

San Diego Astronomy Association

Celebrating Over 50 Years of Astronomical Outreach



December 2020

<https://www.sdaa.org/>
A Non-Profit Educational Association
P.O. Box 23215, San Diego, CA 92193-3215

SDAA Update

In keeping with state and local mandates in regards to social distancing, the **SDAA has cancelled all public outreach and club events** for the foreseeable future. These include our regularly scheduled monthly meetings at Mission Trails Regional Park.

Look for updates on the Lipp telescope.

Since TDS is private space there is no reason to lock down the facility but there are actions you can take to help keep the site safe for all of us. If you plan to visit and use the facility, please bring along some disinfectant wipes or disinfectant spray cleaner. When you finish using the restrooms or the warming room, please wipe down the areas that you touched in order to help prevent the spread of any viruses. As much as we love sharing the views of the night sky, try to maintain the recommended 6-foot social distance guideline.

Next SDAA Business Meeting

December 8th at 7:00pm
10070 Willow Creek Rd
San Diego, CA 92131
Via Zoom

Next Program Meeting

December 16th at 7:00pm
Live Stream

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Incorporated in California in 1963

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December 16th Program Meeting

16 Dec 2020 Dr. Alex Ji - Carnegie Observatories



Talk: The First Stars

Carnegie Postdoctoral Fellow

Email aji@carnegiescience.edu

Dr. Alex Ji is a postdoctoral fellow at the Carnegie Observatories. Alex is a near-field cosmologist, studying nearby stars and galaxies to understand the first stars and galaxies, the origin of the elements, and the history of the Milky Way. Alex's main lockdown activity has been eating Trader Joe's snacks

Video: <https://youtu.be/B8W-0VzFa90>

Newsletter Deadline
The deadline to submit articles for publication is the **15th** of each month.

[Link to SDAA Merchandise Store](https://sdaa28.wildapricot.org/SDAA-Store)

<https://sdaa28.wildapricot.org/SDAA-Store>

[Link to Outreach Calendar](#)

<https://calendar.google.com/calendar/embed?src=g-calendar@sdaa.org&ctz=America/Los>



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San Diego Astronomy Association Board of Directors Meeting *10 November 2020* – Unapproved and subject to review

1. Call to Order

The meeting was held via Zoom and was called to order at 7:07pm with the following board members in attendance: Dave Wood, President; Steve Hallman, Vice President; Melany Biendara, Treasurer; Gene Burch, Recording Secretary; Alicia Linder, Corresponding Secretary; Dave Decker, Director; Hiro Hakozaiki, Director; Mike Chasin, Director; Pat Boyce, Director, Webmaster; Jeff Stevens, Member Steven Myers.

2. Priority / Member Business

The current lessor of private pad #58 made a presentation about changes he's made to the pad to date and the board approved. He also mentioned some future development ideas for the pad site and the board gave recommendations in accordance with the site-use regulations. He was asked to present a detailed plan for any future developments to the pad for board approval.

3. Approval of Last Meeting Minutes

The October meeting minutes approved.

4. Treasurers & Membership Report

The treasurer's report was approved.

5. Standard Reports

a. Site Maintenance Report: Grading completed and gravel delivered. Gravel piles will need to be spread and a few members have agreed to get a skip loader in the coming weeks. The grader damaged conduit that powers Cruzen and 2 private observatories, this will be repaired in the next few weeks.

Installed air vents on the shower enclosure and repaired the toilet in the Men's room.
Purchased hardware to repair the dilapidated shower door.

b. Observatory/Loaner Scope Report: No Report.

c. Private Pad Report: We just leased 4 pads and have 3 new people on the waiting list leaving us a current total of 3 unleased pads including 36) and 9 people on the waiting list (2 of which are current pad holders looking to upgrade). It is possible that one of the 3 people on the waiting list will take one of the unleased pads. I forwarded you a proposal for a windbreak on Pad 39 that I recommend be approved.

d. Program Meetings Report: 16 Sept 2020 Speaker / Topic:
- Speaker: Mia de los Reyes
- Presentation: "The Loneliest Galaxies in the Universe"
- Attendees: 59
Current Program Meeting Petty Cash as of 6 Aug 2020 = \$524
Expenses Since Previous Report - None
Steve will review future meeting highlights in person.

e. AISIG Report: Dr. Jason Wang from Caltech made a Zoom presentation on photographing exoplanets and had 39 attendees.

f. Newsletter Report: Current issue looks good – nothing new to report.



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g. Website Report: We have been continuing to work as time permits on the new website. Not everything needs to be done before switching to it. For example, documents and links to resources can be added after the site is installed. So we should be ready to make the switch soon.

I am getting quotes from GoDaddy and another provider for web hosting. WP can't be installed on our current hosting plan, but the difference in cost is not large. I should have some numbers before the business meeting.

I need some images to install in the slider on the home page of the website. Unless there is some reason not to, I will grab images from the AISIG Flickr site.

h. Social Media: People are visiting our YouTube channel and we currently have 60 subscribers. The October monthly meeting, along with the presentations by Mia de los Reyes and Dr. Wang were posted.

i. Outreach Report: Last month we discussed our recent efforts to "go live" with real-time video observing ported to either a Zoom style meeting or to the public via YouTube Streaming capabilities. On October 19, Gary Hawkins and I set up and hosted a live viewing, live streaming session from Mt. Helix Park. The park was excited to support us, and gave us access to their network for the uplink.

The session was marked by serious humidity, uplink interruptions, and associated equipment issues, but we managed to complete a 2-hour session with many rich targets displayed. YouTube analytics revealed a high of 173 concurrent viewers, with probably 300 total connections. There have been approximately 3600 views of the YouTube video since. We consider the Mt. Helix event a successful first effort for the revival of the SDAA Outreach program. The link to that video is on Gary's personal YouTube site at:

<https://www.youtube.com/watch?v=cgfKyMQmAWM>

We currently have two other events scheduled during November and December. The next event will be hosted by OakOasis County Park in Lakeside on November 14. It has been posted to the calendars and will be publicized via the County system and through our own channels. Rather than using Gary's personal site, we are working toward streaming this event on the SDAA YouTube site, and posting the video there.

Following OakOasis, there will be an event hosted by the Borrego Springs Library on a date to be determined in early December. We have modified our format slightly to meet the county library objectives. Once again, the library has an excellent WiFi network outside of the building and available for us to stream the program.

We also have an opportunity to share a livestream of the penumbral Lunar eclipse on Nov 29/30. An astronomer from the website, Timeanddate.com is organizing a small group of imagers to follow the eclipse with live streaming video feed to their own production facility. He has contacted us and asked for assistance. The stream would be posted publicly, on their website. We are looking at our resources before we make that commitment.

Live streaming outreach events presents new challenges for SDAA volunteers, beginning with the skills, knowledge, and equipment to produce images in near real time. We also need to develop the video production capabilities, and posting procedures for the virtual audience via streaming media. Access to good bandwidth, open sky, and the SDAA YouTube and Zoom accounts is critical. Currently, there are precious few venues with a good sky and Internet access. We also need to discuss SDAA protocols for use of the club's accounts and virtual assets.

j. TARO Report: The frequent power outages have caused a failure of the battery pack that is part of the primary UPS. This is not unexpected as these usually have a life span of about 2 to 3 years. We are in year 5 of operation. The replacement battery pack has been ordered. As a safety precaution, TARO ops have been suspended.

k. Cruzen Report: Gene/Ed are working on an observatory operations manual.

l. Merchandise Report: No sales this past month.



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m. Astronomical League Report: Reminder: The Astronomical League annual conference, ALCON, will be held next August 4-7, 2021, in Albuquerque, NM. This will probably conflict with our own Julian StarFest.

n. JSF Report: No Report – JSF canceled until 2021.

6. Old Business:

- a. Site Grading – Grading complete, gravel spread, some finish work still to be done.
- b. Observatory/Warming room – Plan is to replace the old fluorescent fixtures with new LED lights (red and white) that will be dimmable. Once that's done, we'll get the drywall repaired.
- c. Downing Observatory Donation update – we need to reach out to Mr. Downing.
- d. Banquet/Fund Raising activities – going to form a committee and explore ways to hold the banquet and annual membership meeting virtually.

7. New Business:

- a. SDSU has awarded a number of Lucas Scholarships this year and we're looking for a way to introduce the recipients to the membership and to further strengthen our ties with SDSU.
- b. Dave Decker pointed out that since we now have so many social media platforms, it would be good to have a policy on their use. The board agreed and we're going to look into the possibility of creating a committee level position to manage our digital assets. The person filling the position would be under the supervision of the Board of Directors and would keep a master list of log-in information and passwords for all the clubs digital storage and social media platforms such as Google Drive, Twitter, Facebook, Zoom, YouTube, etc. There are details that must be worked out before a final decision is made.

8. **Adjournment:** The meeting was adjourned at 9:40pm.

2020 Star Party Schedule

Date	Hours	Type	Sunset	Twilight	Moonrise(set)	Illumination
12/5/2020	5:30 to 8:30 PM	Public	4:42 PM	6:09 PM	9:42 PM	76%
12/12/2020	5:30 to 8:30 PM	Member	4:43 PM	6:11 PM	5:34 AM	0%



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10" Meade LX200 Classic EMC w/Smart Drive



Presale price of **\$1,000** for Contributing Members only.

Cloudy Nights & Astromart pricing will be **\$1,200** plus shipping.

How about an exceptional 10" SCT at an absurdly low price. Comparable scopes have been advertised on Astromart for \$1,500 to \$1,600. Stepping up to a 10" primary is 56% increase in light gathering capabilities over the traditional 8" SCT. Be good to yourself this Christmas.

This one is very clean. I have not seen a Meade tripod this free of corrosion – original shipping box for storage. Optics are clean with the exception of some corrector plate surface dust. Model includes the "Smart Drive." JMI case included. 2" visual back and Bob's Knobs. A nice right angle finder is included – don't recall if it is correct image but at least it is half way there. A few starter eyepieces are in the case also. We ran the hand controller and as expected, it seems to be fully functioning. If that is not enough to entice you to pull the trigger, the package includes a very nice Meade 10" wedge.

Selling "as is." We don't think you will be disappointed. Respond quickly.

The bottom-line is; here is an extraordinary value for a visual scope with astrophotography capabilities. Please feel free to call me with any questions.

David Wood
858.735.8808

Homemade Astro-chair



Free to a good contributing member home. The astro-chair is very nicely constructed. 100% adjustable. The non-slip grab strip is surprisingly secure. Finished so it should hold up on a dewy night. Folds up to manageable dimensions.

Not suitable for wide bodies – be careful! While it has been stress tested, the chair is appropriate for up to a trim adult male.

The pricing could not be any better – free to a contributing member. Call me if interested or you have any questions.

Ed Rumsey
858.722.3846



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The Lucas Scholarships

Thinking about majoring in astronomy? Have your children expressed an interest? We hope this will inspire the next generation of astronomers!

Years ago, a former SDAA member, William (Bill) F. Lucas, endowed scholarships at San Diego State University and University of Arizona through the San Diego Astronomy Association to recruit more students to this field. His legacy clearly lives on as evidenced by the scholarships recently awarded on behalf of our organization to the following students majoring in astronomy:

Freshmen: *Beatriz Abreu, Heidi Lopez, Moises Martinez, Lizeth Sanchez*

Juniors: *Vladimir Bautista, Ruby Fulford, Alexia Kubas, Sai Pulikesi Mannan*

Seniors: *Kelcey Davis, Cynthia Ibrahim, Madeline Overton, James Lilly, Madison Walder, Maria Galloway – Sprietsma*

Graduate Students (Master's): *Alex Dimoff, Rex Lam, Kaelee Parker, Josiah Purdum*

We plan on introducing some of the students and their lines of study in a future program meeting, similar to our annual meeting showcasing the junior and high school Science Fair award winners.

For those of you new to SDAA, Bill was an early founder of our organization and instrumental in developing the 10-acre Tierra del Sol observing site. For many years he taught mirror and telescope making in the basement at the Reuben H. Fleet Science Center in Balboa Park and promoted astronomy throughout Southern California. When not making telescopes, he worked on undersea research vehicles at Lockheed near the Coast Guard station.

In 1970 Bill tied for first place in Optics with John Dobson at the Riverside Telescope Makers Conference. Dobson, yes that one, inventor of the Dobsonian telescope, expressed how pleased he was to have tied with Bill as a respected telescope maker.



SDAA members John Laborde and Bill Lucas at RTMC



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Sky & Telescope Subscription Benefit Suspended

The SDAA Board regrets that we are suspending the Sky & Telescope magazine subscription benefit for the foreseeable future. Over the past several months we have experienced increasing delays, processing issues, lost payments, complaints and, after speaking to multiple staff/supervisors at S&T, there is no end in sight while business operations are disrupted by Covid. We will restore this benefit when things return to normal.

We realize this will result in an increased subscription price and apologize for that. S&T does have a reduced astronomy club rate when you subscribe directly with them, however it is somewhat higher than our SDAA rate. For those of you with existing subscriptions, when you renew you can locate your account from their website and begin the renewal process there: <https://sky.pcdfusion.com/pcd/CustomerSupport/Account/Login?ReturnUrl=%2fpcd%2fCustomerSupport%2fApp%2f11672>. If you have any issues renewing please contact their customer service department.

Thank You for Your Amazon Donations

The SDAA board wants to thank members for using the AmazonSmile donation link as you've helped us raise over \$300 this year at no cost to you. This is three times the amount we received last year. Our URL is smile.amazon.com/ch/51-0183640 and, if you are an Amazon user, we hope you will encourage your family to use this option.



San Diego Astronomy Association

SDAA Contacts

Club Officers and Directors

President	Dave Wood	President@sdaa.org	(858) 735-8808
Vice President	Steve Hallman	VicePresident@sdaa.org	(858) 371-9706
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Committees

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Observatory Director	Ed Rumsey	Observatory@sdaa.org	(858) 722-3846
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Loaner Scopes	Ed Rumsey	loanerscopes@sdaa.org	(858) 722-3846
Governing Documents	TBD		
TDS Network	Dave Wood	TDSNet@sdaa.org	(858) 735-8808
Amateur Telescope Making	-Vacant-		
ALCOR (Astronomical League Correspondent)	Dave Decker	ALCOR@sdaa.org	(619) 972-1003

SDAA Editorial Staff

Editor - Andrea Kuhl

newsletter@sdaa.org

Assistant Editor: Craig Ewing

Have a great new piece of gear? Read an astronomy-related book that you think others should know about? How about a photograph of an SDAA Member in action? Or are you simply tired of seeing these Boxes in the Newsletter rather than something, well, interesting?

Join the campaign to rid the Newsletter of little boxes by sharing them with the membership. In return for your efforts, you will get your very own byline or photograph credit in addition to the undying gratitude of the Newsletter Editor. Just send your article or picture to Newsletter@SDAA.Org.



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NASA Night Sky Notes

December 2020



This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Visitors to Both Jupiter and Saturn

David Prosper

Have you observed Jupiter and Saturn moving closer to each other over the past few months? On December 21, the two worlds will be at their closest, around 1/5 of a full Moon apart! While the two gas giants may *appear* close, in reality they are hundreds of millions of miles apart. Despite this vast distance, a select few missions have visited both worlds by using a gravity assist from giant Jupiter to slingshot them towards Saturn, saving time and fuel.

Pioneer 11 was the first mission to visit both worlds! Launched in 1973, the probe flew past Jupiter in late 1974, passing just 26,4000 miles above its stormy clouds. In 1979, it became the first spacecraft to encounter Saturn. Pioneer 11 took the first up-close photos of Saturn and its satellites, and made many exciting discoveries, including the detections of its magnetic field and a faint “F” ring, before departing Saturn and eventually, the solar system.

The Voyager missions quickly followed up, taking a “Grand Tour” of the four largest and most distant planets in our solar system. Both probes were launched within two weeks of each other in 1977. Voyager 1 flew past Jupiter in March 1979, discovering Jupiter’s faint ring and two new moons, along with active volcanoes on Io’s surface! The probe then flew past Saturn in November 1980, discovering five new moons, a new “G” ring, mysterious ring “spokes,” and “shepherd moons” shaping the rings. After a brief encounter with Titan revealed evidence of complex organic chemistry and liquid on the moon’s frigid surface, Voyager 1 was flung out of the plane of the solar system. Following close behind, Voyager 2 took detailed photos of Jupiter’s moons and cloud tops in July 1979. Flying past Saturn in August 1981, Voyager 2 measured the thickness of Saturn’s rings and took detailed photos of many of its moons. This second explorer then captured images of Uranus and Neptune before leaving our solar system.

Cassini-Huygens was the last mission to visit both worlds. Launched in 1997, the mission flew past Jupiter in late 2000 and took incredibly detailed photos of its stormy atmosphere and faint rings. Cassini entered into Saturn’s orbit on July 1, 2004. The Huygens probe separated from Cassini, landing on Titan to become the first probe in the outer solar system. Cassini discovered geysers on Enceladus, fine details in Saturn’s rings, many more moons and “moonlets,” the changing oceans of Titan, and seasonal changes on Saturn itself. After revolutionizing our understanding of the Saturnian system, Cassini’s mission ended with a fiery plunge into its atmosphere on September 15, 2017.

What’s next for the exploration of the outer worlds of our solar system? While Juno is currently in orbit around Jupiter, there are more missions in development to study the moons of Jupiter and Saturn. Discover more about future NASA missions to the outer worlds of our solar system at nasa.gov.



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NASA Night Sky Notes

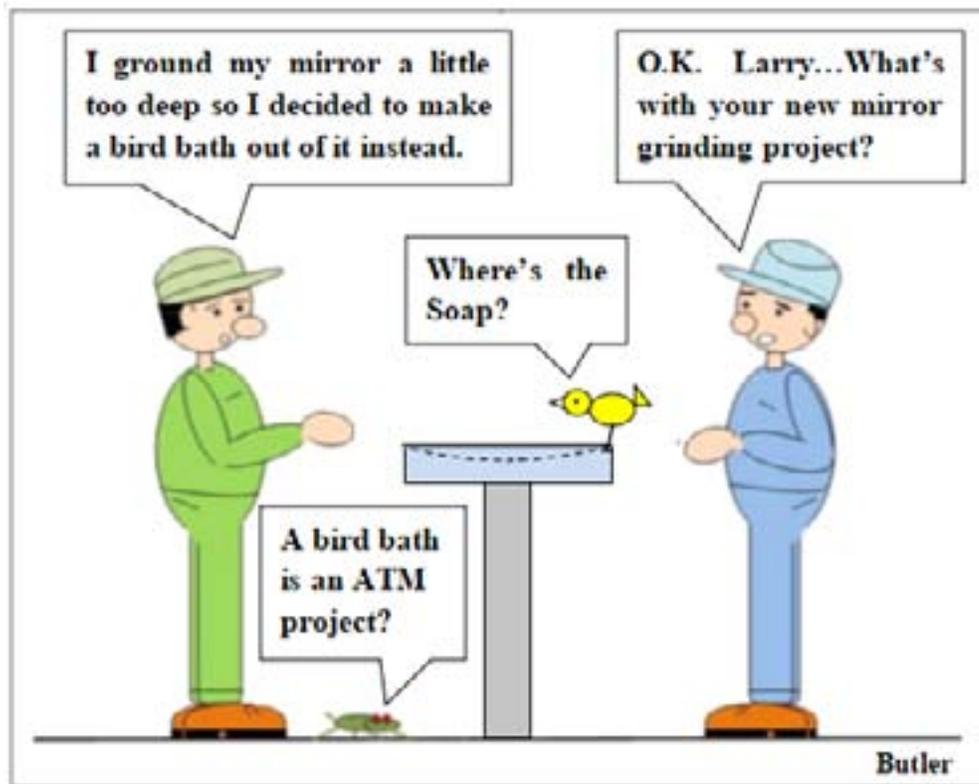
December 2020



The difference in technology between generations of space probes can be stunning! The top two photos of Jupiter and Saturn were taken by Pioneer 11 in 1974 (Jupiter) and 1979 (Saturn); the bottom two were taken by Cassini in 2000 (Jupiter) and 2016 (Saturn). What kinds of photos await us from future generations of deep space explorers?



San Diego Astronomy Association



MEMBERSHIP INFORMATION

Send dues and renewals to P.O. Box 23215, San Diego, CA 92193-3215. Include any renewal cards from Sky & Telescope or Astronomy magazine in which you wish to continue your subscription. The expiration date shown on your newsletter's mailing label is the only notice that your membership in SDAA will expire. Dues are \$60 for Contributing Memberships; \$35 for Basic Membership; \$60.00 for Private Pads; \$5 for each Family membership. In addition to the club dues the annual rates for magazines available at the club discount are: Sky & Telescope \$32.95 and Astronomy \$34. Make checks payable to S.D. Astronomy Assn. PLEASE DO NOT send renewals directly to Sky Publishing. They return them to us for processing.