

ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

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COUNTING METEORS FROM 40,000 FEET

Jane & Morris Jones

Wednesday March 19, 2003

Join SFAA members Jane and Morris Jones as they recount their adventure aboard the NASA DC-8 airborne laboratory in November 2002. For eight days this past November Jane and Mojo shuttled between Dryden Flight Research Center at Base, CA, Offutt AFB AFB near Madrid, Dryden. As part of Instrument Aircraft MAC) Jane and Mojo IMCU - Intensified Unit. Other observers, including Section coordinator Dr. Ruediger Jehns European Space made up the team. talk about the mission, the work laboratory, what rest time, the data reduction and work. They'll also observers do after



Edwards Air Force in Nebraska, Torrejon Spain and back to the Leonid Multi-Campaign (Leonid joined the 8 person Meteor Counting experienced meteor A.L.P.O Meteor Robert Lunsford, and from ESA - the Agency in Germany Jane and Mojo will preparation for the aboard the airborne they did during crew followup research, some results of their show what meteor the 9 hours of Leonid

night - you won't want to miss it! Bring a pencil, and you can plot the stars, name the constellations, and draw the field of view as seen through one of the onboard cameras before you count some meteors for yourself. You will share the experience of a NASA airborne mission, flying below thousands of shooting stars against a backdrop of the aurora borealis and the full moon on the night of the last Leonid storm of our lifetime.

Jane and Morris Jones are members of the SFAA, experienced meteor observers and sidewalk astronomers. They have enjoyed the collaboration with professional astronomers participating in the Leonid MAC for the past five years. Mojo wrote the software currently used on board the two aircraft utilized on the 2002 mission, and also used by a land-based team stationed at Steward Observatory at Mt. Lemmon, AZ. Jane and Mojo made TV appearances, wrote articles, and conducted outreach activities on behalf of the Leonid MAC this year and for past missions. Their website retells the 2002 MAC story with articles and images, and contains writeups and pictures from the past 4 years missions as well. <http://www.whiteoaks.com/mac-2002/>

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CLUB TELESCOPES

The SFAA owns 3 club loaner telescopes, Dobsonian/Newtownian reflectors: 6" f/10, 8" f/7, and 10" f/8. They are available for extended periods (30 days or more) to SFAA members. These are generally very fine scopes, easy to use and well-suited for deep sky, planets, and star parties. The loaner custodians are Pete Goldie & Sarah Szczehowicz, located in San Francisco. If you are interested in borrowing a scope, or if you have items you can donate for the loaner program (eyepieces, star maps/books, collimator, etc.) please contact them via email (pg@lbin.com) or phone (415-206-9867). Email communication is preferred and strongly recommended for a quick and accurate reply.

CLUB ASTRONOMY VIDEOS

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-reknowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. Our acting librarian is Bill Stepka.

For information on the course tapes themselves:
<http://www.teach12.com/ttc/assets/coursedescriptions/180.asp>

Above the Fog is the official bulletin of the San Francisco Amateur Astronomers. It is the forum in which club members may share their experiences, ideas, and observations. We encourage you to participate by submitting your articles, announcements, letters, photos and drawings. We would also like to hear from our new members. Tell us about yourself – what you have done in the past and what other clubs you have joined. **The deadline for the next issue is the seventh day of the month.** Send your articles to Phil Estrin 210 Galewood Circle, San Francisco, CA 94131or at pestrin@dir.ca.gov. Send your articles to Phil Estrin at pestrin@dir.ca.gov.

From Your President

I had a great time at the SFAA Annual Dinner last month, and it was great to see all of you there. The food was great as usual, and the company was warm and inviting. I felt very privileged to hand out the SFAA awards, especially the Herman Fast Award to Bob Berta. I was personally inspired watching our own SFAA members Cheryl Schudel and Jane Houston Jones receive their Astronomical League observing awards. Cheryl won the Universe Sampler, naked eye version. Jane received the binocular awards for the complete Messier and the complete Southern Skies, along with the first ever complete Caldwell list, all 100 objects along with a laudatory note from Sir Patrick Moore himself. Morris Jones, our club secretary, took photos of the event and put them online for you to see at <http://www.whiteoaks.com/sfaa/awards-2003/>.

By the time this issue of *Above the Fog* reaches you, we will have had our first City Star Party. The City Star Party is an easy observing opportunity, and provides a great way for you to share your love of astronomy (and the views!) with the public. We're always looking for people who would like to speak at the City Star Party. If you have a topic you'd like to talk about for 15-20 minutes, why not give Randy Taylor a call and get on the City Star Party speaker's schedule?

Just a reminder: Lorrie Boen, our Treasurer has audited the club membership ledger and discovered that many members are behind in their dues. This issue of the newsletter should have your membership expiration info printed on the mailing label; if you're close to expiration, or your membership has expired, please consider renewing right away.

A few weeks ago, I spent an event at the corner of 9th and Irving with club member Bob Naeye doing sidewalk astronomy. It's always exciting to share the Moon and planets with the general public, and to share the thrill they feel when they see the Solar System up close for the first time. Whether you're observing from the street corner or your backyard, I'll leave you with a few web resources related to the Moon and planets, always good things to observe from the city during the few clear nights we get this time of year.

Jupiter Moons mutual events: http://skyandtelescope.com/observing/objects/planets/article_771_1.asp

Intro to Planetary Sketching and Drawing: <http://home.fiam.net/ericj/drawing.html>

Hitchhiker's Guide to the Moon: <http://www.shallowsky.com/moon/hitchhiker.html>

Until next month, clear skies! Michael Portuesi (email: mportuesi@yahoo.com, phone: (415) 550-9366)

MT. TAM VOLUNTEERS ORIENTATION

There will be an orientation for Volunteers in the Park on Saturday, March 1 at the back office on Mt. Tam (park at Pan Toll parking lot and walk back to the office) at 9:30am. They usually last a couple of hours. Those who want to attend should call Sara Davis at 415-924-7887 to sign up, or just go. This is necessary if people are to be covered by the state's insurance when volunteering on the mountain.

Membership Dues!

You will notice something new on the mailing label of this issue. It is the month and year through which your membership was paid. If this date is past, your membership has expired and this may be your last bulletin. I checked the records, but if you disagree, please let me know.

In an effort to save the club money, this will be the only notice of membership expiration in the future. Also, in an effort to save the club money, you may receive no more than one bulletin after the expiration of membership. I am sure that everyone will understand the necessity of this measure in the current economic atmosphere.

Lorrie Boen
Treasurer



SJAA AUCTIONS

SJAA has approved its calendar for 2003. The Bay-Area Astronomical Auction XXIII will be run on April 13, a Sunday, during the afternoon. Exact hours will be decided later. The 2003 Fall Swap will be on Nov.9,also a Sunday. In each event, a 10% seller's commission will be charged, with caps of \$50/item and \$500/person. For further information, please contact Jim Van Nuland, San Jose (California) Astronomical Association at <http://www.svpal.org/~jvn/>.

Lecture by Dr. Seth Shostak (SETI Institute)

Wednesday, Mar. 5, 2003, 7 pm:Silicon Valley Astronomy Lecture Series Dr. Seth Shostak (SETI Institute) will give a non-technical illustrated talk on:"What Happens After Contact: Responding to a Message from Space" in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280, in Los Altos Hills, California Free and open to the public. Call the series hotline at 650-949-7888 for more information. co-sponsored by: NASA Ames Research Center Foothill College Astronomy Program SETI Institute Astronomical Society of the Pacific Dr. Shostak, who is Senior Astronomer at the Search for Extra-Terrestrial Intelligence (SETI) Institute in Mountain View, will discuss what plans scientists have if they detect a radio message from an alien civilization out among the stars. He will examine how any such messages will be verified (to avoid hoaxes), how the news will be announced, how information from the message would be disseminated, and how humanity might decide whether and how to reply. Dr. Shostak is renowned for his ability to explain astronomical ideas (and their implications for society) in everyday language and is the author of *Sharing the Universe: Perspectives on Extra-terrestrial Life*.



Dorothea Klumpke, Airborne Leonid Pioneer

Over one hundred years ago, American born astronomer Dorothea Klumpke was the first women to observe a Leonid Meteor Storm from above the earth. Below are excerpts from published reports about her adventure. In anticipation of Mojo's and my presentation during the March 19th SFAA General Meeting, I hope her deeds inspire you as much as they inspire me, and that you remember Dorothea during future Leonid Storm viewings.

The balloon La Centaure, bathed in the light of the full Moon, rose over Paris into a bitter wind a few minutes before 1:00 a.m. on November 16, 1899. Its task was to take an astronomer above the autumn ground fog to observe the

last great sky show of the 19th century, the Leonid meteor shower.

Nearly a century before a twentieth century international collaboration sent a spacecraft to Comet Halley, scientists of Russia, Germany and France made plans to launch balloons so that astronomers could observe the Leonid meteor show of mid-November 1899. "I do not know what good fairy overheard my wish to take a trip in the blue sky." Dorothea Klumpke wrote of her voyage in La Centaure. "my surprise was great when I learned the French Society of Aerial Navigation had chosen me for the astronomical expedition of the Leonids. After reflection I accepted the unexpected

invitation. I had the great mysterious and alluring anticipation of an ascent in a balloon."

The Leonids, magnificent in their displays of 1799, 1833, and 1866, were confidently predicted to fill the skies with shooting stars once again. But these predictions fell far short of reality. By 1:00 a.m. on November 16th, as Klumpke waited to go aloft in *La Centaure*, she already knew of the disappointing reports from a flight on the previous night. Undaunted that the Leonids had failed to appear, she resolved to go ahead with her planned program. *La Centaure* carrying the balloon's pilot, a secretary, and Klumpke, ascended to a height of more than 1600 feet and drifted westward over Normandy towards the English Channel. They saw 30 meteors during five hours of observing, of which half were Leonids. Seven hours after launch *La Centaure* made a dawn landing near a small coastal village. The three voyagers, who had logged 176 miles at an average speed of 25 miles an hour, celebrated with a breakfast of cold chicken and champagne. The flight brought Klumpke accolades as the leading woman aeronaut of France.

The seven hour flight was a scientific disappointment: only 15 Leonids were observed. But it was a great milestone for women in science, because the astronomer aboard the *Centaure* was Dorothea Klumpke. At age 38 she had become the first woman to make astronomical observations above the earth's surface, augmenting an illustrious career that would continue well into the 20th century.

After her dramatic flight aboard *La Centaure*, Dorothea had found herself back "...safe in my little student's room at the University of Paris ... my body seemed lighter than ever, and I had the sensation of floating in air, and my heart was filled with gratitude." these words of joy are the best valediction for this true pioneer astronomer, whose spirit lives on in today's woman astronomers.

--*Sky & Telescope*, August 1986, vol. 73 no 2, pp 109 by Kenneth Weitzenhoffer.

Dorothea Klumpke had a spirit of adventure and initiative which is evident by her success at which was at that time a predominately male field. It is also illustrated by her ascent in a balloon on the night of November 16, 1899, to watch for the expected return of the Leonid meteors, which she described in an article in the *Century Magazine* in 1900. The astronomer Pierre Janssen of the Meudon Observatory had selected her as the observer for this flight, and she was overjoyed at the opportunity. She prepared some warm clothes, and on the evening of the 16th met with the two balloonists who would accompany her. About midnight they climbed into their small basket (five feet long by three feet wide) and around 1 a.m. they lifted off. The sight of the city of Paris from the air was glorious. They tossed off ballast sacks, rose to an altitude of 1600 feet, and drifted westward. The sky was clear and pure, and despite the light of a nearly full Moon, fifth magnitude stars were visible. The meteor observations were a disappointment, only 24 meteors were seen from 2 - 6 a.m. But the experience was one never to be forgotten: "Never before had nature seemed to me so grand, so beautiful." At sunrise clouds came up and soon it was overcast. The captain brought the balloon down to about 300 feet above the ground, as they sailed west at about thirty miles an hour, seeking a good landing spot. At around 8 a.m. the balloon came to rest in a meadow near the sea, 176 miles from its starting point. Dorothea wrote that all three occupants were "inwardly enriched a thousandfold by the wonderful experiences of the past night." ---*Mercury*, Vol. X #5/September-October 1981.

compiled by Leonid meteor researcher Jane Houston Jones jane@whiteoaks.com <http://www.whiteoaks.com>, who observed the Leonids from above the earth in 1999 and again in 2002 as part of the Leonid 2002 Multi-Instrument Aircraft Campaign. <http://leonid.arc.nasa.gov/index.html>

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Desert Sunset Star Party - May 1-4, 2003, Benson, AZ

Registration is now online for the Desert Sunset Star Party. Please check our website (<http://chartmarker.tripod.com/sunset.htm>) for details about this new star party and to get your registration forms (early registration ends March 15). It will be held at the Kartchner Caverns State Park. We have speakers who will talk on a variety of subjects such as identifying stars, supernovae, Mars and the weather in the Southwest. We will have vendors present and door prizes and a contest for the best Simple Astronomy Tool (SAT). We also have lots to do during the day and have scheduled tours to Mt. Hopkins (Whipple Observatory), BioSphere 2, and the University of Arizona Mirror Lab. Catered meals will also be available (please fill out sign-up form for meals). If you do not have web access, please contact a club member to get the forms. We hope you will be able to join us.

Chart Markers and More
Pat and Arleen Heimann
<http://chartmarker.tripod.com>

Speakers Needed for City Star Party

Do you have some knowledge you'd like to share with other SFAA members and the general public? Do you enjoy informal public speaking? If so, perhaps you'd like to be a speaker at one of our City Star Parties. You can speak about any topic that's astronomically related. Each talk is about 15-20 minutes in length. If interested, please contact Randy Taylor, our CityStar Party coordinator, at (415) 255-8670 for scheduling.

Important Upcoming Dates

Board Meeting – March 12 – 7:00 p.m.
April 9—7:00 p.m.
Western Addition Library, Scott & Geary Sts., San Francisco

SFAA General Meeting – March 19
April 16
May 21
Morrison Planetarium, Golden Gate Park
Refreshments at 7:00 p.m. - Speakers begin at 7:30 p.m.

Mt. Tam Star Party
April 5 - 7:00 p.m.

City Star Party
March 8- 6:00 p.m.
April 12- 7:30 p.m.
May 10- 8:00 p.m.

Founded in September 1952, the San Francisco Amateur Astronomers (SFAA) is an association of people who share a common interest in astronomy and other related sciences. Our membership consists of people from all walks of life, educational backgrounds and ages. Many SFAA members own their own telescopes; some have been made by hand in local telescope-making classes and vary in size from 6 to 25 inches.

Treasurer, SFAA, 765 Geary St., #302, San Francisco CA 94109

make checks payable to **San Francisco Amateur Astronomers** and mail to:

- \$10 enclosed, youth/student membership
- \$25 enclosed, individual membership
- \$30 enclosed, family or foreign membership
- \$40 enclosed, institutional membership
- \$75 enclosed, supporting membership

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Web Page: www.sfaa-astronomy.org

Sharing the Wonders of the Universe

Has your membership expired? Your mailing label includes the month and year through which your membership is paid. If it is past, your membership has expired and this may be your last issue.