

**Sixth Annual NASS Conference - August 2000 in San Francisco, California**  
Claude Hartman (Arroyo Grande, CA ) and Fred Sawyer (Glastonbury, CT)

The NASS 2000 Conference was held at the Cathedral Hill Hotel in San Francisco, California, August 17 to 20. Our host and conference organizer was Ron Anthony who, aided by Carl Trost and Mark Gingrich, put together a marvelous visit to this beautiful city and bay area. This was our most western conference site in the brief history of NASS.



Claude Hartman chats with Jeanne & Bob Haselby

Warm conversations began among those attending the Thursday evening reception with refreshments. There was a drawing for door prizes of a portable universal ring sundial from Bruno Pichler and an enameled NASS logo pin.

Early Friday we gathered to greet old friends and make new ones while munching on a continental breakfast and looking at several displays. Many sundials and other materials had been laid out for viewing. Some of the materials were for sale, including the new NASS Repository CD. An unusual collection of rare dialing books was also shown.

Fred Sawyer formally opened the conference at 9 am by welcoming everyone. He then presented the pocket sundial door prize to Paul Lapp. Bob Kellogg won the NASS logo pin.

Fred explained that the logo pin was for sale and proceeds would help support the new annual Sawyer Dialing Prize. This led to his explaining that on the event of his retirement, he and his wife

Phil had set up a fund for the award. He then explained some of the details of the **trophy sundial** made by Tony Moss. This dial was on display for all to examine.



Peter Mikkelsen displays his copy of Leybourn's *Dialling*

Native San Franciscan, Carl Trost, opened the formal talks. He treated us with his slides and stories of some of the large sundials we would see on the tour. The pictures of the 1913 opening of Ingleside Terraces' sundial with a 28-foot gnomon and dancing maidens on the 34-foot diameter time ring impressed us all.

Claiming the largest "organic" sundial, Bob Kellogg presented his work with "Amazing Maize Maze". This is a cornfield maze that was done this summer at Long Acre farm near Rochester, New York. Hedges of corn were aligned for the azimuth of the sun at different hours. In addition, flagpoles carrying an annulus called the "eye of Kala" (Hawaiian sun god) threw shadows on large posters for times to within minutes. There were a large number of "oohs" as he showed an aerial view of the cornfield with its maze and a sun face.



The Amazing Maize Maze

Paul Lapp then reminded us that "Toves don't do Trig" in his explanation of the causes of the EOT. He said he tried to do so with a "stick and mud" approach that Toves would appreciate. This led to some "beach ball" geometry in order to explain spherical relationships.



Mac Oglesby with a student sundial

Mac Oglesby showed **sundials** made by 4th through 6th grade students. He worked with students in mounting printed dials he designed that used an "unfolded analemma" he had printed for them. As he put it, in his part of the country "we only see the sun 15% of the time" so he had

them try to make a sundial that looks good. There were numerous questions about the design of the dials as well as the fun of working with kids.

After a short break, Fred introduced the new NASS Repository CD. He had it running on a laptop so he could show how the many electronic features worked as well as the wealth of materials stored. All of the journals and programs that have been sent to NASS members in the past are there, plus the BSS glossary and several larger works, in a form allowing full color photos, an every-word search facility and having many links built in. Most of us were amazed that so much could be on the CD with only a third of its capacity being used. There is room for a lot of future materials. (See the description in the Compendium). Fred said that he spent over a hundred hours putting it together. Some of us wondered if it could have taken so little. My what treasures retirement can bring!

Tom Kreyche brought the morning session to a dramatic close with a demonstration of his **Helioscope** program. This features spectacular graphics to present many types of information similar to **The Dialist's Companion** program. He commented on the difficulties and limitations he has faced in the continued development. The beta version is included on the NASS CD and can be seen on his web site, [www.blueskies.com](http://www.blueskies.com).



After a lunch provided by the Cathedral Hill Hotel, the business meeting of NASS, the Annual General Meeting, was held. Minutes of the meeting are in the December issue of *The Compendium*.

We then resumed with some informal presentations.

Woody Sullivan opened with a presentation of the model of the Mars sundial. He had an exact model of the proposed color calibration card which a future Mars lander would carry. The sixty gram model was little more than three inches square with a vertical gnomon of about two inches topped with a ball that looked strangely like one of Woody's baseballs. We handled the model carefully by its edges to inspect the markings. It carries a motto inspired by Bill Nye, "Two Worlds, One Sun". Sundial markings will be superimposed on transmitted images after a successful landing.

Ken Clark explained his display of his "Dialist" T-shirt. He developed the pattern to join a list of hobby patterns. The patterns were also shown on note cards, a coffee mug and wall plaques.



Ken Clark and the dialist paraphernalia

The afternoon formal talks began at 3pm as Carl Trost returned for a presentation of his work to restore a significant sculpture at the Children's Hospital Oakland Research Institute (CHORI). Crafted in 1928 by Robert Treat Paine, it shows a life sized kneeling youth holding a horizontal shield and is attached to a large stone. A moving company moved and placed the sculpture with the guidance of Carl. Even though the sun was not

shining, his prior measurements with homemade devices allowed an accurate alignment.

Allan Pratt showed a larger version of his "Azimeter" that he had shown at the conference last year. This is a meridian finding device he made with a large protractor and using the sun's azimuth. Both Carl and Allan showed what could be done with inexpensive materials by using a lot of creativity.



Ron Anthony shows his bifilar and equant dials to John Schilke

A standard time dial patented by Yabashi in 1971 formed the beginning of a talk by Fred Sawyer. The method described by Yabashi seemed more like trial and error than theory and this led to an analysis in which he was able to show it was impossible! However, this also led to what was possible and produced the "Sawyer Equant". Ron Anthony printed a horizontal equant dial of about eight-inch square using this design on metal. Ron had added a scale around the perimeter that took advantage of the equal angle nature to adjust for the EOT and longitude. Fred showed the operation of this dial and it was displayed for us to examine.

Mark Gingrich presented the last formal session of the day. He presented the problems facing us as the earth's rotation gradually slows. The chaotic nature and accumulating size of this has led some to propose dropping the leap second in favor of a uniform standard time. The difficult correction would then be passed on to the sundial. Although this means only one minute by the year 2100 other predictions such as the abolishment of time zones sounded much more drastic.

After the conference dinner, Fred Sawyer announced the presentation of the first annual

**Sawyer Dialing Prize** to Fer J. deVries "in recognition of his many years of dedication to dialing, and in gratitude for his development of Zonwvlak and his always helpful encouragement and support of the global dialing community." As Fred raised the certificate for us all to see, many of us saw for the first time a picture of the one who has helped so many of us.



Prof. Benton demonstrates the Heliodon

Fer could not attend, so he had sent a letter that was read by Mac Oglesby. He asked that the money that accompanied the prize be donated in his name to the University of California Regents for use as a one-time prize fund for U.C. Berkeley's Architecture 140 course in which students are required to make a sundial.

Before we left for the evening, another door prize was drawn. Susan Schilke's name was drawn for another Pichler pocket sundial. Then there was still time to enjoy an evening in the "city by the bay".

After two sunny days, we were greeted with the famous morning fog of San Francisco for our Saturday sundial tour! We then knew what Carl meant about wearing layers of clothing for the unexpected. We boarded the bus at 9 am and had a brief tour of the downtown area on our way to the first stop. Carl Trost treated us to local stories on the way.

Our first stop was the Energy Center of the Pacific Gas & Electric Company. Charles Benton and Ryan Straupe guided us through this center featuring ways to conserve energy including

architectural uses of the sun. This is aided by the use of the "Heliodon" which holds models in the light of a fixed light to simulate the sun at different times and seasons. Charles Benton, who designed the device, demonstrated its use and also mounted some sundials that had been brought along. We found that his Heliodon tested fairly well with our sundials. Charles described the work of his class in which students are asked to make sundials. Fred told him about Fer deVries' donation and asked how it could be used. Prof. Benton was overjoyed and said that it would enable the school to keep some of the better projects by offering a purchase prize.



Vertical dial at a photographer's studio

Back on the bus, we traveled to a photographer's studio that featured a stylish vertical dial at the entrance.

Then, still waiting for the sun to break through, the bus wound its way up one of the many hills to a park on "Hunter's Ridge". Here a 70-foot diameter horizontal sundial is dominated by a 78-foot yellow steel gnomon. An amphitheater of dark brick stands within the Southeast side of the time ring! We had a picture of the group standing under the gnomon - making toves of us all!



A Family of Toves at Hunter's Ridge

Our next stop was the Ingleside Terraces Carl had shown us in pictures the day before. It is the site of a turn of the century racetrack now filled with homes. The fountain around the large gnomon is now filled in but we could still imagine where the maidens had danced.



Entrada Court in Ingleside Terraces

We traveled on toward Golden Gate Park warmed by more stories from Carl as the fog continued to scurry overhead. We went first to the Navigators' Dial by E. Earl Cummings. A half globe of the Western Hemisphere with a vertical dial on the other side commemorating the first three old world explorers of the Pacific coast of North America.

Then we went to a small, "Shakespeare Garden" which had an English garden dial with a gnomon that had been cut down for 38 degrees, the latitude of San Francisco.



The Navigators' Sundial on the back of a tortoise



Shakespeare Garden in Golden Gate Park

The highlight of our Golden Gate Park visit was to have been "Sunstones I". Carl and Mark had carefully planned our tour so that we could be at this sculpture at noon in order to observe how the 16 tons of granite marks its passage. Indeed, the fog overhead cleared briefly for a glimpse of the shadow line on the rear stones.



Carl Trost explaining the complexities of Sunstones I

The fog overhead cleared when we arrived in the park's "Fuchsia Dell". This allowed us to check the misalignment of the unexpected horizontal dial there. In frustration and jest, a vain attempt was mounted to realign the massive pedestal and dial - all to no avail. Thanks to Ron Anthony's crew, Irene Webster and his daughter, Reenah Anthony, tasty box lunches and table and chairs were waiting.



A private catered luncheon in Fuchsia Dell



A "vain attempt" to correct the 50° misalignment

We crossed to Oakland getting a great view of the city and the bay. The sun shone brightly when we arrived at the courtyard at CHORI (Children's Hospital Oakland Research Institute) where Carl had aligned the statue, and we all witnessed that it did read quite accurately.



Woody Sullivan testing the CHORI dial



Sunstones II at the Lawrence Hall of Science

Traveling through Berkeley, the bus climbed above the university campus to the Lawrence Hall of Science. To our surprise, as we walked out on the plaza in front of the museum Charles Benton was there pursuing his hobby of flying a camera overhead by use of a kite! We gathered around for what we hope is another group photo. If it worked, we might be shown on his web site: [www.arch.ced.berkeley.edu/kap](http://www.arch.ced.berkeley.edu/kap).

Behind the museum, on a bluff overlooking the bay, was another sculpture by Richard O'Hanlon aided by astronomer David Cudaback. "Sunstones II" had many alignments besides noon including planets. Even without the moon, planets or setting sun, the view of the Golden Gate Bridge was spectacular.

Our last stop was on our way back to the Oakland Bay Bridge. Berkeley Pier used to be used for ferryboats before the bridge was built and extends for what seems to be a half-mile out over the shallows. At the shore there is now a marina where a large horizontal dial of poured concrete acts as a bench for visitors.



Relaxing at the Berkeley Marina

Even for a Saturday the traffic going into San Francisco was just inching its way over the bay bridge. We had plenty of time to plan another evening in the city.

Sunday morning started with another breakfast of assorted fruits and muffins in the meeting room. Claude Hartman opened the formal sessions by describing how he used a computer assisted drawing (CAD) program in order to design an azimuth sundial. The distributors of the Mexican

beer, Sol, wanted a sundial placemat for the summer solstice. Claude used the side of the beer bottle as the vertical gnomon. However, this made design difficult by shifting the center around the edge of the bottle. CAD made plotting computed azimuths easy. Then by taking the average of positions for different seasons, hourlines over several latitudes were drawn.

Mac Oglesby shared with us photographs of his summer trip to Britain that included a visit to Tony Moss. At his shop he etched the dial plates for the unique polar dial he had been displaying. East and West plates are rotated 45 degrees from facing noon thereby catching more of the sun close to the horizon.



Mac shows his polar dial to Warren Thom and Jim Holland

Fred Sawyer showed how to place the hour numerals around a sundial so that simple interpolation between them gives precise time, using what he refers to as Oudemans' Curve. He discussed a paper by Holliday in a recent BSS Bulletin and compared it to a paper done a century ago by J.A.C. Oudemans.

How do you make a sculpture with a hole for the beam of sunlight on the date of a special occasion? Warren Thom showed his experimentation with Styrofoam blocks holding bamboo skewers at the computed angles. An

impressive array resulted when many such "rays" were added.

Using the computer to assist sundial design continued to be a common theme as Bob Kellogg compared the use of Matlab, Scilab and Excel 97. Both the expensive Matlab and the free Scilab showed a ragged screen output. Excel has the sometimes-clumsy references to cells and columns rather than a familiar mathematical form. However, its graphing function printed quite smooth. He said that both Matlab and Scilab could use arrays and show complicated plots whereas Excel is perhaps simple and quick.

Ron Anthony followed the discussion of CAD use by showing his use of programming inside the DeltaCAD program. Many of these macros have now been posted on the NASS web site.

Carl Trost drew our gathering to an end with a few more San Francisco tales.

**André Bouchard has invited NASS to Montreal, Canada for our 2001 Conference. We hope you can join us.**

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The 7th annual conference of The North American Sundial Society will be held September 14-16 (with registration taking place on the evening of the 13th) at the Hotel Lord Berri in Montreal, Quebec.

A number of rooms have been set aside for attendees at a very good conference rate. The hotel's website is [www.lordberri.com](http://www.lordberri.com). Reservations can be made by calling 1-888-363-0363. Our guide in Montreal will be the very knowledgeable Andre Bouchard.