San Diego
Astronomy Association
Celebrating Over 50 Years of Astronomical Outreach

August 2020

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.

The LIPP telescope will also be closed until further notice.

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
August 11th at 7:00pm
10070 Willow Creek Rd
San Diego, CA 92131

Next Program Meeting
August 19th at 7:00pm
Mission Trails Regional Park
Visitor and Interpretive Center
1 Father Junipero Serra Trail

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Incorporated in California in 1963
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Newsletter Deadline
The deadline to submit articles for publication is the 15th of each month.

Link to Outreach Calendar
https://calendar.google.com/calendar/embed?src=g-calendar@sdaa.org&ctz=America/Los

Link to SDAA Merchandise Store
https://sdaa28.wildapricot.org/SDAA-Store
San Diego Astronomy Association Board of Directors Meeting
15 July 2020 – Unapproved and subject to revision

1. Call to Order
The meeting was held via Zoom and was called to order at 7:05pm with the following board members in attendance: Dave Wood, President; Steve Hallman, Vice President; Melany Biendarra, Treasurer; Gene Burch, Recording Secretary; Alicia Linder, Corresponding Secretary; Dave Decker, Director; Hiro Hakozaki, Director; Mike Chasin, Director; Pat Boyce, Director.

2. Approval of Last Meeting Minutes
June meeting minutes were approved.

3. Priority / Member Business –

4. Treasurers & Membership Report - Report approved and 2019-2020 records ready to be sent to our accountant.

5. Standard Reports
a. Site Maintenance Report: There have been reports of wasp nests in several areas at TDS
b. Observatory/Loaner Scope Report: Both star parties for July have been cancelled. August planned dates are for the 8th and 15th and a decision will be made on those by the end of the month. Limited activity due to social distancing. One new member checked out an 8” dob and plans to borrow a few before actually buying. Making similar plans with another new member.
c. Private Pad Report: No report
d. Program Meetings Report: June 17, 2020 / Topic: Speaker: Dr. Jim Fuller/Presentation: The sound of the stars - Attendees: 61, Current Program Meeting Petty Cash as of July 7, 2020 = $524 Previous Report: $524, Expenses Since Previous Report – none. Discussed a way to upload the presentations to the cloud or YouTube so they will be available for those who can watch it live. Alicia is going to contact the Riverside and Orange County clubs to see if we can work with them on sharing speakers or recorded presentations.
e. AISIG Report: The AISIG meeting via Zoom featured Scott Dixon and Kin Searcy demonstrating various methods and equipment needed to get into the “art” of astro-imaging. Scott has edited both his and Kin’s presentations and posted to the “net” for reply and review.
g. Website Report: Nothing new to report
h. Social Media Report: No report
i. Outreach Report: No changes in our operations under Covid-19 procedures. All outreach events for July have been cancelled, and the August events will be cancelled in a week or so if our health guidelines do not change. For the record, Ed Rumsey, Dennis Ammann and Dave Decker have developed a skeletal plan to restart the program if and when circumstances allow.
j. TARO Report: Operations have resumed, weather permitting. Operations have been stable. Current targets in process:
   ➢ The Whale Galaxy – 20 hours, Ha,L,R,G,B. 75% complete
   ➢ Abell 39 – 18 hours OIII, I, R, G, B (member request)
   ➢ The Iris Nebula – 29 hours, Ha, SII, OIII, I, R, G, B
   ➢ The Crescent Nebula – 34 hours Ha, SII, OIII, L,R,G,B (member request) 70%
   ➢ The Elephant Trunk Nebula 36 hours Ha, SII, OIII, I, R, G, B (member request)
   ➢ Abell 2218 - 20 hours. I, R,G,B. (member request)
   ➢ 5 Exo-Plant targets this week.
k. Merchandise Report: Talked about having a sale on sweatshirts before winter
l. Cruzen Report: minor problem with wasps
m. Astronomical League Report: No report
n. JSF Report: JSF Cancelled until 2021
San Diego Astronomy Association

6. Old Business
   a. Still waiting for bids on grading
   b. Lock combo change at TDS targeted for August 2\textsuperscript{nd} – notices will be sent out
   c. Other old business - nothing

7. New Business
   a. Observatory/Warming Room repair still trying to find contractors
   b. BBQ planning – we’ll postpone a decision on the fall BBQ until September
   c. Call for new business – discussed posting of signs at TDS reminding people of the best practices for Covid-19 precautions. There’s a light in a neighbor’s residence that is intruding into the public pad area and possibly on private observatory. Gene and Mike to research.

8. Adjournment – The meeting was adjourned at 8:25pm.

Julian StarFest has been cancelled for 2020

Riverside Astronomical Society has cancelled NightFall that had been scheduled for October 15 -18 in Borrego Springs.
Images of Comet NEOWISE taken by an SSDA member at TDS on the evening of 19 July 2020
You are invited to join your fellow astronomy enthusiasts at the following online events:

General Meeting
Friday August 14th, 7:30pm PDT
Dr. Jay Pasachoff from Williams College will be talking about "Solar Eclipses: Math, Science, and Spectacle"
https://ocastronomers.org/calendar/general-meeting-august-2020/

Open Spiral Bar
Saturday August 15th, 10:00pm PDT
Come and present your club, astrophotos, activities, etc. or not, then socialize and ask questions.  
https://ocastronomers.org/calendar/open-spiral-bar-august-2020/

Beginner's Class
Friday August 7th, 7:30pm PDT
Kyle Coker will talk about how to get started in astrophotography.
https://ocastronomers.org/calendar/beginners-class-august-2020/

All meetings are free and open to the public and are held using zoom.

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Reza AmirArjomand
Vice President
Orange County Astronomers
## 2020 Star Party Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Hours</th>
<th>Type</th>
<th>Sunset</th>
<th>Twilight</th>
<th>Moonrise(set)</th>
<th>Illumination</th>
</tr>
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<tbody>
<tr>
<td>8/8/2020</td>
<td>8:30 to 11:30 PM</td>
<td>Public</td>
<td>7:40 PM</td>
<td>9:11 PM</td>
<td>10:49 PM</td>
<td>79%</td>
</tr>
<tr>
<td>8/15/2020</td>
<td>8:30 to 11:30 PM</td>
<td>Member</td>
<td>7:32 PM</td>
<td>9:01 PM</td>
<td>3:25 AM</td>
<td>14%</td>
</tr>
<tr>
<td>9/12/2020</td>
<td>7:30 to 10:30 PM</td>
<td>Public</td>
<td>6:57 PM</td>
<td>8:21 PM</td>
<td>2:09 AM</td>
<td>28%</td>
</tr>
<tr>
<td>9/19/2020</td>
<td>7:30 to 10:30 PM</td>
<td>Member</td>
<td>6:48 PM</td>
<td>8:10 PM</td>
<td>(8:42 PM)</td>
<td>9%</td>
</tr>
<tr>
<td>10/10/2020</td>
<td>7:00 to 10:00 PM</td>
<td>Public</td>
<td>6:20 PM</td>
<td>7:42 PM</td>
<td>12:55 AM</td>
<td>44%</td>
</tr>
<tr>
<td>10/17/2020</td>
<td>7:00 to 10:00 PM</td>
<td>Member</td>
<td>6:12 PM</td>
<td>7:34 PM</td>
<td>(7:13 PM)</td>
<td>2%</td>
</tr>
<tr>
<td>11/7/2020</td>
<td>5:30 to 8:30 PM</td>
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<td>4:52 PM</td>
<td>6:16 PM</td>
<td>10:46 PM</td>
<td>61%</td>
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<tr>
<td>11/14/2020</td>
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<td>6:12 PM</td>
<td>6:48 AM</td>
<td>0%</td>
</tr>
<tr>
<td>12/5/2020</td>
<td>5:30 to 8:30 PM</td>
<td>Public</td>
<td>4:42 PM</td>
<td>6:09 PM</td>
<td>9:42 PM</td>
<td>76%</td>
</tr>
<tr>
<td>12/12/2020</td>
<td>5:30 to 8:30 PM</td>
<td>Member</td>
<td>4:43 PM</td>
<td>6:11 PM</td>
<td>5:34 AM</td>
<td>0%</td>
</tr>
</tbody>
</table>

The combinations at TDS will be changed on August 2nd
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.
Interesting ATM Projects that still have a serious use:

4" f/10 Refractor

This instrument was lovingly crafted. The machine work is beautiful. Even the 1.25" eyepieces were handcrafted. It is presumed the optics were purchased. The rack & pinion focuser is very smooth. Alt-Az mount, which looks to be generic tripod ready. We viewed in daylight and the optics appear to be clean. A correct image diagonal is included. The case displays the same craftsmanship.

This is a spectacular instrument for a back deck!

8" Newtonian ATM

Looks to be a Peter De Baan creation but no provenance to support. Handle, wooden tube rings, and small hand knobs at the front of the tube, are what you would expect in a Peter design. The mirror is clearly identified as CAL-ASTRO, Pasadena, Calif. We surmised it was a mirror blank source but again have no documentation. Three vane spider. Focuser and finder appear to be in good condition. No mount. Labeled SDAA #5.

This scope could easily be converted to a traditional Dobsonian.

All scopes are currently stored at TDS. Please contact me if interested. Those with a great re-use plan and willing to travel for transfer of property; will be accorded the highest priority.

Ed Rumsey
for SDAA
858.722.3846
Summer Triangle Corner: Deneb
David Prosper

The Summer Triangle is high in the sky after sunset this month for observers in the Northern Hemisphere, its component stars seemingly brighter than before, as they have risen out of the thick, murky air low on the horizon and into the crisper skies overhead. Deneb, while still bright when lower in the sky, now positively sparkles overhead as night begins. What makes Deneb special, in addition to being one of the three points of the Summer Triangle? Its brilliance has stirred the imaginations of people for thousands of years!

Deneb is the brightest star in Cygnus the Swan and is positioned next to a striking region of the Milky Way, almost as a guidepost. The ancient Chinese tale of the Cowherd (Niulang) and the Weaver Girl (Zhinü) - represented by the stars Altair and Vega - also features Deneb. In this tale the two lovers are cast apart to either side of the Milky Way, but once a year a magical bridge made of helpful magpies – marked by Deneb – allows the lovers to meet. Deneb has inspired many tales since and is a staple setting of many science fiction stories, including several notable episodes of Star Trek.

Astronomers have learned quite a bit about this star in recent years, though much is still not fully understood – in part because of its intense brightness. The distance to Deneb from our Sun was measured by the ESA’s Hipparcos mission and estimated to be about 2,600 light years. Later analysis of the same data suggested Deneb may be much closer: about 1,500 light years away. However, the follow-up mission to Hipparcos, Gaia, is unable to make distance measurements to this star! Deneb, along with a handful of other especially brilliant stars, is too bright to be accurately measured by the satellite’s ultra-sensitive instruments.

Deneb is unusually vivid, especially given its distance. Generally, most of the brightest stars seen from Earth are within a few dozen to a few hundred light years away, but Deneb stands out by being thousands of light years distant! In fact, Deneb ranks among the top twenty brightest night time stars (at #19) and is easily the most distant star in that list. Its luminosity is fantastic but uncertain, since its exact distance is also unclear. What is known about Deneb is that it’s a blue-white supergiant star that is furiously fusing its massive stocks of thermonuclear fuel and producing enough energy to make this star somewhere between 50,000 and 190,000 times brighter than our Sun if they were viewed at the same distance! The party won’t last much longer; in a few million years, Deneb will exhaust its fuel and end its stellar life in a massive supernova, but the exact details of how this will occur, as with other vital details about this star, remain unclear.

Discover more about brilliant stars and their mysteries at nasa.gov.
Long exposure shot of Deneb (brightest star, near center) in its richly populated Milky Way neighborhood. Photo credit: Flickr user jpstanley. Source: https://www.flickr.com/photos/jpstanley/1562619922  License: https://creativecommons.org/licenses/by-nc-sa/2.0/

Spot Vega and the other stars of the Summer Triangle by looking straight up after sunset in August!
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.