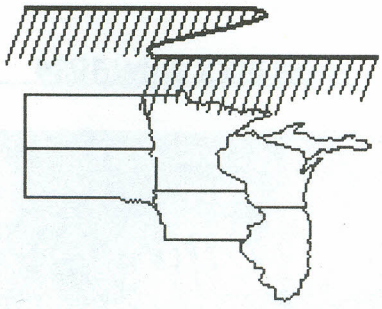


NORTHERN LIGHTS

VOLUME XXIII NUMBER 3 July, 1994

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Roaming the Region

by Janet Stevens

My sources for writing this column are the newsletters that we receive from the societies in our region. This quarter's newsletter were full of plans for, or results from observing the annular solar eclipse of May 10, 1994. We are glad that, for once, the weather cooperated to give all of us a spectacular view.

Robert Custer of the Popular Astronomy Club provided us the following summary and comments regarding their trip to see the annular eclipse.

The Popular Astronomy Club and the Quad Cities Astronomical Society held a joint field trip to the Steve Kuntz farm in Bellflower, Illinois, to observe the Annular Solar Eclipse on May 10, 1994. The records may not be complete, but there were at least 53 persons from four states. Almost half of this number were from Illinois, including 16 from the Quad Cities area. Thirteen Iowans were at this site, as were eleven from Madison, WI. Five people also showed up from as far away as Longmont, Colorado! A great time was had by all, as exemplified by the exclamations, in unison, as second contact occurred" "Look at that!" "There's Bailey's beads!" "Wow!"

The temperature at the Kuntz farm was around 72° F. at first contact. At mid-eclipse, the temperature plunged to 60° F., rebounding back to 72° F. by 1:10 p.m.

Racine Astronomical Society member Rebecca Marie Finch, who is in the sixth grade, recently won a scholarship essay contest sponsored by Great America in Gurnee, Illinois. She won an all-expenses paid trip to U.S. Space Camp in Titusville, Florida, where she spent the week of June 12-17. Rebecca was a guest at a VIP Gala at Great America on April 29, where she was presented with her award by Mercury Astronaut Scott Carpenter. Rebecca wants to be an astronaut when she finishes school.

A new Attendance Prize raffle was instituted in March at the Popular Astronomy Club's meeting. The number of chances entered for each member will be based on a member's attendance at meetings, including the PAC banquet and Persied Watch. The first prize will be a new deluxe color Sky Atlas 2000.0, and will be awarded at the Annual PAC Banquet. A chance for the award will be given to members for every meeting attended. If a member attends all twelve meetings, 12 chances will be entered in the raffle. The more meetings they attend, the more chances they get to win.

Dedication of the Richard Weisen Memorial Telescope took place on May 20, at the program meeting of the Milwaukee Astronomical Society. The telescope is an 18" Obsession Dobsonian, built by MAS member Dave Kriege, with a primary mirror from Galaxy Optics. "Doc" Weisen was president of the MAS when he passed away suddenly last year.

The 1994 N.C.R.A.L. Convention.

by Bert Stevens

The 1994 North Central Region of the Astronomical League held it's annual convention on April 30, 1994 at the PZZAZ! Motor Inn in Burlington, Iowa. The PZZAZ! Inn was designed around a central pool/gymnasium court that all the inner guest rooms open onto. One of the inner first floor rooms was converted into a early registration/hospitality suite for

Technical Abstract Service in the Reflector

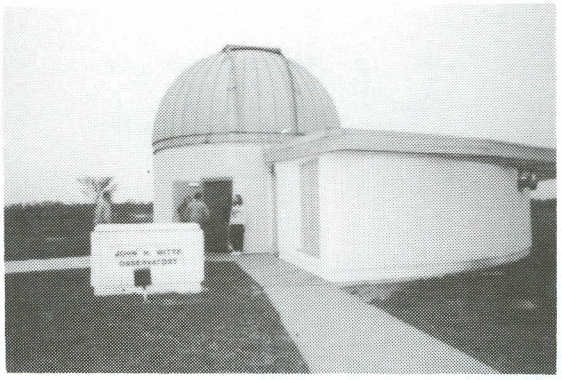
One highly appreciated service that the Astronomical League offers is the Abstract Service which appears in its newsletter, the *Reflector*. Special technical article on telescopes, observing aids, observation-related subjects, etc., are abstracted, and interested clubs/persons can send a SASE with a short note requesting a copy to the editor of the newsletter in which the article appears.

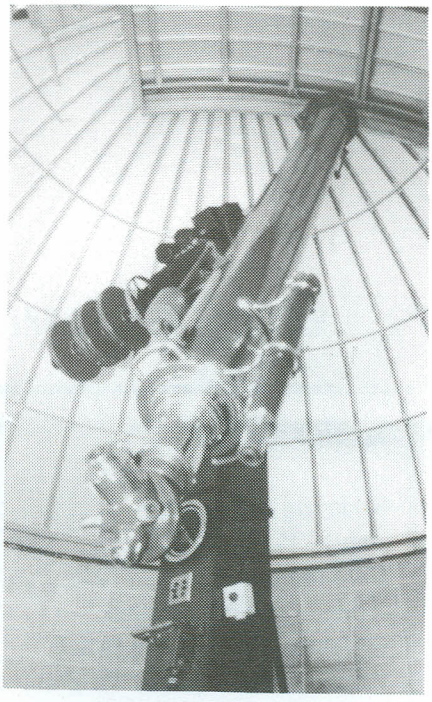
Please ensure that you society's editor is sending your newsletter to the abstractor:

A. L. Ponjee
658 Gilda Drive
St. Augustine Shores, FL 32068-7715

Friday evening arrivers.

The Hospitality Suite provided a focal point for convention goers. The League Sales Office had their wares on display, including the new Astronomical League mugs. Copies of the AstroNotes, back issue *Reflectors*, and *Northern Lights* were also available. But the best part was the Lunching Pad, where a number of celestial delicacies were available such as Pisces fish crackers, asteroid snack mix, flying saucer potato chips and the Dark Matter Brownies which were hard to see because they kept disappearing.





The John C. Witte Observatory of the Southeast Iowa Astronomy Club. The meeting room is to the right of the dome. The 12-inch Clark Refractor (right) shines brightly inside the dome. This instrument is a beautiful example of the telescope maker's art.

As with most conventions, it was the people who made the event enjoyable. The Hospitality Suite provided an easy way to meet old friends and make new ones. It was open most of Friday evening, and on Saturday. People did not hang around there, however, for even though the sky was cloudy, attendees had the chance to visit Southeastern Iowa Astronomy Club's John H. Witte, Jr. Observatory.

Located about 12 miles north of Burlington, the Witte Observatory is managed by the SIAC through a cooperative agreement with the Des Moines County Conservation Board. The Observatory building was built by the SIAC and is operated exclusively by them. The instrument is an Alvan Clark and Sons' 12-inch f/15 refractor. The beautiful brass tube was hand polished to a bright golden shine.

In addition to the Dome Room, there is a large meeting room for public lectures and society meetings. A small room at the far end was built to provide a warm environment for the computer in their new CCD system. They have also engaged in some experimental videography of the planets. The cloudy skies prevented observing though the Clark refractor, but everyone took pictures of this rare and exquisite instrument.

Saturday continued the cloudiness of the evening before, but the conversation was interesting around the breakfast table in the pool area. Discussions included the upcoming solar eclipse and the Comet Shoemaker-Levy 9 - Jupiter collision. After breakfast, attendees moved into the Conference Center for the first talk of the day.

Carl J. Wenning of the Bloomington-Normal Astronomical Society was the keynote speaker. He discussed his ongoing survey of amateur astronomers. Dr. Wenning has been surveying amateur astronomers for his upcoming book "The American Amateur Astronomer's Handbook." He surveyed amateur astronomers at last year's Madison ALCON, Astrofest, and the Winter Star Party. He continued his survey at the NCRAL convention and hopes to also have surveys filled out at Texas Star Party.

Dr. Wenning surveyed both astronomical societies (through their ALCor) and individual amateurs. The preliminary results of his survey will be the subject of a future article by Dr. Wenning in *Northern Lights*.

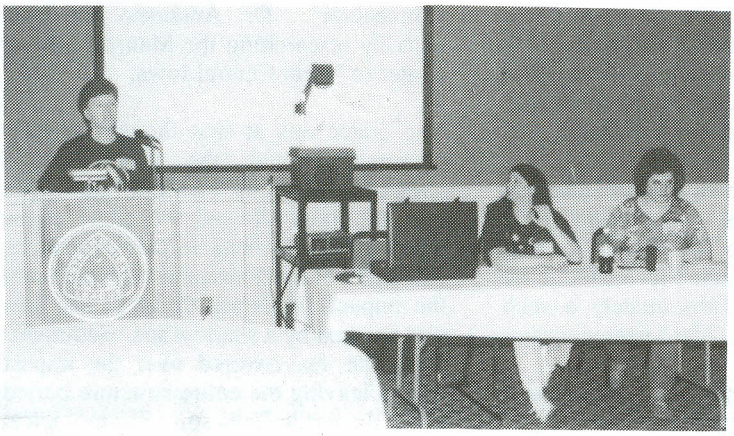
The next event was the NCRAL Council Meeting. The Council Meeting sets the agenda for the Annual Regional Business Meeting, which occurrs immediately after the Council meeting.

The Council meeting was called to order at 10:45 am. Chairman Marion Bachtell reviewed the agenda of business. She then reported that the Region had a new member society, the Prairie View Astronomy Club from Stillman Valley, Illinois. Ms. Bachtell introduced various members of the League Executive Committee who were present.

Chairman Bachtell then introduced Mr. Frank Roldan, Nominating Committee Chairman, who conducted the election of the Regional Representative for a three year term. Ms. Bachtell was nominated, and running unopposed, was unanimously

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Articles and ideas for articles about any astronomical topic of interest to amateur astronomers are invited and should be mailed to the above address. *Northern Lights* is edited by Berton and Janet Stevens. All material is copyright 1994 by the authors and used with their permission.



The Officers of the North Central Region of the Astronomical League. Outgoing Chairman Marion Bachtell (standing) addresses the gathering during the Business Meeting. Seated are outgoing Vice-Chairman Janet Stevens (left) and Secretary-Treasurer Deena Joslin (right).

elected.

The Council meeting was unanimously adjourned at 10:51 a.m.

The NCRAL Annual Business Meeting was called to order at 10:52 a.m. by Chairman Bachtell. Secretary Deena Joslin called the Roll of Societies. Twenty-four out of the thirty societies in the Region were represented. Secretary Joslin read the minutes from the 1993 NCRAL business meeting which were unanimously approved.

The Treasurer's Report was presented by Ms. Joslin and approved. Chairman Bachtell then gave a brief report then on the state of the Region, which is good. Our Region is generally very active both individually and as a whole. Ms. Bachtell introduced League President Jim Fox who reviewed the National ALCON Convention last year. See the article in the November *Reflector* for more details on this event. Mr. Fox also pointed out that the Astronomical League per member dues were increased from $1.55 to $1.75 per society member per year.

Northern Lights Co-editor Bert Stevens then reported on the state of *Northern Lights*. Our Regional publication is alive and well. It is still in the black financially, but new articles are always needed. Everyone who can write should consider writing an article for inclusion in this publication. New subscriptions are always welcome, but group subscriptions would provide an even larger audience. Every society should subscribe to *Northern Lights* for at least one copy to keep up with the activities in our Region.

Janet Stevens, Co-editor and author of *Roaming the Region,* asked that societies try to include information about what their society is doing in their newsletter, and to ensure that their newsletter is sent to *Northern Lights*. This will allow *Northern Lights*, through Ms. Stevens' column *Roaming the Region*, to spread new ideas and information about society activities, fund-raising, and so on.

Under Old Business, the renewal of the three-year loan of $1000 to the Astronomical League Trust Fund was discussed. This loan allows the Trust Fund to collect the interest on the money. This amounts to a small amount of income for the Fund. Further discussion was tabled until after the discussion of other uses of the treasury funds that was to occur under New Business.

The first piece of New Business was elections. Frank Roldan distributed ballots for the election of the Chairman. Since two people were running for Chairman, Ms. Janet Stevens and Mr. Paul Castle, Mr. Roldan conducted a written ballot election. The result was that Mr. Paul Castle of the Popular Astronomy Club was elected Chairman for next year.

While votes were being counted, the next item of business, other uses of the treasury were discussed. These included the creation of a new society officer training kit, and supporting IDA. Jim Fox pointed out that the National Astronomical League has funds to create new programs, but the difficulty is to find good people to execute the program. Alan Saeger of the Quincy Astronomical Society suggested that it might be possible to provide money to local societies in trouble or for a major project. Bert Stevens (*Northern Lights*) suggested that some funds could be used to provide one issue of *Northern Lights* to each member society in the North Central Region.

David Weir of the Madison Astronomical Society suggested that we might back the National Outstanding Young Astronomer Award with a cash scholarship. David suggested that the first place winner could receive $500, and the second receive $300. This would make the Award more valuable and prestigious and help promote astronomy among young people. The Region could do this for one year, but the Trust Fund would have to pick this up in succeeding years.

Chairman Bachtell decided to appoint a committee to look into these possibilities and report on them at the 1995 NCRAL Convention in Fargo, North Dakota. Ms. Janet Stevens will chair this "Regional Treasury Expenditure Committee" with members Barry Beaman (Rockford Amateur Astronomers), Bert Stevens (Northwest Suburban Astronomers) and Bill Lang (Naperville Amateur Astronomers).

The rest of the offices were unopposed. Sharon Stauffer (Rockford Amateur Astronomers) was elected Vice-Chairman. Deena Joslin was re-elected to the post of Secretary/Treasurer. Mr. Roldan encouraged others to volunteer to run for positions, either on a Regional or National level. There are many positions available. One is right for **you**!

The motion on the Trust Fund Loan was picked up from the table. Jim Fox mentioned that monies from the Trust Fund are available for use in any valid League project. The *Comet Halley Slides*, and the *Outline for an Astronomy Course*



Outgoing NCRAL Chairman Marion Bachtell congratulates the incoming Chairman, Paul Castle.

are two projects which were funded by the Trust Fund.

After much discussion, the Region decided not to renew the Loan. The issue will be revisited after the Regional Treasury Expenditure Committee makes its report next year.

The next item of new business was a discussion incorporating the rules for bestowing the Regional Award each year into the Bylaws. Dan Koehler discussed how he had set-up the initial Award in 1989. He felt that the unofficial rules he had created needed to be formalized and possibly modified. Chairman Bachtell pointed out that she had heard some ideas for revising the way the awardee was selected. Ms. Joslin pointed out that the current rules could allow a four-way tie and potentially four awards could be given in a single year.

The general feeling was that the process was going well as it currently stands. The voting procedure will remain as it is, and the discussion will be continued at next year's Convention in Fargo, ND.

The meeting was adjourned at 12:09 p.m. and everyone left for lunch.

After munching lunch, the convention continued with the afternoon papers session. Barry Beaman was the first speaker who elucidated on "Observing Variable Stars with Binoculars". Greg Ganio followed with "Another Amateur's Accomplishments", discussing the long history of accomplishment in amateur astronomy by Green Bay amateur Ron Parmentier, who won last year's NCRAL Regional Award. John Dykla, a professor at Loyola University in Chicago and member of the Chicago Astronomical Society reported on "When Space Became 3-Dimensional".

After a break and another door prize drawing, Gerry Samolyk, Observatory Director of the Milwaukee Astronomical Society tried to guide us toward "Seeking Targets of Opportunity", about the eclipsing binary program at the MAS Observatory. Finally, Charles Allen told us about "Vignettes", astronomical oddities that have occurred through time, such as Galileo's observation of Uranus, of which we did not know the full story.

The Executive Conference Center was cleared so it could be set for the evening banquet. The conventioneers then filed back into the room and settled down with their friends for a delicious dinner.

After dinner, Chairman Bachtell returned to the podium to present the 1994 Regional Award to Mr. Rollin P. Van Zandt. Mr. Van Zandt was unable to be present in person. Unfortunately, a week after the convention "Van" passed away.

Van had been a strong figure in amateur astronomy for many years. He helped build the Northmoor Observatory of the Peoria Astronomical Society (PAS). When the PAS built a second observatory at Jubilee State Park northwest of Peoria, Van built the mounting for the new 24-inch telescope. To honor him, the P. A.S. named it the R.P. Van Zandt Observatory. Van also helped refurbish the Corralitos (New Mexico) Observatory.

Van had been active in the Astronomical League for many years, and was President during the Atlanta National Convention in 1976. Two years later he was elected Secretary of the A.L. for a two-year term and again for two terms from 1989 to 1993. He was League Publications Chair for many years. On the Regional level, Van had held a number of Regional Offices and Chairs.

Van' s wife Florence, passed away last year. He began suffering from severe anemia when his bone marrow stopped manufacturing red blood cells. Last fall, medication he was receiving for this condition caused him to be hospitalized in Bisbee, Arizona, for a perforated ulcer. After his release from the hospital, he recuperated in Salt Lake City with daughter Jean and then Peoria with daughter Jan. Van had recently returned to Bisbee. On Saturday, May 7, Van received a transfusion for his condition. That night, he passed away in his sleep. Rollin Van Zandt had dedicated his life to astronomy on the local, regional, and national level. He will be missed by everyone whose lives he has touched over the years.

After the award presentation, Dr. Raymond R. Anderson, Professor of Geology at the University of Iowa was introduced. He spoke about "The Death of the Dinosaurs, Iowa's Cosmic Connection". Dr. Anderson has been actively researching the Manson Meteor Crater in North Central Iowa.

The crater was at first thought to have occurred around the time of the Cretaceous-Tertiary period, but core samples have allowed the crater to be dated as having been formed before the extinction of the dinosaurs. At the time of the impact, the North Central Iowa area was covered by a shallow sea. Sediments from the sea covered over the impact crater, leaving the entire structure buried under the fertile Iowa soil. Seismological studies and core samplings have defined the size and shape of the crater as well as providing material for the dating process.

After the question of the Mason Crater had been put to rest, David Bachtell reintroduced the outgoing Chairman, Marion Bachtell, only he introduced her as the "Empress of the North Central Region". In through the main entrance, Marion swept in wearing a beautiful ruby-red gown and tiara proclaiming to all that she was the Empress.

This has been a longstanding joke started by the "Boys from Green Bay (Wisconsin)", five members of the Neville Public Museum Astronomical Society who had declared her as Empress a few years ago at the San Jose National Convention. Each year at the convention, the Boys from Green Bay have tried to embarrass her, and she has tried to even the score. As this was her last year as Chairman, she had to execute the perfect revenge.

Dressed as the Empress, Marion ordered her guards, armed with costume executioner's axes, to round up the "Boys from Green Bay" and bring them to stand before her Court. Each was located in the crowd and brought to the front of the room to stand before the Empress.

Once apprehended, Steve Mofle, Don DeWitt, and George McCourt, were duly chastised for embarrassing the Chairman and generally causing trouble. Each was then awarded entry into the "Order of the Royal Pests" and given a Certificate to validate their new position. The Empress then sent her guards out to get the last pest, Astronomical League President Jim Fox who had taken every opportunity to address her as "Your Highness" and generally embarrass her. He too was



At left, Steve Mofle proudly displays his "Order of Royal Pests" certificate after he, George McCourt (center) and Don DeWitt (right) were rounded up by Empress Bachtell's guards. The Empress, Marion Bachtell, herself is at the far right. Below, the revenge of the Boys from Green Bay as Chairman Bachtell gets showered with bubbles. Nominating Committee Chairman Frank Roldan (right) looks on in amusement. Two of the Convention Committee members look on from the far left.



awarded entry into the "Order of the Royal Pests" and given a Certificate.

The Boys then gave the Empress their salute. They pulled out soap bubble guns and showered Marion with bubbles, almost hiding her from view.

With the bubbles clearing, Chairman Bachtell thanked those in the Southeast Iowa Astronomy Club who worked so hard to make this a great convention. She also thanked everyone for coming, and brought the convention to a close.

Update on Minor Planet Observations with the H.S.T. Amateur Participation Program

by Harald Schenk

During 1993, Jim Secosky and I completed our study of five minor planets with the Hubble Space Telescope. A previous article in *Northern Lights* (July, 1993) described our observations of minor planets (224) Oceana and (944) Hidalgo. In this update, I would like to describe the excellent assistance we received from more than 80 amateur ground-based observers around the world.

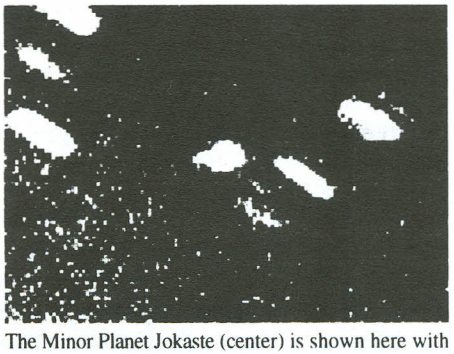
We observed our third minor planet in June. (2201)Oljato was a 19th magnitude object. The minor planet passed near the orbit of Venus during 1980 and 1983. Both times, the Pioneer Venus orbiter observed a magnetic field variation in the solar wind. Scientists suggested that this disturbance might be associated with outgassing material in the Oljato orbit, some distance behind the minor planet, but not with the minor planet itself.

Ground based observer Neyle Sollee, from Crestone, Colorado, was able to obtain CCD images of the area where the minor planet would appear. out of 37 images, he had two in which a 19th magnitude object showed movement. Unfortunately, it was not in the predicted position, and it was moving a near right angles to where Oljato should have been.

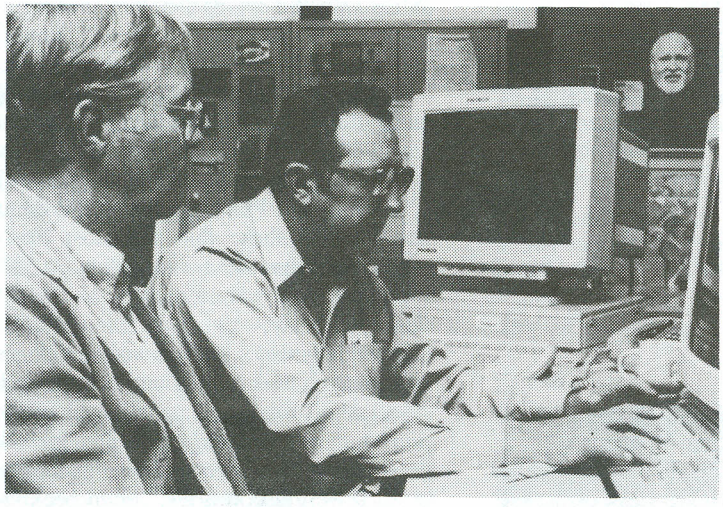
What was the strange object? Had we made a new discovery? Our solar system contains a vast number of minor planets. I felt that a computer program might help us to identify this object. This was done with the help of several members of the Milwaukee Astronomical Society. Using "Dance of the Planets", Richard Adduci was able to show that the most likely candidate was the minor planet (223) Rosa.

Our last two minor planets were scheduled to be observed in mid-October and mid-November. This gave us enough time to prepare an observing package for the ground-based observers who were located in 22 different countries. Each package contained a customized ephemeris from Goddard, HST sky charts (prepared by our assigned Technical Assistant, Max Mutchler of STScI), plus an observing form. These were sent out about a month before the scheduled observation.

The minor planet (899) Jokaste was observed with the Hubble Space Telescope on Saturday, October 23. The 6½ hour exposure began with initial guide star acquisition at 8:11 U.T. This may sound long, but the HST has to shut down each time the sun, earth, or moon threaten to damage its sensitive detectors. The telescope must then re-acquire the target. Unfortunately, the HST had a problem during the exposure. Tracking was lost for 2 seconds (possibly due to a micro-meteorite impact). During the re-centering interval, HST's pointing was controlled by gyros, which allow a small amount of drift during the interval. The FOS continued to expose throughout the entire 2 second interval, and I was worried that it would affect the results. So far, it appears that there was no harm done.



The Minor Planet Jokaste (center) is shown here with a short tail. This image was captured by German amateur astronomer Rolf Stuber in a 32 minute CCD exposure on November 11, 1993.



Harald Schenk (left) works with Charles Kowal, discoverer of the comet/minor planet Chiron, at the Space Telescope Sciences Institute.

The minor planet (182) Elsa was observed on Thursday, November 4. This required a 35 minute exposure which began at 16:54 U.T. Elsa, at 12th magnitude, was the brightest of the five minor planets we observed. Our goal had been to search for evidence of OH emission in the ultraviolet part of the spectrum. This would indicate a possible cometary origin. of the five minor planets, the three main belt objects have all been observed with a comet-like coma by previous astronomers. This might have been due to impacts. It might also have been due to a magnetic field (such as Galileo found at (951) Gaspra) holding dust particles in suspension. (243) Ida, the second minor planet imaged by Galileo, is now also suspected to have a magnetic field. *Aviation Week & Space Technology* has also reported that Ida may have a satellite, based on Galileo images. The ground-based observers were instructed to search for evidence of a possible dust coma.

Observations were staggered in order to provide complete coverage before and after the HST observation. Jokaste studies began on September 30, and ran up to November 11. Elsa studies began on September 30, and ended on November 16.

Observers used various formats to study the minor planets. These ranged from CCD's and photographic plates to VHS. There were numerous visual observations, as well as photographs and slides. As the results arrived by mail, one thing became apparent right away. If there was a coma remaining on either minor planet, then it was much too faint for visual observations, or short exposures.

The first indication of this occurred when a Canadian amateur found the suggestion of a short, faint tail on minor planet Jokaste. This was noticed during a procedure in which he accumulated CCD images. This in effect enabled him to reach fainter magnitudes. While the result was inconclusive (it may have been due to something in the image processing used), it was noted that the "tail" was pointing in an anti-solar direction.

A call went out to observers who had sensitive CCD equipment. On October 16, a German observer took the first image of what appears to be a view of such a tail. This involved a 26 minute CCD exposure. The image was duplicated on November 11, with a 32 minute exposure. At this time, it still remains to be seen if the effect is real, or due to image processing. The HST spectrum of Jokaste shows several absorption lines which could be the result of a dust coma.

While I plan to make at least one more visit to STScI for data analysis, I would like to point out that this has been a wonderful experience for amateur astronomy. As of June, 1994, the third amateur competition has been narrowed to two finalists. I encourage all of you to enter future competitions. If you are selected, I can guarantee you the experience of a lifetime!

(Ed. note: Since Harald wrote this article, he asked us to include the following information)

Beginning in Cycle 4 of the Amateur HST Competition (which started in April), foreign amateurs may submit proposals. They are required to find an amateur astronomer who is a U.S. citizen who will act as the Principal Investigator (P.I.). Harald has been working towards opening the contest to those from other countries for more than a year. He points out that, after all, the European Space Agency is a part-owner of the HST. He has contacted some of his foreign ground-based observers, and there is great interest in the amateur program overseas. Unfortunately, there has been little publicity about it. Harald has offered to help pair foreign amateurs with U.S. observers for future HST competitions. The U.S. volunteers will be the P.I., and be involved in a collaborative effort on a future HST proposal with a foreign observer. If you are interested in pairing with a foreign amateur, please contact:

Harald Schenk
2330 S. 11th Street
Sheboygan, WI 53081

★ ★ ★

Astrofest 1994
by Michael F. Barrett, Chairman

I am pleased to announce that ASTROFEST will again be held at Camp Shaw-Waw-Nas-See on the weekend of September 9-11, 1994. Camp Shaw-Waw-Nas-See is located about 15 miles to the northwest of Kankakee, Illinois, and our event has been held there every autumn since 1982.

For further information the general public should write:

Astrofest
P. O. Box 596
Tinley Park, Illinois 60477

or call (708) 966-6214 (Alan Birkner, General Information)

Astrofest brochures and registration forms will be mailed in early July to those who have attended previous Astrofests.