

The Refractor

The Bulletin of the Eastbay Astronomical Society
 Founded in 1924 at Chabot Observatory, Oakland, California

Volume 81
 Number 2
 December 2004

December 2004's talk:

Global Observations of Pollution From Space

Sunday, December 12, 2004, 6:00 pm

Speaker: Steve Massie, Ph.D.

Chabot Space & Science Center
 Soda Board Room, Dellums Building

In the 1970s, Steve Massie helped Terry Galloway make measurements of the amount of aerosol (dust) in the Bay Area's urban atmosphere. They did this by measuring the brightnesses of various stars over several hours using the 20" refractor (at old Chabot Observatory). This got Steve interested in remote sensing measurements. Since then, he has been involved in several remote sensing studies at NCAR, one of which used NASA satellite observations to determine changes in aerosol amounts over Asia. Steve will discuss this work, and about how recent developments in satellites will allow one to quantify amounts of regional pollution (of aerosol and several gas species) on a global basis.

Steve grew up in San Lorenzo and attended UC Berkeley from 1970- 1974, graduating with an AB degree in Astronomy. He went to Boulder, Colorado to become an atmospheric scientist, obtaining his Ph.D. in 1979 in Astro-Geophysics at the University of Colorado. From 1979-1982 he was a post-doc at the University of Arizona Planetary Sciences department. The Upper Atmosphere Research Satellite program of NASA was initiated in the early 1980's, and he returned to Boulder in 1983 to participate in this program at

the National Center for Atmospheric Research. He has studied polar stratospheric clouds (which produce the ozone hole), thin cirrus near the tropopause (which produces a dry stratosphere), and global pollution using a variety of satellite instruments. ★



Apollo 16 view of the Earth taken with a hand-held Hasselblad camera on 16 April, 1972.

This month's meeting format is different. We will do a potluck dessert social, have a talk, hold an election, and, weather permitting, we'll also have a Members Only View Night.

**There will be no
 Dinner with the
 Speaker this month.**

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In Memoriam

Franklyn G. Creese

1937—2004

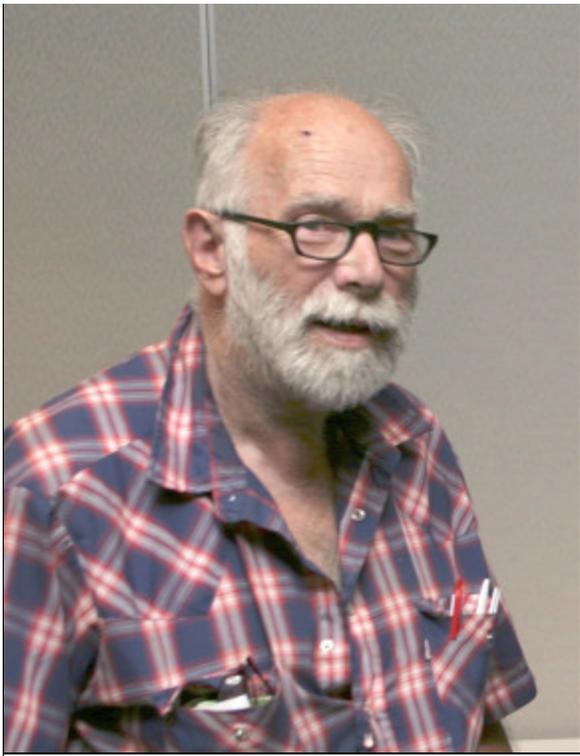


Photo by Carter Roberts

Excerpt from the San Leandro Times: Creese, Frank G., a physics professor, died Monday, October 25, 2004, at age 79. A native of Oakland, Mr. Creese was a past president of the Astronomical Society at Chabot Observatory. He was the husband of the late Anne Creese, who died last year, and is survived by his brothers, Stanley Creese and wife Betty, and William Creese and wife Ruth.

From Carter Roberts: Franklyn joined the EAS on April 27, 1937 and set the record for the longest continuous EAS membership of 2 days less than 67 years 6 months.

Mark Gingrich reminisces: As anyone who met him can testify, Frank was a gentle person with the spirit of an inveterate student who looked forward to learning whatever new concept or discovery would be revealed next. Tending more to the theoretical side of things, I'll never forget Frank's amusing confession: "I'd rather think about the problem for several hours than actually spend a few minutes settling the issue with an

experiment!" But this indeed was the kind of fellow he was—an Aristotelian stuck in the midst of an experimentalist's world. That, however, would not prevent Frank from appreciating the beauty of a well-executed experiment.

His student-like passion was likewise evident when it came to understanding the vagaries of the stock market, as I discovered some six years ago. It was a weeknight, around 10 p.m., and I was about to leave the San Leandro BART station. That's when I noticed Frank. He was thrashing through the recycled newspapers bin, like a mad raccoon in a dumpster. (I admit I was a somewhat startled by this sight. Had Frank become a homeless person, I wondered, resorting to fishing for valuables from the trash?)

"Frank!" I cried. "What the devil are you looking for?"

"Oh—hi," he replied somewhat sheepishly upon being recognized. "The library closed an hour ago, and there was an interesting article about the Japanese stock market in today's Wall Street Journal. I've just got to find that article tonight!" Whereupon he went back to digging through the bin of discarded newspapers, much to my amazement.

Such illustrates the intensity the seemingly mild-mannered Frank would exhibit when he needed to learn something.

I last talked to Frank at the September EAS members' meeting. He seemed to be in good spirits and in good health. It's hard to believe that we've lost this patriarch of EAS in the same short span of time that has taken his wife, Anne, and Betty Neall, away from us. In thinking about Frank this morning, I recalled a story he once told me about a pivotal event early in his life—an event that occurred, I just noticed, around the time of his joining the EAS. When he was 12 years old, Frank's parents took him to the Oakland airport—the section now known as the north field—to watch the historic start of an expected around-the-world flight by an aviation sensation named Amelia Earhart. (She succeeded in completing the first portion of her journey, landing safely in Hawaii. It was a later leg of the trip, to Howland Island over three months later, that was to be ill-fated.) I recall saying to Frank, "That day at the airport sure must've been exciting."

Frank replied, "It probably was to most everyone there, but at the time I wasn't very impressed."

"No? Why not, Frank?"

"I noticed that Amelia Earhart was wearing her hair cut short. And I just didn't like any girl who wore short hair!"

So I looked up the date this morning: Earhart took off from Oakland on March 17, 1937—just over a month before a youthful Frank Creese signed up with a local astronomical society based at Chabot. Which now has me wondering, could Earhart's flight have provided a certain 12-year-old some additional motivation to look skyward?

Don Stone adds: There's a bit more to the (above) story. Since Franklyn was a minor, he needed a sponsor, and Betty Neall became his sponsor. That's why Franklyn was a member so long! So once a month on EAS meeting day, Betty used to pick up Franklyn and bring him to the meeting. There are now only a handful of current members who can top Franklyn's record of 67 years plus as an EAS member! ☆

Editor's News 'n Views



Howdy Astro Fans!
Happy Holidays? *Bah, humbug!*
When it isn't cloudy or raining, it's freezing cold, which makes me drag out the same old plan, like an old pair of moth-eaten thermals, to pay big bucks for electric underwear (never happens). And the

good news is: it's going to be like this for the next SIX months. But, nevertheless, the bright Winter stars beckon, the soft glow of the planets as they dance through the night sky lures us out; and so we go, risking frostbite and lost extremities to once again witness the wonders of nature, gliding by overhead like the Christmas lights on Picardy Drive. (There's a definite love/hate thing going on, here.)

First up: It's election time! We got in our nominations for officers and board members last month, and now we get to vote on 'em. All of the current officers: Pres. Carter Roberts, VP Phil Crabbe, Secretary Linda Lazzeretti, Treasurer Don Stone, Events Coord Dave Rodrigues, Dir of Telescope Makers' Workshop Paul Zurakowski, Dir of Equipment Ken Swagerty, Groups Coord Terry Galloway, Librarian Paul Hoy, Membership Registrar Bruce Skelly, Editor Don Saito, and Board Members Alan Fisher, Conrad Jung, Alan Roche, and George Roush. Plus, we've got three additional board members to vote on: Eric Campbell, Celeste Burrows, and Gerald McKeegan. How nice!

In the September 2004 issue of the Astronomical League's quarterly magazine, *The Reflector*, there is an article called, *Have Transit Will Travel*, written by Jackie Beucher. On page 13, she mentions someone familiar to all of us: "*The morning of the transit dawned bright and warm. Such a variety of telescopes! – a perfect time for the techno-nerds to shine. And shine they did! I'm no expert, but I think the prize goes to **Carter Roberts** of California, who had so many gadgets not all of us were sure what they were for!*" So, congratulations to Carter as the *Techno-Nerd-to-beat-all-other-Techno-Nerds*. Was there ever really any question? ☺

Robert Garfinkle, EAS member and Fellow of the Royal Astronomical Society, has a new article in the December issue of "Astronomy" magazine. "Polar Moon" (pages 84-89) is about the Sir John Franklin expedition to locate a Northwest Passage through the Arctic seas in 1845. The expedition was a total loss, but 6 men associated with Franklin or the attempts to rescue him and his men have been honored with lunar features named for them. The article recounts the expedition, the rescue attempts, and what you can see when you observe these lunar features. Check it out.

I put the word out last month that I was looking for people to help do the newsletter and web site, and was flooded with calls and emails of members wanting to contribute! Then, my alarm went off, and I woke up. ☺ Well, the request is still out there, for any of you who are teetering on the edge of commitment. I say, what the heck—take the plunge! But that's just me.

That's it for now. See you – IN THE FUTURE! ★

Spare Shots

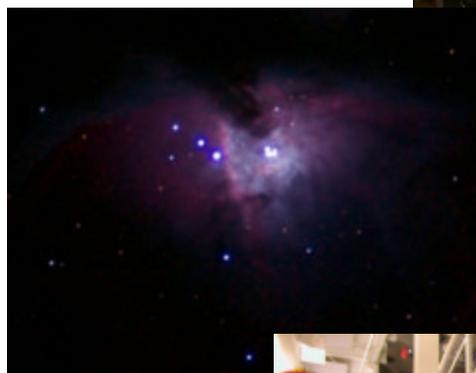


▲ *Series of the total lunar eclipse images from October 27, by Conrad Jung*

▶ *It's been a bit slow in the TMW (Telescope Makers' Workshop), lately, so Instructor Dave Barosso decided to work on his own telescope. Photo by Don Saito*



◀ *The Orion Nebula*
Photo by Paul Hoy



▶ *Ken Swagerty talks exo-planets with pioneer of the field, Debra Fischer!*

That's it for this month!

★



Sundial Bridge at Turtle Bay

By Ellis Myers

Imagine a sundial with a gnomon soaring to 185 feet above your head, and with the shadow progressing along its arc at the rate of an inch every five seconds. You really don't have to imagine it, because you can observe one at first



From a vantage point east of the span, it is evident that the construction pays homage to its natural setting. Ducks, salmon, and small fishing boats have free rein. The pylon is 217 feet tall, measured from its ball-bearing support at river's edge.

hand in Redding, California. The Sundial Bridge at Turtle Bay crosses the Sacramento River as it leads you from the museums of the Exploration Park due north to the Botanical Gardens across the wide river. Although telling time is hardly a prime function of this sculpture, it is a marvelous piece of public art. Designer Santiago Calatrava said he wanted a bridge "right on the edge of the possible," and it was certainly that in its construction. Calatrava, the Spanish architect-engineer who gained fame with his main arena at the Athens Olympics, has received acclaim for other bridges in Europe, but this is his first in the United States.

The cable-stay design makes it possible to transfer the weight of the span to a single 14-inch ball bearing at the river's edge, so there are no bridge supports in the water. Further, the pedestrian deck is constructed of textured glass so that the shadow of the bridge on the water is less disturbing to spawning salmon.

The Sundial Bridge has rightfully become a popular destination, providing an interesting diversion along Highway 5, 200 miles north



The pedestrian walkway is of glass and granite. The cables protrude through the deck to anchor to the steel below.

of the Bay Area. But Exploration Park is well worth visiting, as well. It is a sprawling 300-acre campus filled with educational and entertaining activities focused on the relationship between humans and nature, with some emphasis on Native American culture. Trails begin here and follow along the banks of the Sacramento.

Of particular importance in the museum at this time is an exhibit on the Sundial Bridge Project and Calatrava's work. You can see, for instance, the four restaurant placemats, on the backs of which the concept of this cable-stay bridge was devised. This exhibit, runs only through January 16, 2005. ★



Around the plaza markers are set at 15-minute intervals from 11am to 3pm, presumably calibrated to be accurate on June 21. Everything is covered with a mosaic of white Spanish ceramic tile.

Save the Manzanita!

This is an informational update on the planned work party on Dec 4th to continue preservation work on Pallid Manzanita sites near Chabot Space & Science Center. This is a joint effort between CSSC and the Friends of Sausal Creek (FOSC).



Background:

The Pallid Manzanita is a native local chaparral plant that is listed as endangered by the state of California and as threatened by the US government. There are multiple sites of this plant in the greater East Bay. The City of Oakland and Chabot are charged with preserving a stand of these manzanitas that are located adjacent to the Chabot facility on City property that is part of the greater Chabot site. The FOSC has adopted a second stand of manzanitas about a quarter-mile southwest of Chabot on the other side of Skyline Boulevard.

Planning Meeting:

Work party planning meeting will be Friday, Dec 3, 4:00 pm in Chabot's Biology Lab. All those interested in helping with this project are invited to attend. Here's the tentative schedule:

9-12 Work parties at Chabot and FOSC sites

12-1:30 Pizza lunch at Chabot

1:30-4:30 Work party at Chabot

Please RSVP to Eric Havel (see contact info at the end of this article) by Wed, Dec 1 if you plan to participate.

Continued Page 5

Newly acquired VLD (very large dobsonian) for EAS

Mrs. Gayle Carr of Pleasant Hill, donated her deceased husband's last and largest, unfinished, home-made 16" telescope to the EAS to do with as we will. It's rather a monster—easily the largest "portable" telescope the EAS now owns. We have turned it over to the Galaxy Explorers to finish, and will either use it, or find it a good home. It is to be called the **Walter Carr Memorial Telescope**.



Gayle and Walter Carr

From Mrs. Carr:

My husband had a mineral collection and a chemistry lab when he was a little boy in Rhode Island. They had an M.D. neighbor who encouraged his scientific interests. (His family is still trying to figure out what planet he was from; no-one else had any interest at all in science). At age 16, he got job cleaning glassware for a chemical company, and loved it. When Terry (his family name) was 17 the family migrated to Glendale, CA where he finished his last year of high school and discovered the LA County Museum, which had a terrific High School program. He attended Glendale College for two years and finished his degree at Pepperdine, where he had been awarded a scholarship. Terry took a parasitology class, and was hooked. This became useful in his practice of medicine at Contra Costa County Hospital, which was where he took a residency after completing his M.D. degree at UCSF.

Terry was a T.A. at DVC in oceanography and marine biology for many years. The scope of his interest in science was astonishing. As someone at his memorial said "He never met an ology he didn't like" About 25 years ago he and a friend took a class from John Dobson at the Lawrence Hall of Science and made telescopes. He then launched into the big blue one, but it was too unwieldy to get out of the garage. He was interested in astronomy ever since though, and used an 8-inch, often. ★

The L-o-n-g-e-v-i-t-y Club

The list below contains all members alive or fossilized who have been with the EAS for at least 25 years(!). Our current living leader is Ken Landon who will soon reach the 60 year plateau. Note that Kingsley is within reach of joining the 20,000 day club. Glen Bailey needs only 73 more days before he reaches 50 years as a member. Conrad Jung and Alan Fisher are the newest members of the 30 year club. And lastly, Don Stone is the latest EAS member to notch 25 years... At last. ★

Ad Astra!

Don Stone (This is as of 10/31/2004)

	Preferred Listing	Curr Exp	DATE OF	Splits	Days	Years
1	Franklyn G. Creese	Deceased	1937,04,27	ok	24654	67.50
2	Betty Neall	Deceased	1936/04/23	ok	24525	67.15
3	Arthur S. Leonard	Deceased	1927,07,08	13,54	24476	67.01
4	Kenneth W. Landon	2005	1945/10/01	ok	21581	59.09
5	Frederick N. Veio	2005	1947/04/01	ok	21034	57.59
6	Anne S. Creese	Deceased	1948,02,17	ok	20336	55.68
7	Kingsley W. Wightman	Life	1950/04/01	ok	19938	54.59
8	James B. Gibson	2005	1953,10,03	ok	19388	53.08
9	Glen F. Bailey	Life	1955,01,15	ok	18188	49.80
10	Walter Marion	Deceased	1949/09/10	27,17	16354	44.77
11	Earle .G. Linsley	Deceased	1925,03,06	ok	16031	43.89
12	Weldon G. Thyberg	DNR	1957/11/04	ok	15337	41.99
13	Michael J. Robinson	2005	1963/10/12	ok	14691	40.22
14	Thomas B. Martin	2005	1963/04/20	19,19	13709	37.53
15	Steven T. Massie	2005	1969/10/19	ok	13528	37.04
16	Doug Berger	2005	1967,10,26	ok	13521	37.02
17	Herman P. Robinson	Deceased	1949/10/01	ok	13477	36.90
18	Terry R. Galloway	Life	1967,12,14	ok	13472	36.88
19	Helen Pillans	Deceased	1949/09/10	ok	12759	34.93
20	Mark Gingrich	2005	1971,10,15	ok	12071	33.05
21	Robert E. Schalck	2005	1971/10/15	ok	12071	33.05
22	David Treganowen	DNR	1970/10/29	ok	12046	32.98
23	Paul R. Zurakowski	2005	1972/01/21	ok	11979	32.80
24	Richard W. Sarrica	2005	1969/11/08	3,30	11881	32.53
25	Dorothy Williams	2005	1973/05/11	ok	11497	31.48
26	Julius C. Travis	DNR	1971/07/07	ok	11440	31.32
27	Carter Roberts	2005	1973/10/08	ok	11347	31.07
28	Conrad L. Jung	2005	1973/10/23	ok	11332	31.03
29	Alan R. Fisher	2005	1974,09,05	ok	11015	30.16
30	Carter Mehl	2005	1976/09/10	ok	10279	28.14
31	John Westfall	2005	1946/02/23	2,8,18	10099	27.65
32	Alan Roche	2005	1977/08/28	ok	9927	27.18
33	John Alfonso Jr.	2005	1973,11,07	ok	9855	26.98
34	George L. Johnston	2005	1977/11/08	ok	9855	26.98
35	Gary S. Nye	2005	1977/11/08	ok	9855	26.98
36	John P. Clancy	2005	1978,02,28	ok	9743	26.67
37	Dick Rudloff	2005	1978/12/11	ok	9457	25.89
38	Joseph O. Waidl	DNR	1967/02/20	1, 10,	9294	25.45
39	Paul K. Glanville	DNR	1974,04,16	4,21	9263	25.36
40	Don Stone	2005	1979.07,09	ok	9247	25.32

Manzanita—cont'd from Page 4

Volunteers are asked to work at one or both sites, and should wear protective clothing as there is poison oak. Bring gloves if you have them. Small tools like clippers, shears and pruners, small shovels, etc. would also be helpful—this is just our initial effort. We'll be doing an updated inventory, flagging and picture taking at the same time. I really don't expect the work to be very strenuous—poison oak and potential rain are the biggest potential headaches. We will push forward in a light drizzle. Questions about the Chabot site should be directed to Eric Havel. Chabot Board Member, Carter Roberts and I will be co-

ordinating the work party at the Chabot site. Questions about the FOSC site should be directed to the FOSC Field Coordinator, Kristen Hopper, at krhop@earthlink.net. Thank you for your support and interest in this important project.

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Eastbay Astronomical Society

At Chabot Space & Science Center
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December 2004
RETURN SERVICE REQUESTED

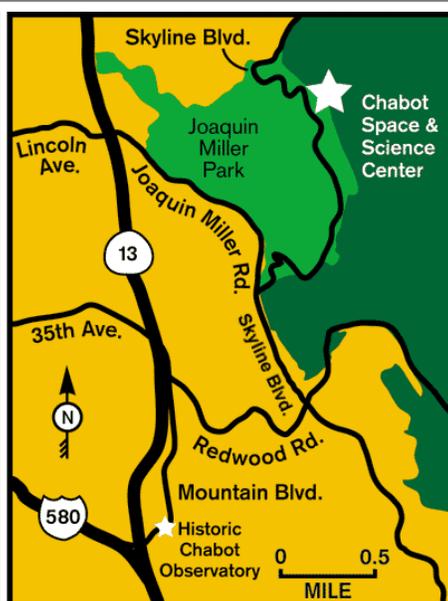
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Articles and photos for *The Refractor* are encouraged. Deadline for the January 2006 issue is January 1, 2005. Items may be submitted by mail to:
Editor - 3514 Randolph Avenue, Oakland, CA 94602-1228. Internet email address: donsaito@comcast.net Hm: (510) 482-2913.



FUTURE CONJUNCTIONS

Dec 9 EAS Board Meeting, Chabot, Soda Board Rm, 7:30pm
12 EAS Meeting, Holiday Dessert Social and View Night,
Chabot, Soda Board Rm, Spees Bldg, 6:00pm
Jan 13 EAS Board Meeting, Chabot, Soda Board Rm, 7:30pm
22 EAS General Meeting at Chabot, 7:30pm, Physics Lab
Note: *Most* meetings this year will be held on the 3rd Saturday of
each month

Join the Eastbay Astronomical Society

- Regular, \$24/year
- Family, \$36/year
- Contributing, \$40/year
- Student, \$15/year (digital news-
letter, only)
- Sustaining, \$60/year or more

Contact: Don Stone, EAS Treasurer
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Sign up online at <http://www.eastbayastro.org/>