The Sunday morning meeting at the hotel combined a continental breakfast, an extensive show-and-tell exhibit, talks, and the Annual General Meeting. After the AGM, the next hour concentrated on "Tools for Dialing". David Shayt described the evolution of inclinometers, for measuring style height for example, culminating in the digital inclinometer. He described the "Smart Tool" angle finder that he used during the dial tour. A catalog is available from the manufacturer at 1-800-SMART-LEVEL. Next, the writer presented the results of a brief study of six computer programs available to design sundials. Four are limited to two-dimensional dials; the remaining two are also capable of designing three-dimensional dials.

Ralph Galvin with the Suntrak

Ralph Galvin then described his Suntrak as "a hands-on sundial, a transit and a true compass for determining seasonal shade periods at a site, and may be used for laying out large sundials on uneven surfaces." His handout further described his instrument.

William Van Wyke and his hemisol

The Show-and-Tell session started off with William Van Wyke describing his very attractive stepped hemisphere model for a large sundial sculpture; each 20 minute step is a gnomon that casts its shadow on the gnomon below it.

Harris Morrison with his Shepherd dials

Harris Morrison presented his exhibit of sundial jewelry. Allan Pratt then demonstrated his “terella” (little Earth) which is a small commercial globe whose axis, in use, is oriented parallel to Earth's axis. An extensive discussion appears on pages 62 to 72 of C. L. Stong's 1960 book The Scientific American Book of Projects for the Amateur Scientist. Next, Don Petrie demonstrated his equatorial, interactive sundial based on the disappearance of a shadow. Bob Owendoff then summarized his impressive dialing accomplishments including the self-orienting sundial at the US Naval Academy. Thaddeus Weakley described his difficulties with obtaining funding for a university dial a model of which he displayed. His exhibit also contained a number of humorous sundial cartoons.

New Board member Claude Hartman

Claude Hartman followed with a description of his “shaded” sundials based on an illuminated slit on a dark background instead of a shadow on a light background. Alternate names suggested by the conferees for this sundial type include “bright gnomon” and “sun beam dial”. The term “gnomonclature” was suggested by a conferee for a glossary of dial definitions. He showed a number of architectural models of his dials. Stephen Luecking, the artist designer of the Founders' Park sundial visited on our tour, joined

the session to describe some of his sundial concepts. His projection equatorial sundial is a spoked wheel with holes in the rim between spokes. Light entering the holes strikes the wheel spokes, each of which is marked with the season. Ken Clark detailed the steps in designing and building his “far decliner” sundial that is a vertical dial declining South 84.6º West. His handout is a good guide for anyone planning to design and build a sundial.

André Bouchard draws what he sees

André Bouchard presented an update of the activities of the Quebec Sundial Society and gave each attendee a copy of the interesting progress report.

Finally, Javier Moreno Bores from Spain described his conical style whose apex is at the sundial origin. One side shows Italian hours and the other side shows Babylonian hours.

Although Bill Buckler was unable to attend the conference, he sent two dials and details of his construction methods. A small stack of self-explanatory brochures describing the capabilities of Sara's “Gnomon Research” organization occupied the space next to Bill's exhibit. Mac Oglesby also sent in a copy of his design manual for time-to-sunset dials.

Javier Moreno explaining a new type of dial

In conclusion, it is hoped that all the speakers will submit articles for The Compendium to enable all NASS members to benefit from the interesting and useful material presented at the 1997 conference.

Equatorial at the Lincoln Park Zoo - missed on the tour!

The group gathers at the Chicago Botanical Gardens