

BPAA Newsletter

Battle Point Astronomical Association, Bainbridge Island, WA

ISSUE 63

MAY-JUNE 2004

MAY-JUNE-JULY CALENDAR

(Unless otherwise noted, all events are at the Edwin Ritchie Observatory, Battle Point Park)

May

May 4: Full Moon

May 8: Star Party Battle Point Park. Beginner session 7 p.m.

May 11: Last-quarter Moon

May 12: Board Meeting 5:30 p.m., Member Meeting 7 p.m.

May 16-23: Texas Star Party, Prude Ranch, Texas

May 19: New Moon

May 27: First-quarter Moon

May 28-30: 36th Annual Riverside Telescope Makers Conference, Camp Oaks, California

June

June 2: BPAA Board Meeting 7 p.m.

June 3: Full Moon

June 8: Venus Transits the Sun

June 9: Member Meeting 7 p.m.; Last-quarter Moon

June 12: Star Party Battle Point Park. Beginner session 8 p.m.

June 13: Jet Propulsion Lab's 60th Birthday (1944)

June 17: New Moon

June 20: Summer Solstice

June 25: First-quarter Moon

June 26: Imaging the Sky Conference, Gresham, Oregon

July

July 2: Full Moon

July 4: Grand Old Fourth in Winslow

July 7: BPAA Board Meeting 7 p.m.

July 9: Last-quarter Moon

July 10: Star Party Battle Point Park. Beginner session 8 p.m.

July 14: Member Meeting 7 p.m.

July 14 – 17: Mt. Bachelor Star Party www.mbsp.org

July 15 – 17: Table Mountain Star Party www.tmspa.com

July 17: New Moon

July 20: 35th Anniversary, First Man on the Moon (Apollo 11)

July 24: First-quarter Moon

July 31: Full Moon



*Hubble Space Telescope 14th Anniversary Image
Ring Galaxy AM 0644-741
(Courtesy NASA, ESA, and AURA/STScI)*

CALENDAR NOTES

The summer constellations Lyra, Aquila and Cygnus will soon be taking center stage. To take advantage of the longer summer nights, BPAA's star parties in June and July will begin at 8:00 p.m. rather than at 7:00 p.m. As for other star parties in the region, it's time to start planning. The Table Mountain Star Party and the Mt. Bachelor Star Party coincide this year. We attended both last year, and will be choosing Mt. Bachelor over Table Mountain this year. The Mt. Bachelor Star Party is unique in offering dark skies along with many conveniences not found at other star parties in more remote areas. Links to both parties are listed above. The dates for the Oregon Star Party, one of the best in the region, are August 12 – 15. The Web site is www.oregonstarparty.org.

Unfortunately, we in the western U.S. won't get to see the most hyped astronomical event of the summer, the transit of Venus. Apparently we will have another opportunity in 2012.

If you're interested in imaging, check out www.its-ccd.org for information on the "Imaging the Sky with Digital, Web & Video Cameras" Conference scheduled for Saturday, June 26 at Mt. Hood Community College Planetarium Sky Theater in Gresham, Oregon. The conference will cover the use of digital, web and video cameras to image the moon, sun and planets. This will be a great conference for beginners as well as more experienced astrophotographers.

Finally, a reminder that any member at any time who is planning to observe can invite others to join in by sending an email to bpaa@yahogroups.com. To join our email group, send an email with your name to bpaa-owner@yahogroups.com and we can enroll you. If you want to also have web access to the messages and files, you can join the Yahoogroups by clicking the register link for new users on <http://groups.yahoo.com/>, and then you can request to join our group on this page: <http://groups.yahoo.com/group/bpaa/>. The system will send us a message, and we'll approve your request after we verify your membership.

Diane Colvin
BPAA Events Director
dicolvin@comcast.net



IN BRIEF

President's Message

Paul Below

The April 10 Star Party was lively—Cathy and I had about six attendees at our beginner session. Malcolm provided dome tours, and Nels and I had "dueling Dobs" (you had to be there) out in front. The partly cloudy skies allowed us to view the planets and open clusters, with a few galaxies also visible through the fuzz.

The current issue (#42) of *Amateur Astronomy* magazine contains a reprint of an article by Cathy Koehler that originally appeared in the *BPAA Newsletter*. The article was called "Higher than Everest," and was on the talk given by Paul Hodge at our observatory last year. This is the second time that *Amateur Astronomy* has printed one of our articles (the previous one was by Anna Edmonds on the Herschels).

Harry Colvin has completed the Herschel 400! I have contacted the Astronomical League and they will be sending the club materials to us so that we can embar-

ass Harry by making a fuss. The 400 is an advanced observing program, something to do after the Messiers are too easy. Completing it is quite a feat, especially as Harry did it by starhopping to all of the objects. For more information go to <http://www.astroleague.org/al/obsclubs/herschel/hers400.html>.

For those that are interested in starting with something a little more introductory than the 400, check out the Astronomical League's web site, or look in the *Reflector*. In addition to the ever-popular Messier list, they have a lunar club, a double star club, a binocular club, and more. Let's get more BPAA'ers on the list!

Thanks to all those who helped out—Malcolm, Russ, Bill, Anna, Diane, and anyone I've forgotten—in two recent educational events: a night for a school group from Suquamish, and an event for Bainbridge home schoolers. The Association received many thank yous (and picked up a few new members).

I am hugely impressed with the progress that Malcolm is making on the Big Scope, with help from Harry, Russ, Dan, and others. It looks like we may be ready to start imaging this summer. Want to get involved? Let us know!

Speaking of getting involved, we are still looking for help. Facilities, Archives, and Publicity especially. Know someone who might be coaxed into helping? Want your own observatory key?

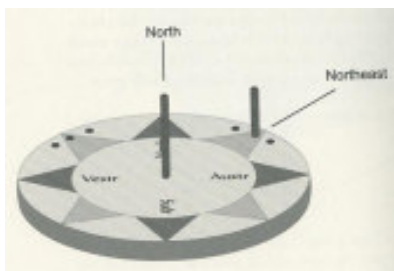
Viking Astronomy

Russell M. Heglund

Leif Karlsen, author of *Secrets of the Viking Navigators*, was the guest speaker at the March 10 member meeting. Vikings regularly crossed to Iceland, Greenland and North America in the 10th and 11th centuries, out of sight of land without magnetic compass. Leif discussed the navigation methods that Vikings may have used to cross the open sea. Most crossings were made in summer, when the rising and setting of the sun could be used to determine the ship's course. At night, stars gave direction--Polaris was well known, and north could be determined on clear nights.

The Vikings were latitude sailors. Since Iceland and Greenland were straight west of Norway, by keeping on the same latitude throughout the voyage, they could reach their destination. They would go to a particular port in Norway known to be the same latitude as their destination. Before departing, they would note which stars crossed the zenith each night and which stars passed close to the horizon. These stars would be the reference stars for latitude during the voyage. They would also note the rise and set locations of the sun, relative to their planned course, for daytime navigation. If the sun were obscured by sea mist, they may have used a device called a "sunstone" to find it.

Leif brought some devices he constructed and demonstrated how the Vikings may have used the sun to navigate: a horizon board (to locate points of the compass), shadow pins (to get direction), and a sunstone (to locate the sun in a mist).

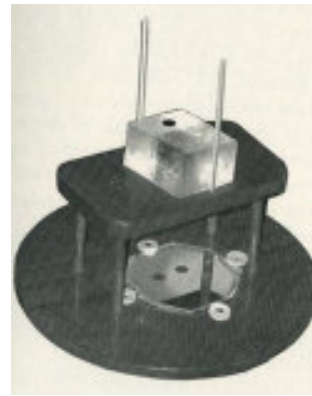


Horizon Board (Courtesy Leif Karlsen)

The horizon board was a board divided into eight sections (directions) and then oriented towards the rising and setting locations of the sun.

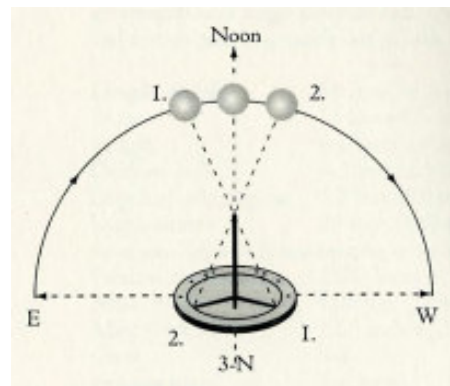
If the sun was obscured by mist (often a sea mist hung over the horizon), a sunstone could be used to locate it. The sunstone was a piece of calcite crystal (Icelandic spar), which Leif had mounted to a board. He had

placed a black dot on the top of the crystal. When you look from the bottom, it appears there are two dots.



Sunstone (Courtesy Leif Karlsen)

When the sun was obscured, you rotate the crystal until the "two" dots appear to have equal density. At that point the crystal will be pointing to the sun. (Calcite is a birefringent material, which will split incident rays into two beams—thereby we see two images.)



Shadow Pins (Courtesy Lief Karlsen)

direction. Bisecting the line gave north direction.

Members were able to examine the navigation devices and beautiful sunstones Leif had brought. The talk reminded us that much of our knowledge of astronomy grew out of a desire to locate ourselves in the trackless sea, as well as to locate our place in the universe (still on-going).

Note: All diagrams are from Secrets of the Viking Navigators by Leif K. Karlsen, One Earth Press 2003, used by permission.

To-Do Lists

Malcolm Saunders

Jobs to fit all skills and schedules. If any of the following tasks interest you, contact Malcolm at saunders@drizzle.com for details.

- The window on the second floor, north side is broken. It should be replaced, if possible some material, such as polycarbonate, that resists thrown rocks.
- One of the two deadbolt locks on the front door of the observatory must be replaced or repaired. The knob

on the inside does not reliably turn the deadbolt making it possible to lock yourself inside the observatory.

- There is a large amount of old equipment, much of it obsolete computer gear, around the observatory. Organize a work party to clear out the debris.

How's the Big Telescope?

Tracking is much improved: the telescope is fine for visual use and probably good for CCD camera work using short exposures. Club members wishing to learn how to use the telescope should contact Malcolm Saunders. If you like hands-on learning, consider the following :

- Re-collimating
- There are numerous wires associated with the telescope controls. Some wires dangle and should be secured with cable ties and anchors to prevent entanglement with moving parts. Other wires need their connectors replaced or better secured.
- Run a 115volt circuit up the side of the ladder in the dome so that we can connect instruments at the top

without using extension cords--a hazard.

- Build a hand control bypass circuit. This is fairly simple: a few relays and RJ45 connectors should do it. There is a design available. This would allow us to improve telescope tracking by feedback from a CCD camera on the eyepiece.

- We have an optical encoder on the DEC drive. We would like to (re-)install one on the RA drive. Neither encoder is connected to any electronics. We need a circuit prepared to give readout of telescope RA and DEC coordinates from these encoders. Suitable circuit designs should be easy to find.

- Look into a transition from our current telescope control software to the program called "Scope." This project calls for knowledge of software, the C programming language, stepper motors and their control electronics. Contact Malcolm or Jim Vaughan.

- We are considering changing from hard wired controls to *Bluetooth* or some other wireless system in the dome. The first step would be to determine feasibility and cost.

ARTICLES

Seeing Stars: Astronomy 0.001

Anna Edmonds

It's coming. This June, in Africa, and the Middle East, among other places. Unluckily for us, on Bainbridge it will be over before we can see it, but probably it will be tracked on a number of internet sites. Undoubtedly there will be lots of photos. It is rare: In the six thousand years between 2000 BC and 4000 AD it will happen only 81 times. It is the "Transit of Venus."

What this means is that Venus will cross in front of the Sun on June 8th. It's a miniature eclipse of the Sun, but an eclipse is usually when the Moon gets between us and the Sun. An eclipse by the Moon takes only a few minutes; the transit by Venus will last six hours (from about 5:15 UT to 11:30 UT). Venus will block only 0.1% of the light because it's a lot farther away than the Moon, so most people won't know it's happening. Even so, this is a big event.

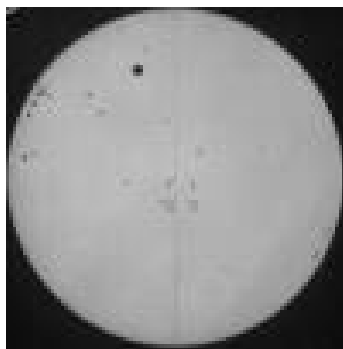
Back in the 17th century when telescopes were invented, astronomers realized that, with a transit, they had a powerful new measuring tool to learn about the Solar

System. To use it, observers placed themselves at widely separate places. There they each tried to measure exactly where they saw the planet against the Sun's disk at precisely the same time, and then they compared their results. They also added to their calculations Kepler's laws of planetary orbits, their relative motions, and their relative distances to the Sun. With the differences between their results, they learned how much farther the Sun is from the Earth than they'd thought before.

Doesn't it sound easy?

They had a lot of problems. For one thing, they didn't have clocks that kept precise time, so their comparisons were only approximate. Besides that, they had great trouble pinpointing an exact time when they should all make their measurements. After astronomers figured out what time the next transit would occur, where in the world they could see it, and how to get there, weather and political conditions complicated their work: In the 18th century the French astronomer Guillaume le Gentil had to make his measurements from the deck of a rocking ship because of a war where he'd hoped to land.

But astronomers are persistent. With several more transits and with some additional help from radar in the



The Transit of Venus, 1882. (Courtesy U.S. Naval Observatory Library)

20th century, scientists now calculate that the mean distance to the Sun (the Astronomical Unit) is 149,597,870.691 km, or more or less 93 million miles.

Since we know how far it is to a place most of us have no desire to visit, why should we still be interested in this June's transit?

One reason is that no one alive today observed the last one in 1882, and although the next time will be in 2012, the one after that won't come until 2117.

Then, it's an educational opportunity on many levels: It's an event that's helped us learn how big our Solar System is, how the planets move, and what is in our Solar System besides what we can see with our naked eyes. It's a chance to share in a scientific project with astronomers around

the world. It's an opportunity to test our own ability to calculate the distance to the Sun. It's a time to study the history of astronomy.

And then, there are always chances of unexpected or incidental discoveries. Captain Cook made one such discovery when he sailed to Tahiti in 1769 to observe the transit and bumped into a string of islands previously unknown to the western world—Hawaii.

But this measuring tool of the distance to the Sun has an even bigger value: It's part of why Earth-bound people can calculate with such fine accuracy how to throw a bit of machinery into the sky, then guide it, and know that at a certain time it will land on Mars, or take their friends to the Moon—and bring them safely back!

Herschel Hunting

A Sprint to the Finish at Three Eastern Oregon Observing Sites: Klondike, Camp Hancock, & the Sunriver Nature Center Observatory

Harry Colvin

The March wind howled at 40 mph. Driving south towards the Tacoma Narrows Bridge, visions of Galloping Gertie, the bridge's ill-fated predecessor, danced in my head. We rounded a curve and came upon a large Douglas fir, sprawling across the road, bringing traffic to a crawl. As they say, timing is everything. We got round the tree to be greeted by a "high cross winds on bridge" warning. Diane informed me that the water below the bridge looked like the North Atlantic. I was relieved to get across with the trailer still attached.

Klondike

Three hours later we were on I-84 going east through the Columbia Gorge. While driving the Gorge, I thought about the catastrophic floods that formed this canyon some 10,000 years ago. Our destination was a place called Klondike, an unofficial observing site often used by Portland astronomers. It is located south of Biggs, just east of the Wasco airport, about five miles out of town. The observing site itself is in the middle of a wheat field, and in the distance one can see a wind farm. The large, perpetually moving wind machines are a good clue to the major problem with this site: WIND! Upon arrival, we could barely open the car doors, let alone set up the Dob.

This was our fourth time at this site and we have always had wind or both wind and rain. One wonders

why it is identified as an observing site, although it does feature dark skies and good horizon lines. We backtracked to a state park and campground across the Columbia River. The trailer shook, it rained, it cleared up, and the wind blew on and on. The campground is a great place to park a trailer, but there is no viewing, due to the bright lights of a truck stop in Biggs.

Camp Hancock

The next morning traffic was snarled by two trailer trucks and a diesel pusher overturned by the previous night's winds. We drove on to Antelope, once home to the Rajneeshee cult, now famous for the best marionberry cobbler in eastern Oregon.

Camp Hancock is located about 16 miles east of Antelope and was the site of the Rose City Astronomers 2004 Messier Marathon. The Oregon Museum of Science and Industry runs camps there for kids, and a visit is just like going to summer camp. Meals are provided in a dining hall and those attending, about 85 this year, are recruited to help out by setting tables and cleaning up.

Camp Hancock also features great hiking trails and fossil hunting areas; the site is located in the John Day Fossil Beds National Monument. But our mission was all-Herschel. I was there to bag the remaining 31 of the 400 Herschels on my list. All were mag. 10.5 and dimmer galaxies in Virgo and in the dreaded Hydra constellation. The list included one faint small globular, NGC 5694. As it turned out, it was a very difficult object to locate and observe.

We set up on what is called Dob Hill, with a good view to the south. Diane held the Dob in place to keep it from shifting in the wind as I began to star-hop, using *Starry*

Night Pro computer charts to identify star patterns. Most of the objects were very closely packed in Virgo. By 11 p.m. I had located almost 20 galaxies.

The wind had died down as I dropped down into the muck to locate the two remaining Hydra objects. NGC 5694 is located about 10 degrees off the horizon with very few guide stars for hopping. It took me almost 30 minutes to find its location, but I could not really see much.

By 1 a.m. transparency had decreased, forcing me to give up on Hydra and return to Virgo. There I logged six more galaxies. By 2 a.m. conditions had deteriorated and I retired, having located 26 objects, a personal best, but five short of goal.

The weather turned cloudy and the following night was a total washout unless one enjoys looking at Jupiter through haze.

Sunriver Nature Center Observatory

The Sunriver Nature Center Observatory, located in Sunriver, Oregon, is run by the same organization that sponsors the Mt. Bachelor Star Party. The observatory grounds and patio area have excellent views to the

The following article about long-time BPAA member Don Trantow appeared in The Lowell Observer, Fall 2003, Issue 60.

Donor Profile: Don Trantow

Kristi Phillips

After retiring in 1997 from a long career as a bookkeeper, Washington native Don Trantow celebrated his freedom by going on a train trip: he attended an Astronomical Society of the Pacific conference in Chicago, and then visited his brother in Cincinnati. On his train ride home, he pondered what he wanted to do with the rest of his life.

“That’s when the real fun began,” Trantow says. Honoring his lifelong interest in astronomy—a passion first sparked by reading *Pictorial Astronomy* in his youth—

south, the only problem being an airport strobe light about one mile to the southwest. I set up the Dob around 10 p.m., determined to bag the remaining five objects. It was a great night, skies black with excellent southern horizon views. The sounds of wildlife seemed to come from all directions, including the howling of coyotes.

This was it: the sprint to the finish. I first went after the three remaining objects in Virgo, NGC 4699, 4546 and 4030, all mag. 11 galaxies. No problem in these skies and within an hour I was down low in Hydra looking for NGC 3621. I found it and now I had only one to go. Would the globular NGC 5694 that had been so difficult two nights before spoil my evening and keep me from finishing the Herschel 400? Not tonight! There it was! Even without averted vision I could make out the small, faint, round disk that looked almost like a planetary nebula or an out-of-focus star. It was after 1 a.m., but my two-year quest was over. I reflected on all the nights I had spent star-hopping. Now it was time to celebrate.



Trantow decided he wanted to replace the aging roll-off roof observatory that he had built in 1976 in the backyard of his home on Bainbridge Island with a new and improved facility. Shortly after drafting his plan, he hired an architect to design the structure and then retained a contractor to build it. Construction began in April 1998 and took several months to complete. The finished product was a 12-foot by 22-foot, 2-story structure with an Ash Manufacturing Company dome, which houses a 12-inch Meade LX200 telescope.

“I’m out there observing every night the weather permits,” Trantow says. His favorite objects to view are double stars and planets Mars, Jupiter and Saturn. “Astronomy for me is a hobby, it’s fun.” At about the same time he was building his improved observatory, Trantow began thinking about the need to put his affairs in order.

With no spouse or heirs to provide for, Trantow decided he wanted to leave his estate to a respected re-



search observatory. With fondness, he recalled his very first visit to Lowell Observatory in the early 70s. “It was a chance to visit the place where Percival Lowell had done his life’s work, including his passionate study of planet Mars,” Trantow says. “I also have a great interest in Mars, and I was inspired to build my observatory in 1976 to pursue my interest in observing the Red Planet.”

So in the late 90s, Trantow made another pilgrimage to Lowell. Much had changed in the 25 years since his first visit. The Steele Visitor Center had been built and the Observatory’s public programs were thriving. But one thing had stayed the same: the Observatory and its people had retained the warmth and accessibility he had experienced on his initial visit. “That visit confirmed that Lowell was the place where I wanted to leave my legacy,” says Trantow.

Working with the Observatory and an estate lawyer, Trantow made arrangements to include Lowell Observatory in his will; in doing so, he became a charter member of the Percival Lowell Society, a recognition program for those who make planned gifts to the Observatory.

“Lowell Observatory is a very viable institution that needs to be supported,” Trantow says. “I wanted to play a small role in helping secure its future.” Trantow continues to play a meaningful role in the life of the Observatory. In 2001, Trustee William Putnam invited Trantow to serve on Lowell’s Advisory Board—a position Trantow has eagerly assumed for two years

now. “The greatest advantage to serving on the board is being able to form a close relationship with the Observatory and the people here,” Trantow says.

Trantow says he finds immense value in his association with Lowell Observatory. Since his retirement, he also has time to cultivate his other passions. Not only is Trantow a dedicated amateur astronomer—or, in his words, a “cosmic sight-seer”—he also finds joy in collecting rocks and exploring old mining camps in Nevada, remodeling his home in Washington, playing golf, and attending astronomy conferences. And if his myriad adventures also involve a train ride, Trantow says he considers that an added bonus.

Trantow says his legacy gift to Lowell Observatory fills him with a sense of accomplishment. “My legacy will live on through Lowell,” he says. “That makes me feel good.”

Don Trantow’s Observatory



The Meteor—Part 1 Special to the Battle Point Astronomical Association

Gerald Elfendahl

As a “local” historian, I once engaged John Rudolph, BPAA cofounder, in a fun idea—let’s combine the Island’s historical society and BPAA to create “Our Neighborhood Museum” featuring both the Island and the Solar System—our bigger neighborhood. I dedicate this story to John and Ed Ritchie, too. What a blessing to have known them, spirits bright as a falling star.

When “Meteor Falls Into Sound” appeared before my tired eyes as I was researching another story in an old Kitsap County Herald, I woke up. Whoa! Unbelievable. How could this be forgotten? When a following week’s

headline reported a forest fire raging on south Bainbridge, I wondered. Wham! Hot meteorites landed here? Gravity anomalies in Rich Passage? A meteor impact? And...and...and...

Though I put reins on my imagination, the story grew as I researched further. We’ll share it in installments. Part 1—overview and the first news reports. Part 2—other observations. Part 3, perhaps a fourth—have you renewed your membership?—a synopsis and any new findings. I am learning much about meteors and hope you’ll contribute discoveries to this story about...The Meteor.



Sunday evening, July 15, 1928, was warm, still and moonless around Puget Sound. Radio programing ended at 11 PM. Most had gone to bed—a weekend behind

them, a new week ahead. For a few, the week began at midnight—July 16.

Telephone operators sat before quiet manual switchboards on graveyard shift. A sailor in the Bremerton Navy Yard stood midnight to 4 a.m. watch aboard his battleship. A tugboat skipper used a flood tidal current to help carry him south around Point No Point with a barge in tow. Bottles rattled in the bilges of a purring Prohibition rumrunner sneaking its way up Sound in the darkness. The crew of the ferry *Kitsap* docked at Vashon. A sheriff made the rounds near Port Angeles. A security guard fought sleep at Dupont's dynamite storage facilities. A young couple shared a late night drive in Manette. A beach cottage owner enjoyed the gentle sound of waves and distant city lights. Some still walked city streets.

None would claim to see it first. It all happened so fast. At 12:18 a.m., many saw it. If they were outside, they darn well couldn't miss it!

This was the first generation of earthlings to experience flight. A few dreamed of spaceman Buck Rogers, the attempt to break the high-altitude balloon record, transcontinental dirigible travel or the upcoming visit of The National Air Tour. Lofty dreams were interrupted as the Earth, speeding around the Sun, had a head-on collision! Nobody fell out of bed—at first. Most awoke a few seconds later.

At least one meteoroid journeying through space's vacuum was diverted by gravity and plunged into Earth's atmosphere. The space debris began to burn up from the high-speed friction. It left the endless day of space and headed into the planet's shadow.

It was first seen in the upper atmosphere traveling faster than most could conceive—thousands of miles an hour—up to 89,000 mph (40 km/sec). Estimates would vary. It began to glow bluish white, so bright that it could be seen hundreds of miles away. For five to seven seconds, people froze in their tracks. Seattleites said it was bright as day. Even in its bright light, folks observed a comet-like tail. Something was racing across the sky. Some could not trust their eyes. Were they hallucinating? Was it near? Was it far away? Should they duck? ...“METEOR!”

Some heard it roar, hiss and scream overhead! Many heard thunderous explosions. A few saw it crash on land while others said it splashed into water—a lake, rivers and Puget Sound. A few saw it break apart in the sky into fragments. Was “it” more than one?

Seattle area front page news stories immediately de-

scribed the encounter. Early reports came mostly from the city and points south. In days, sightings were reported from outlying areas and to the north.

UW scientists checked their seismic activity monitor and found no abnormal disturbances at the time of the alleged meteor impact. Was it plugged in? College deans, librarians and scientists were quoted in calming articles and editorials, providing general education about meteors. The world was not ending. The following Sunday, one religious leader worked the meteor into his sermon. The old world may be ending.

UW and US government scientists eagerly organized to find evidence. Did it impact the earth? Treasure hunting amateurs scoured the landscape, too, with visions of metallic meteorites studded with diamonds or laced with platinum. The most astronomical gift may have been meteoric public lessons in the art of observation.

The *Seattle Times* was one of the first to tell the story: “Meteorite Blazes Path Of Fire Over Northwest—Seattleites See Heavenly Visitor ‘Half as Big as the Moon’ in Flaming and Noisy Descent.” They reported “an intense blue light as bright as day...

“The *Times* and police headquarters were deluged with calls. The time of appearance over Seattle was generally fixed at 12:18 a.m. The course was slightly west of north, and the duration of (its) presence was five to seven seconds. From that premise, reports of observation of the phenomenon began to vary widely...Seattle's experience was repeated up and down western Washington and Oregon. Late motorists on the Columbia River Highway near The Dalles, OR, were certain that the meteor fell to earth just across the river in Skamania County, WA. At Portland, many were certain it landed within or near the metropolis.

“An Associated Press dispatch from Tacoma said ‘a meteorite so large that its light filled the sky for miles and the roar of it hitting the earth or the water rattled windows of houses in many parts of the city and woke many from their sleep, buried itself somewhere in this community...

“An official record of the meteorite was made in the log of the battleship *Idaho* at Puget Sound Navy Yard (Bremerton). Ensign R. L. Adams, officer of the deck from midnight to 4 AM made the notation. Adams saw a shooting star about 12:20 a.m. that appeared half as large as the moon, about 20 miles in the air. It traveled in a south to north direction and had a tail like a comet. It was brilliant and lighted the whole sky with a pale blue glow for about seven seconds, then faded out. He

heard three blasts like distant gunfire as the meteorite disappeared.”

Monday's *Bremerton Daily News Searchlight* added to Adam's account: "...A shower of sparks accompanied the explosion.”

The *Times* also noted "Observers at Kent were sure ... (it) landed between Kent and Seattle. Seattle observers put its landing a few miles northward.

"The seismograph at the UW showed no record of any disturbance of any kind that would indicate a collision of the flying body with the earth. Some observers were positive that the meteorite disintegrated in the sky over Seattle.

"Reports from many points...indicated the meteor had a tail, that following the flight there were one or more explosions, and a prolonged ghostly phosphorescence lighting the sky. UP, AP and special correspondents of the *Times* had reports pouring in from up and down the coast.

"Some in downtown Seattle were sure the meteorite passed within 200 feet of the L. C. Smith Building (Smith Tower) and sank in Puget Sound to the northward. Some put the diameter at 30 inches. An observer on 12th Ave. thought it was 500 feet above him and had a diameter of five or six inches. A motorist at White Center put the height at ten miles and the diameter at 'twice that of a Roman candle ball.' The US Weather Bureau had no official record..." Weren't they "meteorologists"?

"Some Tacomans at first thought the DuPont powder works had exploded! Some Tacomans were positive it fell into Lake Steilacoom, four miles south from there.

"William Holmes told Tacoma police that he had attended a campfire picnic at Lake Steilacoom and that at 12:30 a.m. he had suddenly noticed an unearthly light in the sky. A few seconds later, he said he heard 'crackling' noises on the lake and then a sizzling sound as if the waters were being burned. Then heavy waves washed ashore. He concluded the meteor had plunged into the cold waters of the lake and exploded."

The *Times*' Monday story was followed by an editorial. Seattle was abuzz, "Meteor. Meteor. Where the heck is the meteor?"

Fred Niendorff at the morning *Seattle Post-Intelligencer* had a day to collect stories. His article was accompanied by two illustrations. The larger showed the meteor crashing into Puget Sound as witnessed by a family; the other showed the path of the meteor into Puget Sound. Niendorff reported: "It was

observed as far away as The Dalles, OR...and believed to have ended its awe-inspiring flight in Puget Sound off the NE shore of Vashon Is.

"It fell with a boom that was heard miles away, awakening Vashon residents and sending huge waves thundering against the western shores of the peninsula at Manchester and Harper.

"Small boys playing on the beaches (on Monday) reported seeing numbers of dead fish washed ashore on the incoming tide. Mrs. Jessie Carter, living in a nine-room house on Maury Island (at the south end of Vashon Is.) reported that after the meteor crashed, sending out a peal like thunder, her home trembled on its foundations fully two minutes.

"The crew of the ferry *Kitsap*, just completing its run between Fauntleroy and Vashon Heights, say they watched the flight...and saw it come closer and closer to earth with a sickening swish, then with a roar, plunge into Puget Sound in the shallow waters near Blake Island.

"At his Manchester summer home, Carlton Fitchett, a *P-I* columnist, reported that at about 12:20 a.m., the time he later learned the meteor had crashed, tremendous breakers pounded the beach far beyond the high water mark, despite the lowering tide, and threatened to drive residents from their beach cottages.

"...Romantic residents were organizing search parties...spurred by memories of the famous prehistoric meteor found in Canon Diablo, AZ,...found to be mixed with diamonds and precious metals of great value...platinum at \$115 per ounce per ton of meteorite.

"How large the local meteor may be is problematic. Estimates of eyewitnesses ... varied all the way from six inches to sixty feet in diameter...

"While observers differed as to size and color, all agreed it came out of the Southern skies. Many who didn't see it were awakened from sleep when it crashed nearby....

"From Tacoma, Olympia, Chehalis and Vancouver, WA, came reports. There were no (initial) reports from the north tending to confirm the belief that the meteor ended its flight here (near Blake Is.)"

And Bainbridge?...to be continued

Gerald Elfendahl is a lifetime resident of Puget Sound, a local historian and author of an environmental history and geomorphology of Bainbridge Is. He was a longtime curator/director of the B.Is. Historical Society and once studied astronomy with George Z. Dimitroff. He can be reached at gelfenda@earthlink.net.

IN THIS ISSUE

CALENDAR: May, June, July	1
CALENDAR NOTES	2
IN BRIEF:	
President's Message	2
Viking Astronomy	3
To-Do List	3
ARTICLES :	
Seeing Stars	4
Herschel Hunting	5
Don Trantow	6
The Meteor, Part 1	7

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 Attach graphics as separate files.
 Hard copy will not be returned without SASE.

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