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nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

Amateur
astronomers
just get better
looking ...

Janis Seaton



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nightwatch

February 2000

President's ADDRESS

Already we are going into the third month of the year. The skies are darkening with the much anticipated message of moisture. I need not fear this change in observing fortunes. With the telescope nestled in its customary corner of the garage and my library close by the side of my easy chair, I turn my mind to other matters of a more contemplative nature.

I just finished reading a book written by Key Davidson on the life of Carl Sagan. If one were to draw a portrait of this man in a paragraph or two, it would be very stilted and incomplete. His positive and negative qualities coexisted in a very changeable mixture that would affect his relations with fellow astronomer's, writers, politicians, and loved ones in ways that even he could not have guessed. Many fellow scientists regarded him with derision believing him to be a TV personality and not a real scientist. Others knew him to be a serious contributor to the advancement of science. This dualistic impression left by Sagan's personality traits of overwhelming confidence and egotism coupled with an almost religious zeal for promoting the belief in science, lead to his somewhat bumpy life of honors and rejections. Carl wasn't an observer. His interest in doing the grunt work of science was near zero. Also, his interest in a subject was limited both in time and intensity. His talent lay more in hypothesizing and the telling of the story of science. There were several times in his career where his ability to extend the theory further than the facts got him in trouble. Memorably, Carl's belief in the dominance of the process of life to rise and propagate no matter what the environmental barriers lead him to try and promote Venus as a possible haven for life (until the question of the temperature of the Venusian surface was proven beyond a shadow of a doubt).

Dr. Sagan had the idea of floating life forms in the atmosphere of Venus that he readapted to the upper reaches of Jupiter (remember Cosmos). Sagan also went out on a limb by predicting that the smoke from the oil wells set on fire in the Gulf conflict could cause a mini nuclear winter (he was wrong).

Sagan made many enemies on his way to being one of the most popular scientists of the later 20th century. Dr. Edward Teller hated Sagan (and vice versa) for his dead set opposition to the Star Wars Nuclear Policies. In the late eighties, the Reagan administration had brought together the ideas that had existed before, but not with such clarity, that one could survive a full out nuclear exchange between the USSR and the US. Carl Sagan, mainly convinced by his third wife, Ann Druyan, went to battle against this apocalyptic military planning and using the work of other scientists, promoted the reality of the nuclear winter scenario. From this time on, Carl set himself against much of the establishment military complex. Funny enough, it appeared that Sagan had more affect on the Soviet nuclear planning than his native land. Gorbachev made overtures to the US on reducing the nuclear stock piles partially believing that, if the famous US

PVAA Events Calendar

Month	Star Party	General Meeting	Board Meeting
February	5	18	25
March	4	17	24
April	8	14	7
May	6	19	12

scientist Dr. Sagan says it is a no win situation to blow up the world, then Reagan would agree to reduce the number of weapons in the world (he failed to realize the animosity between the Reagan administration and the nuclear winter promoters).

In basic science Sagan had and will always have his detractors. Most of the papers co-authored by him show detail work that was done heavily by the other members of the writing team. To be fair, Sagan did come up with many discoveries on his own or at least mainly on his own (the dust in the Martian atmosphere being the main reason the color of the planet would change was one of his pieces of work).

Sagan was a visionary, a weaver of celestial tales, even as he was dying from cancer. His last appearance on Ted Koppel's TV show, "Nightline" in October 1996, Carl looked haggard and hairless from the ravages of both the disease and the cure and yet still spoke inspirationally on the subject dearest to his heart: the Cosmos.

Carl Sagan died in December 1996, facing death in the way he faced life. He didn't believe that he would be saved the indignity of death at the eleventh hour, nor did he make his peace with God in the last moments when the meaning of being utterly alone could sway even the most ardent atheist. The book I feel paints a balanced picture, outlining the positive aspects of Sagan; the brilliant theorizing, the empathy and connectives to his audiences and the determination to see through to the end what he believed in; and the negative: the coldness toward others that he could turn on like a light, the destructive lack of concern for others he displayed at times. He was a brilliant and difficult man on a mission to make the Cosmos understandable to the public and worthy of public funds to explore. All in all the world would have suffered for the lack of this scientific herald. The book is available at Barnes & Noble and at Borders bookstores.

Good reading.

Roy Schmidt

PVAA General Meeting
21 January 2000

Announcements

An Evening on Mt. Wilson. We have set a date of April 1, 2000 and 18 members have signed up and have received some literature of the plan for the night and a few rules at the observatory. If you have paid and not received this material, please contact Bob Branch.

Upcoming Star Parties. The next Star Parties are March 4th at Death Valley, with an alternate party at Yesterday Ranch, and April 8th at Yesterday Ranch. Please contact Joe Hillberg about the Death Valley party details. For those more interested in the sky than in sleep, a Messier Marathon may be attempted at the April party.

Next General Meetings. The next meeting, on February 18th, will feature Bob Stephens speaking on the care and maintenance of Asteroids, and how to see them from your own backyard. The St. Patrick's Day meeting on March 17th will present facts about early Irish Astronomy and ancient sites and stories.

Book Catalog. For a good selection of Astronomy books, the Willmann-Bell Catalog was recommended. Their \$1 shipping fee is a nice feature. Find details at www.willbell.com.

What was up?

Lunar Eclipse. The January 20th eclipse gave most in our area an interesting, though not spectacular show. While some reported a completely clouded view for the whole evening, most were able to observe the moon slowly being swallowed up by the Earth's shadow and only missed the promised view of a reddish or orange moon as its' faint light wasn't visible

..PVAA 24 HR. Hotline.

Get the latest news on the star party, club meetings, special events and astronomy happenings.call 909/985-1684

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<http://www.cyberg8t.com/patrick/PVAA.htm>

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through the light cloud cover. Newspaper photos were spectacular, though, we could only wish we had been at their vantage point that night! One theory holds that the moon was less red at totality than in prior years as the dust in our atmosphere from the eruption of the Philippine volcano several years ago had dissipated enough to lessen this effect.

Presentation of the Evening

Randy Fear of the Big Bear Solar Observatory was our speaker for the January meeting. He delivered a fascinating lecture on the current research work going on at his facility. The Observatory itself is quite a sight, situated on a small peninsula of land jutting out into Big Bear Lake.

It's white dome looks quite out of place amid the motor boats and jet skis of residents and vacationers enjoying the beautiful lake and it's mountain scenery. Randy explained that, while the middle of a lake would be a terrible spot for a stellar observatory, it was ideal as an observing site for the Sun as daytime turbulence over water is much less than that over land. The water creates an inversion layer over the lake and this hot stable atmosphere often yields a very good view of the Sun. At night, however, the heat from a warm lake would rise into the cold dark sky making galaxies and stars other than our closest one very hard to see clearly. We also learned that our misfortune on hot, smoggy days means good luck for the Observatory as the same inversion layer which traps smog over our cities keeps this turbulent air from rising and interfering with the Sun gazing taking place at the higher altitudes of Big Bear. They have over 300 days a year of good seeing at their location and boast the best overall seeing throughout the year of any solar observatory in the world

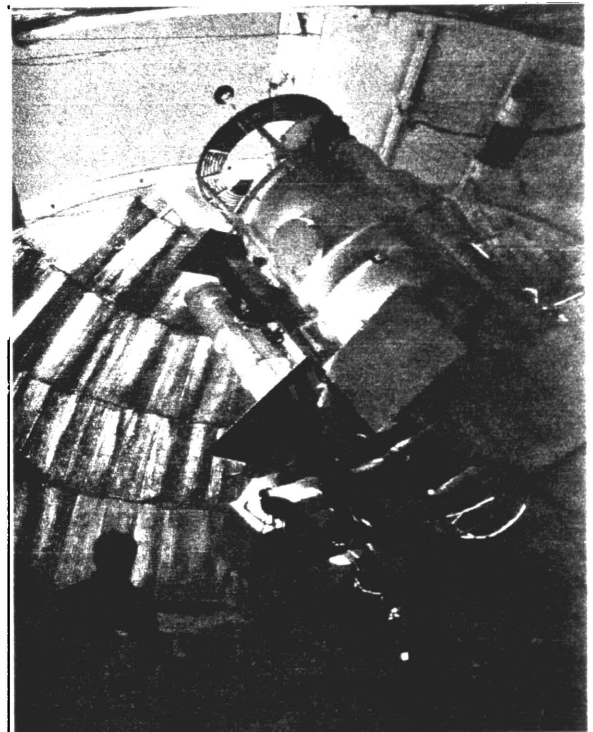
Their observations of sound and light waves coming

to us from the Sun are being used to expand our understanding of the Sun and it's constantly changing behavior. They are also studying the magnetic fields on the Sun, with sunspots being our visual indication from the Earth of an area with a high concentration of magnetic fields on the Sun. The solar cycle is an approximately 11-year pattern of slowly increasing and then decreasing solar activity. The actual polarity of the Sun changes in sync with the 11-year solar cycle as well, and some work at the Observatory attempts to help understand how this swap of North for South poles occurs. While we are currently within six months to one year of the next maximum in the cycle, as measured by observed sunspots, the peak has brought little dramatic solar activity like flares and prominences. With all the observing power trained on the Sun from Big Bear, they were hoping for a better show.

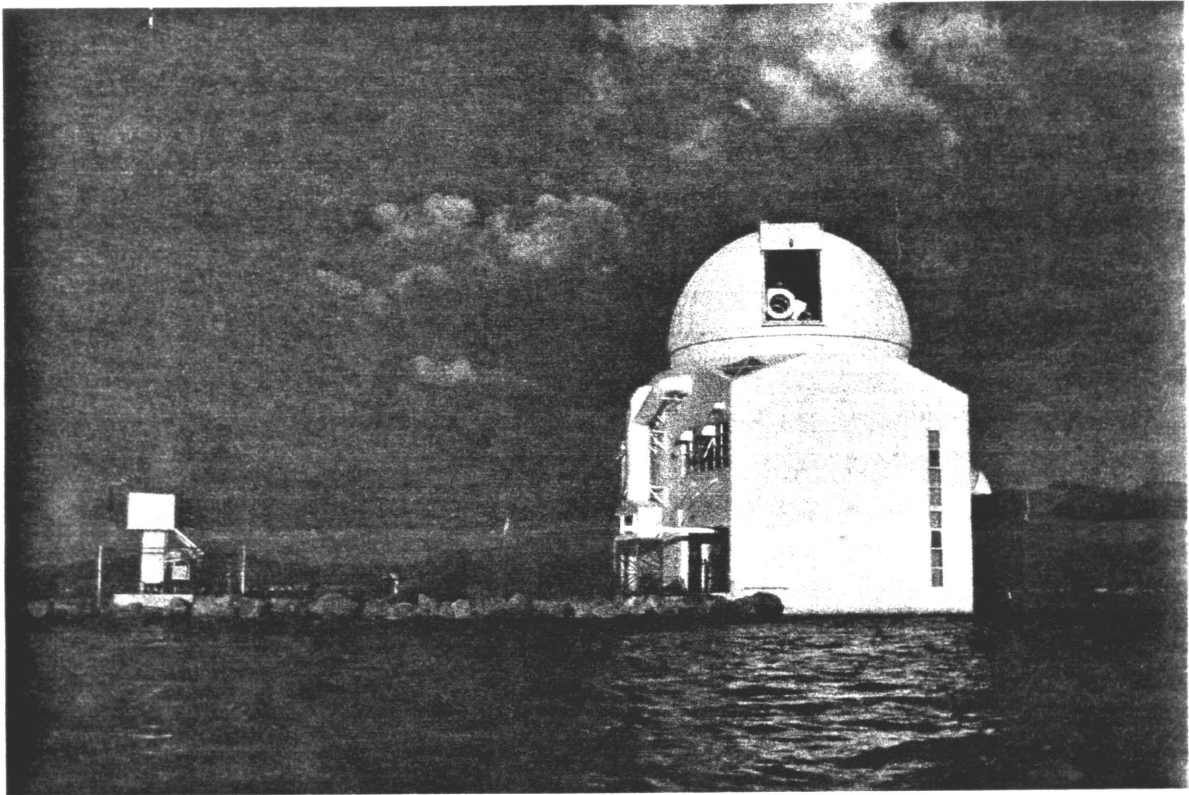
For more information on the Solar Observatory and their work you can visit them at <http://www.bbso.njit.edu>.

Claire Stover

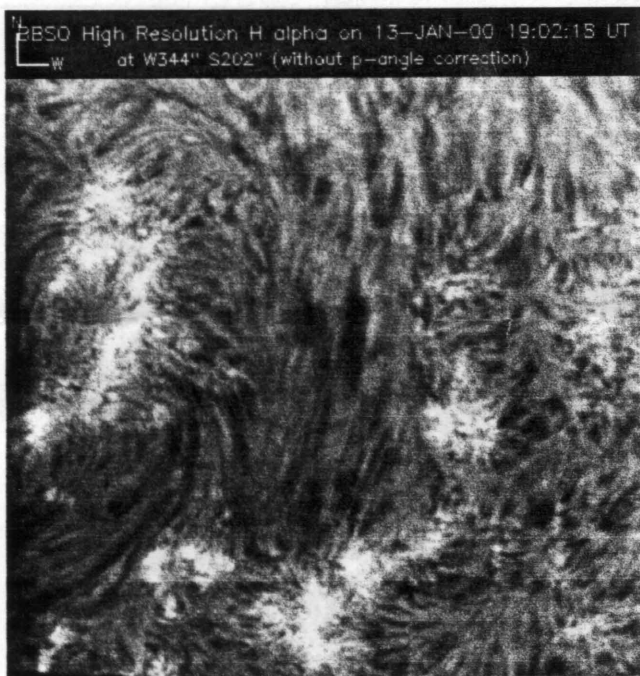
IMAGES TAKEN FROM BIG BEAR WEBSITE



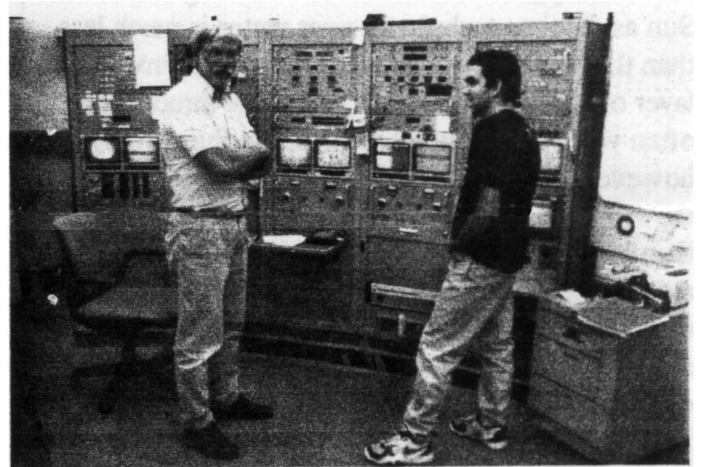
Telescope and Observer



The Observatory Taken From Big Bear Lake



BBSO High Resolution H-alpha Image



*Big Bear Solar Observatory
Showing the Observing Floor*