

OBSERVER

A STELLAR NEW YEAR TO ALL!

GEARING UP

While this comet isn't exactly a show-stopper, it has offered some great opportunities for astrophotographers following its path to gear up and get ready for comets C/2012 S1 (ISON) and C/2011 L4 PanSTARRS (see article in last month's *Observer*). Lately sprouting a tail, Comet Linear (C/2012 K5) was captured in Auriga streaking by M36 from Ron Pearson's CosmicRock Observatory in Evergreen, Colorado. The temperature was a bitter 6° fahrenheit on January 3, 2013 when Ron made this image. Photo details: eight 5-min. exposures with an unmodified Canon 400D on a C-80mmED with a Televue 0.8x focal reducer-flattener, Astronomik CLS filter, piggybacked and guided on 12-inch Newtonian. Imaged with "Nebulosity," guided with "PHD" and processed with "Nebulosity" and "CS 3 Photoshop" on a Macbook Pro.

Image © Ron Pearson

Calendar

4.....	Last quarter moon
11.....	New moon
18.....	First quarter moon
26.....	Full moon

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JANUARY SKIES

by Dennis Cochran

Did someone give you a star for Christmas? This is a nice romantic idea which, if you think about it, is not possible. Your star in described as such in a company's database (and more than one company does this) but nowhere else. The IUA, the International Astronomical Union, the world-wide body of astronomers that settles questions of a stellar nature among the nations, doesn't recognize these multiple assignments, as nice as they may be as a thought or a gift. The stars belong to the Milky Way Galaxy if they belong to anybody. But of course the companies attaching you to a star aren't claiming that you own the star, only that is it, in some sense, attached to you. And it is: in their database and in your gift. If you can locate your star in the heavens and look at it, probably through a telescope or binoculars since most of them are quite faint, it be-

comes attached to you in a new way: you have worked to find it and succeeded. And you have received its light from light-years distance across the universe. The star has communicated its existence to you, the ONE who bothered to find it.

Your star may well have planets, too, as astronomers are beginning to find. Besides slow, painstaking ground-based searches we now have the Kepler spacecraft looking for planets. At the present time planet searches discover larger-than-Earth planets that are close to their stars. Some day some space agency, or all of them working together, may have the money to build, launch and operate a multiple-spacecraft array that can find Earth-sized planets at Earth-like distances from their star. These have been planned but not built. Maybe someone on one of

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PRESIDENT'S CORNER

by Ron Pearson

2012 —“It was the best of times, it was the worst of times,” seems to describe this past year for us. I can't remember another year like this for those of us engaged in the science and art of watching the sky. We had two great astronomical events to watch this year—the annular solar eclipse nearby in New Mexico, and a historic Transit of Venus which none of us will ever witness again. Both of these events occurred within a couple of weeks in early summer. Normally a lack of rain and thereby clouds would allow us to go out and observe even more, but historic drought brought huge and destructive wildfires to our north and south Front Range neighbors, burning many out of their homes and generating clouds of smoke and haze that obscured our best night skies and caused the cancellation of the “Weekend Under the Stars” star party by our Wyoming friends. Even our plains dark sky site viewing was curtailed by the sudden appearance of a huge oil drilling derrick that was drilling for more fossil fuel with lights ablaze 24-7 during our summer and fall months.

All this did not deter our astro-outreach as we were able to field volunteers with telescopes at both Chamberlin and the Denver Museum of Nature and Science (DMNS) for the partial eclipse, the transit of Venus and Colorado Astronomy Day. Amidst all this, the center of our DAS galaxy, Chamberlin Observatory, welcomed an increase in public visitors to nearly 5,000 strong in



2012—more than 1,000 attending the Transit of Venus and during some good weather monthly Open Houses. Our DAS membership has also grown to nearly 400 this year as our membership manager gurus, Brad and Darrell, opened our on-line door even wider with “Paypal.”

Unfortunately, late this year three of our most active astro-volunteer friends have been sidelined with major health challenges and we don't know when or if two of them will be able to return to “active-duty.” We don't know what 2013 will bring for us, but we do know there will be 12 new moon weekends, 12 Chamberlin Open Houses, many Public Nights and clear skies at least some of the time. Additionally, we look forward to at least two comets with a huge potential to grace our night skies with cosmic beauty.

It certainly has been a privilege to serve the DAS these past three years as your president and certainly humbling to work with all those E-board and non-elected volunteers and public night volunteers who do so much for the DAS in our world of “sharing astronomy” with members and the public. Once again it's time for our election of new officers and board members for another year. All terms are for one year. Nominations will officially open at our January 25th meeting and continue to the Annual Meeting in February. It's up to you, our members, to nominate a new slate of officers and board members, and then vote at the February 22nd Annual Meeting at Olin Hall. In the meantime, contact the Election Chair, Tim Pimentel or David Shouldice if you wish to make a nomination. Only members in good standing can nominate or be nominated so I hope by then you've responded to our renewal notices sent by email or snail mail. If you have ideas for improving the DAS in any of its major aspects, if you think something should or could be done differently or better, or just want to be in on the decision-making and direction of the DAS, the best way to do that is offer your name for nomination to be a board member or officer. Certainly 2013 can be the best of times if you get involved.

To all of you, clear skies, good health, and “Keep Looking Up” in 2013! ★

DAS SCHEDULE

JANUARY

- 1 New Year's Day
- 4 E-Board Meeting at Chamberlin (Begins at 7:30 P.M.)
- 11-13 EGK Dark Sky weekend
- 19 Open House at Chamberlin Observatory: Cathie Havens of S&S Optika—“How to Use Your New Telescope.” (Begins at 7:00 P.M.)
- 25 General Membership Meeting at D.U.'s Olin Hall: Toshiya Ueta, PhD: Circumstellar shells; and Nomination of Officers (Begins at 7:30 P.M.)

FEBRUARY

- 1 E-Board Meeting at Chamberlin (Begins at 7:30 P.M.)
- 8-10 EGK Dark Sky weekend (Messier Marathon)
- 16 Open House at Chamberlin Observatory (Begins at 6:00 P.M.)
- 22 Annual Meeting at D.U.'s Olin Hall: Election of Officers and speaker Bill Tschumy on *SkySafari* (Begins at 7:30 P.M.)

Public nights are held at Chamberlin Observatory every Tuesday and Thursday evenings

beginning at the following times:

March 13 - April 14 at 8:00 P.M.

April 15 - August 31 at 8:30 P.M.

September 1 - September 30 at 8:00 P.M.

October 1 - March 10 at 7:00 P.M.

Costs to non-members are: \$3.00 adults, \$2.00 children.

Please make reservations via our website (www.denverastro.org) or call (303) 871-5172.

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The Executive Board conducts the business of the DAS at 7:30 p.m. at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome.

www.denverastro.org

JANUARY SKIES

(CONTINUED FROM PAGE 1)

these newly-discovered planets has been given our Sun as their star!

Jupiter is a lovely object these cold nights. Several people at the recent Chamberlin Observatory Open House mentioned the beautiful view of the giant planet as seen thru various telescopes. Farther south in the January sky, the little-talked-of constellation Eridanus the River tumbles along east of Cetus the Sea Monster, villain of the Andromeda tale. The celestial river is born between the nebulae just west of Orion's western leg, whose foot is the bright star Rigel. One of these nebulae is IC 2118, with the headwaters of the river running north along its east side. The larger nebula between the infant stream and the leg of Orion is not identified in my *Peterson's Field Guide to the Stars and Planets*, but may be on your star chart. Galaxy NGC 1726 is west of the borrom of IC 2118. Eridanus then flows abruptly west from its Beta star most of the way to Cetus before plunging into southern skies. There are galaxies to be seen around its eastern Omega and Nu stars too. Peterson says that 40 Eri B, the river's Omicron star, which is actually part of a triplet including a very low-mass red star, is the easiest to spot white dwarf in our sky. This triple star is at about 6 degrees south declination and RA 4hr 12 min. Peterson also tells us that NGC 1300 is a "fine example of a barred spiral galaxy." It is in a little group of galaxies at 20 degrees south and RA 3hr 20min, if you can see down that far.

The field-filling galaxy M31 of Andromeda is now straight overhead. It was a popular object at the Open House, with no climbing of the ladder necessary because the Clark was pointed straight up. And M31's smaller fellow, M33, a more loosely wound type of spiral which we see face-on, is south of that, almost down to Triangulum's sharp southwestern tip. Below that lies Aries the Ram, an east-west straggle of stars. Straggling farther east we find the Pleiades, the Seven Sisters, of which only six are still bright. This cute little asterism has two other names as well: M45 and, in Japanese, Subaru. Jupiter is down-east from that cluster. And to the west of all of these last-mentioned objects is the Great Square of Pegasus the Winged



A LOVELY PAIR

NGC 2071 and M78 (on the right) form a distinctive pairing of reflection nebulae in the dust clouds north-west of Alnitak in Orion, very close to Barnard's Loop. Buried inside and bursting through the molecular cloud are hot young T Tauri stars in the process of being formed. A white spot to the right (south) of M78 is McNeil's nebula, a highly variable light plume discovered by amateur Jay McNeil of Padukah, Kentucky in January 2004. Acquired by Darrell Dodge at the EGK Dark Site in November 2011 with a Canon 450D DSLR and an AT81N imaging Newtonian.

Image © Darrell Dodge

Horse. If you ride along the top of the horse, almost halfway across is the double star 78 Peg, right where a saddle might be. The southwestern leg of the horse, which ends with a turn to the west, then points directly to the gorgeous globular cluster M15, floating right above the tiny constellation Equuleus the Small Horse. If you've lost track of where we are, west of the little horse is easy-to-spot Delphinus the Dolphin. Surf into the new year on this man-friendly beast! ★

ABOUT THE DAS

Membership in the Denver Astronomical Society is open to anyone wishing to join. The DAS provides trained volunteers who host educational and public outreach events at the **University of Denver's Historic Chamberlin Observatory**, which the DAS helped place on the National Register of Historic



Places. First light at Chamberlin in 1894 was a public night of viewing, a tradition the DAS has helped maintain since its founding in 1952.

The DAS is a long-time member in good standing of the **Astronomical League** and the **International Dark Sky Association**. The DAS' mission is to provide its members a forum for increasing and sharing their knowledge of astronomy, to promote astronomical education to the public, and to preserve Historic Cham-

berlin Observatory and its telescope in cooperation with the University of Denver.

The DAS is 501 (c)(3) tax-exempt corporation and has established three tax-deductible funds: the Van Nattan-Hansen Scholarship Fund, the DAS-General Fund and the Edmund G. Kline Dark Site Fund.

More information about DAS activities and membership benefits is available on the DAS website at www.denverastro.org.

FAIR WINDS, BILL, AND THANK YOU

by DAS Members

Bill Ormsby joined the DAS in 1992 and almost immediately became involved with the club. One of my first remembrances of him was during his first camping star party in the fall of 1992. This was before the widespread of the internet and more than a few times, the location information of the events were either wrong or inaccurate. These directions were often announced by the hosts only a couple of months prior to and a quick one page newsletter supplement was mailed out to the membership announcing these events.

This one in 1992 was the Fall LAS star party held in the Pawnee National Grasslands. The directions to the Longmont Astronomical Society's usual "Cactus Flats" site were sent and on the Friday evening I arrived at the site and I found that Bill and his wife Grace were already there with their camper. Others arrived and after awhile we deduced that only the DAS members were on the site. Dan Wray decided to go to the nearby Antelope Valley campground and he came back and told us that the LAS members were there. We all decamped and moved to the correct site as Bill and Grace stayed behind to redirect the other arrivals to the real site until noon the next day when they were relieved by another member.

After a DAS meeting or Open House event, a core set of members usually adjourned to the Village Inn. Bill and I had a ritual at the "V.I." He would order not just an iced tea, but a SENIOR iced tea. The cold drinks were served with a lemon wedge and Bill didn't like lemon. He had me pluck off the wedge if we sat close to each other or he would bring it to me, balanced on a teaspoon. I usually would suck on it in front of Jack Eastman and Jack would mention something about puckering a trombone section.—*Joe Gafford*

* * * * *

Upon coming to town, Bill was the first new DAS person I had the pleasure to meet. It was Christmastime, and the small gift shop in the building where I worked sold blinking red-light Rudolph noses on an elastic band. I thought these would be handy for making the wide legs of my scope more visible so that people at public star parties wouldn't trip over them, so I bought a handful and brought them to the Open House. When I gave one to Bill as a thank-you for the welcome, he wore the elastic band with the blinking round red light on his forehead, like a miner's head light, and said the blinking was to indicate when he was having an idea. That cute-faced mental image will stay with me until I hit senility.—*Lisa Judd*

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My friend, Bill Ormsby, was a true gentleman astronomer - insightful, inspiring, but always humble, as all great people are. In ways he wouldn't understand, I will miss his counsel and his lessons on simple approaches to life, along with that hoarse voice and cherubic grin that let you know you were in the company of a wonderfully warm and giving person, and how lucky you would be. Good-bye, Bill O.—*Steve Solon, former DAS president.*

* * * * *



Last summer during a Tuesday Public Night we were up in the dome with a few guests. We were looking at something near the zenith, I can't remember what it was, but the point is that we were not using the gantry which was parked along the North wall to the side of the office door. While we were all standing on the South East side of the pier viewing and talking, I

heard a loud crashing sound and immediately looked in the direction of the sound, and in the dark, saw the dimly lit silhouette of a person's body lying prone under the gantry. I instantly thought the worst as I began moving in the direction of the tragedy. I was thinking that it was a guest and that they were probably horribly injured. When I got to the scene, the body was still motionless and I began recalling my training in CPR thinking that I was about to witness the worst.

When I began kneeling down I realized that it was Bill Ormsby on the floor. He was lying face down, perfectly flat with his arms out front and over his head clutching the cash box he was in the process of carrying to the office. I am guessing that while in route he for some reason decided to take a short cut under the gantry to get to the office and had tripped on the lower rail under the platform. As soon as I reached out and touched him he began trying to get up. I had to hold him down at first, telling him to relax for a minute and take inventory of his senses and possible broken bones. He chuckled like he always did in that giddyish tone and said that he was fine. Not believing him at first I kept him from just bouncing to his feet for a while longer, but it soon became apparent that he somehow survived a fall that would have caused some serious injury to the majority of the rest of us. He arose unscathed from the fall and was only worried about the condition of the cash box. I was amazed!

After closing down for the night we went to V.I. and later I asked him why he attempted to walk under the gantry and he said he did not know and joked about it. I can no longer remember exactly what he said, but it was funny.

Bill was a tough cookie. Always happy and cheerful; playful and ready for a trip to V.I. I am happy to have had the opportunity to know him and to work with him for the short time that I did. We have all suffered a substantial loss with the passing of this man.—*Scott Leach*

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If you have not been to our monthly meetings or Chamberlin Observatory events in the past few years you missed having the privilege of getting to know one of the nicest people in Colorado, if not on our planet, Bill Ormsby. Perhaps the only person nicer is his wife Grace. Rumor has it, that perhaps Bill wasn't really interested in astronomy and only came to the DAS to hang out with the Chamberlin crowd. Not so. He wasn't a dark site "regular" or have a long list of observing certificates, but I first remember meeting Bill with his family—Grace and son Sammy—at Star Stare and Fox Park campouts in the early or mid-90s. Bill pulled a small camper with his small car and set up a telescope and camped with us every summer to stare at the stars with his scope (a C-8 originally, I



BILL ORMSBY

Above, Bill with his camera outside of Chamberlin Observatory (Photo by Chuck Habenicht). Below left, Bill at his first star party at the Pawnee National Grasslands, Oct. 1992. Next page, top photo: Bill at the Texas Star Party in 1996 with his amateur radio rig, and bottom photo: a portrait of Bill taken in 2007 (Photos by Joe Gafford).



think, then a small dob reflector). Bill and family, “stood-out” from the crowd perhaps, because Sammy is severely challenged, so camping and observing took much more dedication than many would be willing to put in.

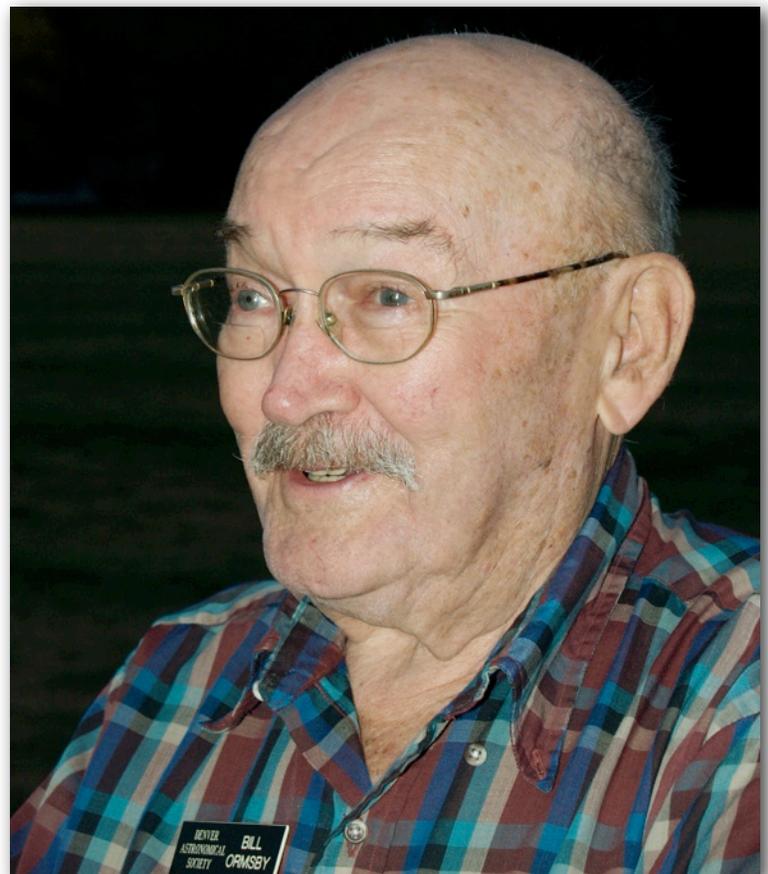
Bill was one of the few to grind his own telescope mirror during our mirror grinding class in the mid-90s under the tutelage of Jerry Wilkerson and Terry Chatterton in the gritty, damp basement of Chamberlin. Few of us amateurs have accomplished that or even attempted it. When the then new Chamberlin Observatory Director, Dr. Bob Stencel, instituted a more formal training program for operators of the 20-inch Clark-Saegmuller refractor, Bill was among the first to be certified in 1995. Bill became a part of the Public Night team on a tuesday night—eventually he was at Chamberlin for every tuesday night of the month, not just the one night per month that most Public Night volunteers do.

Bill was one of our more “senior members” and as years passed, telescope operation and then observing became much more difficult for him, as his eyesight weakened and he had a pacemaker put in, amongst his other challenges from diabetes. But he didn’t drop out or give up, he simply adapted and changed how he graced us with his presence and experience in DAS. I got to know more about him and learned his entire life was one of service to others. Bill was too young to be in the military on Dec. 7, 1941 but he witnessed, first hand as a young teenager, the attack on Pearl Harbor where his father was stationed. He joined the fight of WWII as part of the Merchant Marine Service. You might think that is less hazardous duty, but think about being on a slow moving, poorly defended transport ship carrying critical supplies or hundreds of fellow servicemen on an ocean full of enemy hunters looking for targets by the tonnage. One thing we shared was a career working for the federal government. I don’t know the details, but Bill had a career in what we used to call the “civil service” as an Air Traffic Controller for the FAA. No one in civil service serves more people directly or is responsible for more lives than that of an air traffic controller. Obviously the compensation is not commensurate with the level of responsibility and it is truly a position of service to all of us. Bill was a Ham radio operator and was well known for giving exams to would-be operators. He also served as an election judge for many elections. It was during these later years that he became the ever-present Public Night volunteer or just a DAS volunteer; if you needed something done, Bill would raise his hand and say “I can.” At every monthly Open House or special event, Bill was at the bottom of the stairs taking tickets, over the years greeting thousands of children and families and guiding them upstairs to the big telescope. Toward the end of the historic transit of Venus last June when he helped hundreds of others go upstairs to the dome room, I had to remind him to go up stairs to have a look before it was over, and he said, oh, I should, then headed up for a peek. He took over our Scope Loaner program, as “Quartermaster Bill,” and attended every meeting of the E-board. Being a Chamberlin “key holder,” if someone needed access to Chamberlin to pick something up or do something off-hours, Bill

would come over and open up for us. For many years he wore a red shirt that I used to kid him about as it seemed he had only one. Eventually Grace must have starting buying him shirts of a different color, because he changed! I don’t know what he did for others who were president, but when I became president of the DAS three years ago he’d give me a salute with a big smile and hello when he opened the door or greeted me coming into Chamberlin. He was probably partly joking, but I know he was also saluting because he was Bill O. and was happy to be reporting for service! He gave me a good hand shake and I gave him a salute (as best a weeny civilian can do) at our final meeting when David Shouldice and I visited him at Swedish Hospital last week. As he was being hooked up to a dialysis machine, I suggested they put some Swedish gasoline (coffee) in there to get him going and he gave us a big farewell wave and yeah! Thanks for your friendship and service to us Bill O. We know you will have Fair Winds and Following Seas in your new service to those that go before us “in the land of the unclouded sky.” —Ron Pearson, friend of Bill O., president. DAS. ★

DAS Honorary Member Bill Ormsby passed away at Swedish Hospital on December 29, 2012. A memorial service for Bill was held at Mountain Friends church in Denver on January 6th and was well attended by many of Bill's DAS friends and his family. Bill joined the DAS in 1992 and for his many years of service to the club, he was made an Honorary Member of the Society in around 2005.

At the December meeting of the E-Board, Norm Rosling was made an Honorary Member of the Society for all of his outreach, Public Night service and teaching of astronomy to children in particular. Norm is recovering from his injury and has recently been transferred to a care facility in Boulder.



TRIP REPORT – ARIZONA SCIENCE AND ASTRONOMY EXPO (ASAE)

by Donald Lynn

Photos by Tim Hogle

The First Annual ASAE (apparently they plan to repeat this) was held Saturday and Sunday, November 10 and 11, at the Tucson Convention Center. I carpooled with a friend. A friend from southern California took Amtrak, which cost less than gas, though it takes all night each way. I arrived late Friday afternoon, and checked into the Super 8, which was inexpensive and only about 2 miles from the Expo. Another carload of friends had checked into a nearby motel, and we all met up for dinner in a nearby Mexican restaurant. Next morning we all headed over to the convention center for 9:00 opening. We guessed wrong about which side of the building to park on, and almost attended some other function being held there.

Admission tickets were only \$10 per day (but actually cost \$11, due to an apparently unavoidable fee). If you have seen PATS in California, or I am told NEAF in New York, then you know what ASAE looks like: booths from most astronomy-oriented companies and organizations, and nearly continuous talks held in a nearby room. It appeared that there were slightly more booths than PATS, at roughly 100. By the way, ignore the “Science” in the Expo name; other than microscopes, I saw nothing non-astronomical.

Some of the booths were information only, and others sold products. Oceanside Photo and Telescope (OPT) and Woodland Hills Telescope, had many bargains and large selections to sell. Other booths that I found memorable were Apogee, Astro Physics, Celestron, Explore Scientific, iOptron, Kitt Peak, Lowell Observatory, Lunt, Meade, Mt Lemmon, NASA, Planewave, Quantum Scientific Imaging, Springer Publishing, Stellarvue, Tele Vue, and Vixen.

The Expo had door prize drawings at the end Sunday, drawing from tickets from attendees on

both days. So 2-day people had twice the odds. Winners did not have to be present. Some of the booths, such as OPT, held their own drawings, though most required you to be there at the drawing.

The talks were really top quality, except for lack of organization. The schedule handed out was wrong in many respects. But it was closer to reality than the online schedule I had printed before leaving home. The talk times were changed, speakers added and removed, and the schedule (both online and printed) had half the talks listed as the date after the Expo ended. Eventually they put up an easel with the correct talks and times listed, but you had to keep checking it for changes. Even trying hard to keep up with the changes, I missed two talks I would have liked to hear. In addition, the first talk Sunday was scheduled for the minute that they began admitting people to the Expo. Fortunately I missed only part of the introduction. All the talks scheduled time for questions, and many questions and their answers were quite good.

Probably the best talks were the keynotes Saturday and Sunday, by astronaut (and amateur astronomer) Don Pettit, and by the star of the TV series *Meteorite Men*, Geoff Notkin. Pettit showed a lot of pictures of the International Space Station (ISS), including the Russian zero-G toilet, of the Earth from the Station, of stars, of aurora, of the physics of weightlessness, and more. And he explained how he took them. A lot of them have been put together into time-lapse videos that are awesome. To take sharp images of the Earth under low light conditions he needed a barn-door tracker to compensate for the station's movement, rather than the usual Earth's rotation. He built the tracker out of “spare” parts he found laying around



Photo above: One of the four aisles of display booths representing over a hundred astronomical entities. Below left: Solar scopes were set up for public viewing. The sun cooperated with sunspots, prominences, and a flare.

ISS (like a Hasselblad film camera [after ISS went digital] and a presumably structural bolt from a Progress spacecraft). His latest expedition to ISS set the record for images taken, at about a half million. I was so impressed that after the talk I went up and shook his hand and thanked him for doing that great astrophotography from space. He replied that as an amateur astronomer he could not have possibly gone to space without doing astrophotography.

Notkin related some of his adventures looking for meteorites around the world. One that stood out was when a flash flood came up between his meteorite search location and where the rest of his crew was. He drove through water up to the middle of the windows on his vehicle, and somehow made it back in time to meet the search party being sent out for him. Then there was the time he got permission (after long negotiations) to search the area on a military bombing range where observations showed meteorites had landed. In spite of warnings, his companion kept picking up unexploded bombs, but nobody blew up. Another time he used the world's strongest permanent magnets dragged behind a truck to pull iron meteorites right out of the ground. After one search session, some unthinking assistant put the magnet assembly in the bed of a pickup truck, and it stuck. The magnets were guaranteed to lift about 2 tons when in contact with iron. He claimed they never got the magnet assembly unstuck.

Other notable talks were Adam Block on his observing/imaging/education programs at Mt.



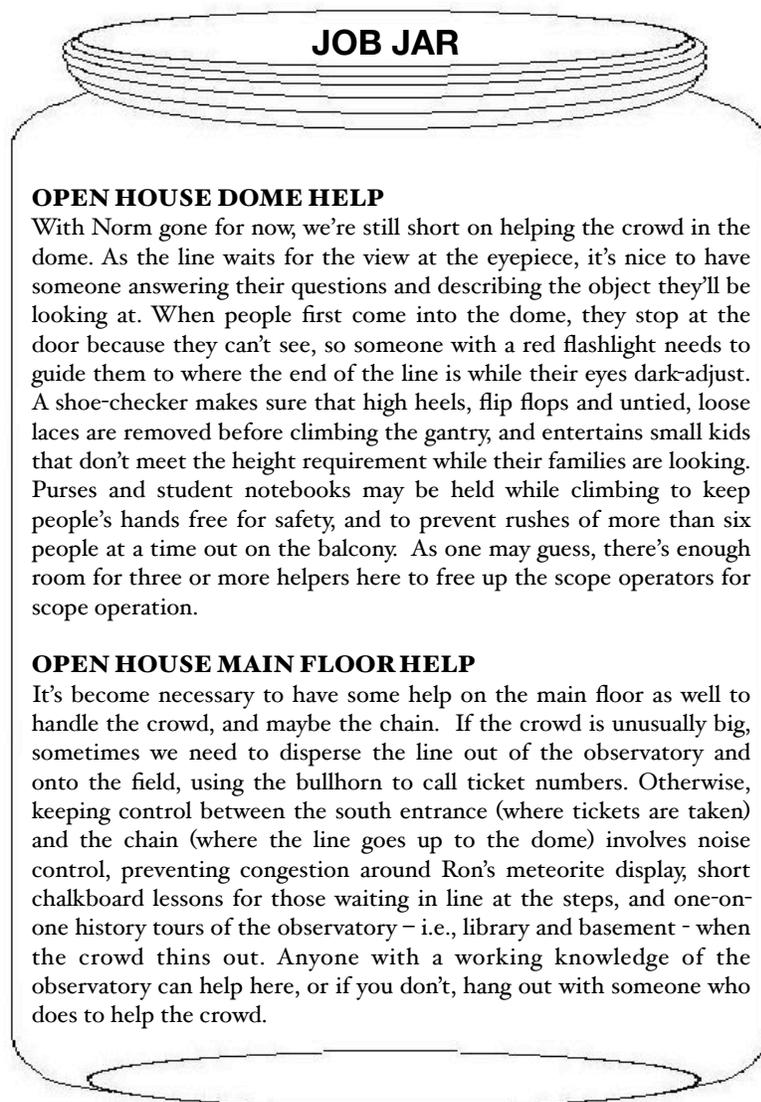
DAS JOB JAR

As we all know, it's never fun to say goodbye to a dear friend like we did this month. It's tough to describe all the small jobs Bill did for us—among them, he was considered for so many years as a steadfast figure every Tuesday Public Night handling the cash box, the keeper of the bottom-of-the-stairs chain at Open Houses to make sure the capacity upstairs stayed within the observatory's weight codes, and running our loaner program where he lent out our Coronado PST; I carried it with me all over Hawaii and others have used it at Colorado Astronomy Day. Such a major loss is accompanied with the good news that our other sick friend, Norm, is doing much better and may return to us in the future.

It's difficult to believe that this all started with Bill simply catching that nasty cold that went around in mid-October, and Norm suffering a severe head injury about the same time. Since then, people have been stepping up to fill their roles long before using this jar to ask for them. Such a wonderful club; our new Loaner Program coordinator is Chuck Carlson, and two people have stepped up to do Public Night presentations for Team 1 as Norm did, including Ron Hranac. Public Night teams have been working with our co-

ordinator Hugh Davidson to cover all Tuesday night fee collections for now, and there have been some rumblings about the Open House stair chain.

So, to wrap up the remaining loose ends and accommodate other needs that have come up, this edition of the Job Jar is all about Open Houses. These needs aren't very formal, and there are still two outside lawn needs from last year: Ready Mount operator for wheelchair access and Den Mother/Father to help people learn how to use new scopes.



OPEN HOUSE DOME HELP

With Norm gone for now, we're still short on helping the crowd in the dome. As the line waits for the view at the eyepiece, it's nice to have someone answering their questions and describing the object they'll be looking at. When people first come into the dome, they stop at the door because they can't see, so someone with a red flashlight needs to guide them to where the end of the line is while their eyes dark-adjust. A shoe-checker makes sure that high heels, flip flops and untied, loose laces are removed before climbing the gantry, and entertains small kids that don't meet the height requirement while their families are looking. Purses and student notebooks may be held while climbing to keep people's hands free for safety, and to prevent rushes of more than six people at a time out on the balcony. As one may guess, there's enough room for three or more helpers here to free up the scope operators for scope operation.

OPEN HOUSE MAIN FLOOR HELP

It's become necessary to have some help on the main floor as well to handle the crowd, and maybe the chain. If the crowd is unusually big, sometimes we need to disperse the line out of the observatory and onto the field, using the bullhorn to call ticket numbers. Otherwise, keeping control between the south entrance (where tickets are taken) and the chain (where the line goes up to the dome) involves noise control, preventing congestion around Ron's meteorite display, short chalkboard lessons for those waiting in line at the steps, and one-on-one history tours of the observatory – i.e., library and basement – when the crowd thins out. Anyone with a working knowledge of the observatory can help here, or if you don't, hang out with someone who does to help the crowd.

NOMINATIONS AND ELECTIONS

Nominations of DAS Officers and E-Board members for 2013 occur at the January 25th General Meeting. Tim Pimentel is the Election Chairperson. Contact Tim (Tim Pimentel tim.pimentel@yahoo.com) to make nominations between January and the election held at the Annual (General) Meeting February 22nd. Members must be present at the February Annual Meeting to vote.

Lemmon, Phil Plait (author of *The Bad Astronomer*) telling us why the world won't end when the Mayan calendar hits its "end" December 21, Pamela Gay on citizen participation astronomy, a panel discussion on what we are learning about the formation of the solar system from meteorites, and Steele Hill on orbiting solar observatories. I missed the talk by Wally Pacholka (due to late schedule change), but I know he had great images (I saw many of them at his sales booth).

Lunches turned out to be an issue. The snack bar inside the Expo had limited choice, expensive prices, and ran out of many items. So several of my friends went out to nearby restaurants for lunch. This worked fairly well Saturday, though it was

time-consuming, but on Sunday many area restaurants were closed, so choice was quite limited. The people who did best were ones who brought lunch with them.

There was an imaging workshop associated with the Expo, I believe including shooting your own images through a large scope, given by Adam Block, but I did not sign up for this (at considerable expense), so I can't report on how that went. I can say from hearing him speak (here and previously) that Block really knows his stuff.

Solar telescopes were set up outside, including white light, hydrogen alpha, and calcium light. Viewing was good, with one huge prominence and a good-sized sunspot, as well as the usual little

stuff. Allegedly a large solar flare went off, but it wasn't while I was watching.

There was a star party Saturday evening at a site provided by the local Tucson astronomy club. It was some distance away from town, so I didn't make it.

Monday morning we drove home, as most of us had commitments the following day. If we had another day or two, we could have taken in some astronomical sights of Tucson, such as Kitt Peak, Mt. Hopkins, the 8-meter mirror-making lab, or Flandrau Planetarium. Maybe next time.

Bottom line, I really enjoyed the experience, and likely will attend in the future. The others I talked to also considered the trip worthwhile. ★

Answers-----

Optics Jumble

SIRIUS

TASCO

MEADE

VIXEN

ORION

EFFIGY

If you eat junk food to stay up all night observing, you'll wind up

with a MIDRIFF CRISIS

Thank you, Lisa Judd, for last month's "Jumble" puzzle!
The answers are to the left!



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