Dr. Nicholas Galitzki
began his astronomy career at the California Institute of Technology where he earned his B.S. in astrophysics in 2008. While at Caltech he was involved in two research projects, one with a lunar seismometer developed at the Jet Propulsion Laboratories and another working with a weather monitoring station for the proposed Caltech Cornell Atacama Telescope. After Caltech, Nicholas took a break for a couple years which included a stint as a line cook at an Italian restaurant in Boulder, CO and time as a K through 9 teacher in Seoul, South Korea. After these adventures he continued his education at the University of Pennsylvania where he earned his doctorate in astrophysics in 2016. While at UPenn, his research concentrated on the development and launch of a balloon borne telescope from Antarctica and the subsequent analysis of the data from the mission that has revealed new details about the star formation process in our Milky Way. He has now joined the cosmology group at UC, San Diego on a project that aims to build the next generation of telescopes that will examine in unprecedented detail the polarized signal from the cosmic microwave background.
1. Call to Order
The meeting was called to order at 7:00pm with the following board members in attendance: Dave Wood, President; Steve Hallman, Vice President; Gene Burch, Recording Secretary; Melany Biendara, Treasurer; Dave Decker, Director; Hiro Hakozaki, Director; Mike Chasin, Director. Members/visitors in attendance: Dan Kiser (JSF)

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

3. Priority / Member Business – none

4. Treasurer’s & Membership Report
b. Mel is looking at various options for increasing the return on our investments

5. Standard Reports
b. Observatory/Loaner Scope Report - Nothing to report
c. Private Pad Report:
   We still have 4 available pads and 5 people on the waiting list. All the people on the waiting list have passed on the currently available pads. Board is considering revoking leases on pads which haven’t met the pad usage requirements. Still nothing more from Pad 14 about his proposed upgrade.
d. Program Meetings Report
   Updated 2020 Program Meeting Guest Speaker List – MTRP Auditorium Has Been Reserved for Dates Below
   18 Mar - Nick Galitzki - Simons Observatory (CMB)
   15 Apr – Paul Ericson IDA & S.D. County
   17 Jun – Dr. Jim Fuller – NASA Caltech
   15 Jul - TBD
   19 Aug - TBD
   16 Sept – TBD
e. AISIG Report:
   Secondhand info says the meeting went well. February’s meeting (2-26) will be a “deep dive” into TARO with Dave Wood
f. Newsletter Report – Again – thanks to Andrea for her great work!
g. Website Report – 2020 Banquet sponsors are now on the website.
h. Social Media Report – No report
i. Outreach Report:
   January has been another great month for Outreach activity. The most telling aspect is the large ratio of attendance at school events versus public events. This is a drastic change from last Summer when schools were not generally in session.

   The school / public cycle is also apparent in the distribution of events during the week. Most school events occur on weekdays during Standard Time. Support for school events is difficult, with beginning times around 5:00 PM on weekdays, and duration averaging only about 90 minutes, including setup and takedown. By contrast, the public events on weekends enjoy a much more flexible schedule, longer event times, and therefore greater support.

   For any member interested in supporting school events, think “simple”. We use moderate systems that are easy and fast to deploy. And students are always impressed with what we show them, even though we think it is very elementary. Here are the numbers for the month:
Totals for January:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Events Completed</td>
<td>13.0</td>
</tr>
<tr>
<td>Events Cancelled</td>
<td>4.0</td>
</tr>
<tr>
<td>Public Attendance</td>
<td>172.0</td>
</tr>
<tr>
<td>Private Attendance</td>
<td>1087.0</td>
</tr>
<tr>
<td>Total Attendance</td>
<td>1259.0</td>
</tr>
<tr>
<td>Mem Support</td>
<td>63.0</td>
</tr>
<tr>
<td>Average Mem/Event</td>
<td>4.8</td>
</tr>
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</table>

Year to Date since January 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tr>
<td>Completed Events since January 1</td>
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</tr>
<tr>
<td>Cancelled Events since January 1</td>
<td>4.0</td>
</tr>
<tr>
<td>Events Scheduled since January 1</td>
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<tr>
<td>Public Attendees since Jan 1</td>
<td>172.0</td>
</tr>
<tr>
<td>Private Attendees since Jan 1</td>
<td>1087.0</td>
</tr>
<tr>
<td>Total Attendees since Jan 1</td>
<td>1259.0</td>
</tr>
</tbody>
</table>

j. TARO Report
   Everything is good, some imaging has been attempted but poor weather is still causing interruptions. Current targets in the pipe are:
   • M-81
   • NGC 2359
   • NGC 1579
   One successful EXO run was completed and awaiting processing - WASP-43b

k. Merchandise Report – Merchandise has been re-stocked and a small notice and link to the online store has been placed in the newsletter.

l. Cruzen Report – Bill N has stepped down and Dave Wood has taken his place. The board noted the time and effort that Bill put into the observatory and is appreciative of his efforts.

m. Astronomical League Report – No report

n. JSF Report – Dan K reported that planning and preparation for JSF 2020 is well under way. It will again be at the Menghini Winery from August 13-16. The website and links to reserve camp sites are up and running.

6. Old Business
   a. Banquet Update – Mike C sent a survey out to all attendees and the overall response was positive.
   b. Other old business – None.

7. New Business
   a. Summer fundraising social event tentatively scheduled for July 25 on the rooftop of the Natural History museum.

8. Adjournment
   Adjourned at 9:00pm.
San Diego Astronomy Association’s 2020 Julian StarFest®

Please register now to attend the 2020 SDAA Julian StarFest®!

Once again, SDAA Members, friends and families are encouraged to prepare their scopes and attend the annual Julian StarFest.

This year, the SDAA Julian StarFest will be held at the Menghini Winery, from Thursday, August 13, to Sunday morning, August 16. There will be plenty of activities for families and astronomers of all experience levels, including:

- Tent and RV camping under the dark skies of Julian
- The largest FREE public star party in California - held on Saturday night, August 15. Up to 2000 people are expected to visit the event between 7 PM & 11 PM. (We need you, your expertise, and your scopes!)
- Dark sky astronomy, with solar viewing throughout the day
- Optional behind the scenes tour of the world-famous Palomar Observatory on Saturday morning
- Speaker presentations on astronomy and space related topics (Friday and Saturday)
- Exhibits by major telescope and accessory vendors
- Food and beverage vendors
- Astronomy games and crafts for kids
- Raffle drawing for gifts and astronomy equipment on Saturday afternoon

JSF attendees will also be able to visit the nearby town of Julian, well known for its apple pies, gifts, specialty shops and hospitality. This year, the JSF will also coincide with the Julian Natural Wonderfest. Those attending the JSF can visit the Julian Wonderfest event, being held at Jess Martin Park, starting at 4 PM on Saturday, August 15.

We need your help to ensure success for one of SDAA’s largest outreach event. This is the perfect opportunity for us to re-connect with fellow members and to share our joy and knowledge of the night sky with those new to astronomy.

On-line registrations for JSF camping and for Palomar Observatory tours can now be made by using this link: https://sdaa28.wildapricot.org/SDAA-Store Additional links to register and to view detailed information for the event can also be found on the SDAA website and https://www.julianstarfest.com/

Confirmation packages, including additional event details and a site map will be sent to you upon registration.

Registration is now open. We look forward to seeing you at the 2020 SDAA Julian StarFest!
## 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>
</thead>
<tbody>
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<td>8:18 PM</td>
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</tr>
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<td>(8:56 PM)</td>
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</tr>
<tr>
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<td>9:41 PM</td>
<td>5:59 AM</td>
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<tr>
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<tr>
<td>9/19/2020</td>
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<td>8:10 PM</td>
<td>(8:42 PM)</td>
<td>9%</td>
</tr>
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<td>10/17/2020</td>
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<td>(7:13 PM)</td>
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<tr>
<td>11/7/2020</td>
<td>5:30 to 8:30 PM</td>
<td>Public</td>
<td>4:52 PM</td>
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<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>
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<td>12/5/2020</td>
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<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>
Event date:
Wed Jul 15, 2020 (All day) to Sat Jul 18, 2020 (All day)

Location of event:
Embassy Suites Hotel
1000 Woodward Place NE
87102 Albuquerque, NM
United States
See map: Google Maps
New Mexico US

The Astronomical League holds an annual national convention that provides an opportunity for amateur astronomers all over the country to gather together to learn and exchange ideas, techniques, and opinions on astronomy. The conventions provide professional astronomers an opportunity to address to attendees about their field of expertise. This allows amateurs to learn about the latest discoveries in astronomy directly from the astronomers making the discoveries. This year’s Astronomical League Convention (ALCON) will be held in Albuquerque, New Mexico from 15 to 18 July 2020.

The ALCON starts on a Wednesday with an AL Council Meeting. The main conference is held on Thursday, Friday, and Saturday and features speakers and workshops. The conference ends with an awards banquet on Saturday. The speaking events are for those interested in astronomy from the beginner to the advanced amateur. Check the 2020 ALCON schedule for a list of speakers and their topics.

The 2020 ALCON will feature two special events, an evening presentation on 17 July by Apollo 17 Astronaut Harrison Schmitt and a tour of the Very Large Array (VLA) on 19 July. Evening field trips to observing sites will be available on 15, 16, and 17 July.

The ALCON 2020 website is available at http://alcon2020.astroleague.org. We hope to see you at the 2020 ALCON!
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.
Dim Delights in Cancer

David Prosper

Cancer the Crab is a dim constellation, yet it contains one of the most beautiful and easy-to-spot star clusters in our sky: the Beehive Cluster. Cancer also possesses one of the most studied exoplanets: the superhot super-Earth, 55 Cancri e.

Find Cancer’s dim stars by looking in between the brighter neighboring constellations of Gemini and Leo. Don’t get frustrated if you can’t find it at first, since Cancer isn’t easily visible from moderately light polluted areas. Once you find Cancer, look for its most famous deep-sky object: the Beehive Cluster! It’s a large open cluster of young stars, three times larger than our Moon in the sky. The Beehive is visible to unaided eyes under good sky conditions as a faint cloudy patch, but is stunning when viewed through binoculars or a wide-field telescope. It was one of the earliest deep-sky objects noticed by ancient astronomers, and so the Beehive has many other names, including Praesepe, Nubilum, M44, the Ghost, and Jishi qi. Take a look at it on a clear night through binoculars. Do these stars look like a hive of buzzing bees? Or do you see something else? There’s no wrong answer, since this large star cluster has intrigued imaginative observers for thousands of years.

55 Cancri is a nearby binary star system, about 41 light years from us and faintly visible under excellent dark sky conditions. The larger star is orbited by at least five planets including 55 Cancri e, (a.k.a. Janssen, named after one of the first telescope makers). Janssen is a “super-earth,” a large rocky world 8 times the mass of our Earth, and orbits its star every 18 hours, giving it one of the shortest years of all known planets! Janssen was the first exoplanet to have its atmosphere successfully analyzed. Both the Hubble and recently-retired Spitzer space telescopes confirmed that the hot world is enveloped by an atmosphere of helium and hydrogen with traces of hydrogen cyanide: not a likely place to find life, especially since the surface is probably scorching hot rock. The NASA Exoplanet Catalog has more details about this and many other exoplanets at bit.ly/nasa55cancri.

How do astronomers find planets around other star systems? The Night Sky Network’s “How We Find Planets” activity helps demonstrate both the transit and wobble methods of exoplanet detection: bit.ly/findplanets. Notably, 55 Cancri e was discovered via the wobble method in 2004, and then the transit method confirmed the planet’s orbital period in 2011!

Want to learn more about exoplanets? Get the latest NASA news about worlds beyond our solar system at nasa.gov.

Credit: NASA/JPL-Caltech

Look for Cancer in between the “Sickle” or “Question Mark” of Leo and the bright twin stars of Gemini. You can’t see the planets around 55 Cancri, but if skies are dark enough you can see the star itself. Can you see the Beehive Cluster?
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.