

# San Diego Astronomy Association

Celebrating Over 50 Years of Astronomical Outreach



September 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.

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

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

### Next Program Meeting

September 16th at 7:00pm  
Live Stream

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## September Program Meeting

### 16 Sept 2020 "Ask The Astronaut" - NASA



Status: Appearance# 2008-0719

Talk: Postflight Exp 61 Virtual  
Appearance: The San Diego Astronomy  
Association Monthly Meeting

Email [jsc-astroapp@mail.nasa.gov](mailto:jsc-astroapp@mail.nasa.gov)

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### Live Streamed Astronaut Q&A

### 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>

[Link to Outreach Calendar](#)

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



# San Diego Astronomy Association

## *San Diego Astronomy Association Board of Directors Meeting*

*11 August 2020* - Unapproved and subject to revision

### 1. Call to Order

The meeting was held via Zoom and was called to order at 7:10pm 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, member Ed Rumsey

### 2. Approval of Last Meeting Minutes

July meeting minutes were approved.

### 3. Priority / Member Business – Ed discussed a problem getting loaner scopes returned in a timely manner and we denied one members request because of past issues getting them to return the loaner.

### 4. Treasurers & Membership Report - Report approved and Mel is trying to clean up the membership database in Wild Apricot. Returned \$440 to a member who purchased a telescope at the banquet auction, but it wouldn't work.

### 5. Standard Reports

- a. Site Maintenance Report: Several more reports of wasp nests at TDS
- b. Observatory/Loaner Scope Report: Both star parties for August have been canceled.
- c. Private Pad Report: We currently have 10 people on the waiting list (two are current pad holders and looking to upgrade) and 6 available pads. There may be two additional pads available that I'm working to resolve. Once that is done, I will be running a structured pad lease event and we should see a couple of the available pads leased. I submitted two requests for Pad Improvements over the past two weeks that are awaiting board approval:

1. Pad 58 is looking to upgrade some electrical and is working with Bill Q – approved by board.
2. Pad 22 submitted a proposal to install a dome similar to what is on several other pads – approved by board.

Pad usage through 7/24: 26 pads have already met their minimum for the year and 7 others are on track to meet their minimums. 19 leased pads show no usage to date. Note that I'm not sure if some people are reluctant to use their pads due to Covid concerns.

- d. Program Meetings Report: July 15, 2020 / Topic: Speaker: Blaine Baggett/Presentation: Apollo at JPL - Attendees: 65, Current Program Meeting Petty Cash as of August 11, 2020 = \$524 Previous Report: \$524, Expenses Since Previous Report – none. We've got a private YouTube channel and the July Membership meeting was posted. An email was sent out and 7 people have viewed it. Working on posting the presentation by Blaine Baggett.
- e. AISIG Report: No report.
- f. Newsletter Report: Current issue looks good with nothing new to report.
- g. Website Report: The website was updated with expanded information about how to open and close TDS.
- h. Social Media Report: No report
- i. Outreach Report: All previously calendared events for August have been canceled. No new events have been scheduled and will not be for the foreseeable future. There are no significant changes to the Covid-19 policies from the state or from any of our hosting venues. In light of this reality, Ed Rumsey and I have agreed that it would not be wise to schedule public events at our own venue, TDS.
- j. TARO Report: Operations have resumed, weather permitting. Operational hits last week from several long duration power outages. No major issues, but the UPS system batteries may need replacement in the next 12 months. Operating time under battery power has been significantly reduced since the initial installation in 2014.



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The ISP (Canyon Wireless) had a major service outage at 1:45 am on Monday August 3<sup>rd</sup>. TARO was imaging at the time and performed automated observatory shut down without issue. Current targets in progress:

- Abell 39 – 18 hours OIII, L, R, G, B (member request)
- Iris Nebula – 29 hours, Ha, SII, OIII, L, R, G, B
- Crescent Nebula – 34 hours Ha, SII, OIII, L,R,G,B (member request) 90%
- Abell 2218 - 20 hours. L, R,G,B. (member request)
- NGC 6820 – 31 hours L,R,G,B, SII, Ha, OIII (member request)

k. Merchandise Report: a few sales

l. Cruzen Report: No report

m. Astronomical League Report: Mary Todd has had to step down as the AL coordinator and we're looking for a replacement.

n. JSF Report: JSF Canceled until 2021

## 6. Old Business

- a. Jim Traweck has taken over coordination of the grading and will keep us posted
- b. Lock combo change at TDS completed on August 2<sup>nd</sup> – notices were sent out
- c. Other old business - the warming room roof will be replaced on August 13-14. Gene has contacted a contractor who seems interested on bidding on the interior repair work including the drywall and lighting upgrade.
- d. Signs were posted regarding Covid-19 precautions and the proper method for members to close down TDS when leaving
- e. We need to contact the property owner west of TDS with the bright light

## 7. New Business

- a. BBQ planning – we'll postpone a decision on the fall BBQ until September

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

## Do you shop at [amazon.com](https://www.amazon.com)?

Shout-out to our members who have designated the San Diego Astronomy Association as their charity of choice when shopping Amazon. We have received over \$250 from Amazon's foundation already this year, surpassing last year's \$230. If you and your family haven't yet done so, you can designate the SDAA to receive 0.5% of eligible purchases as donations to SDAA by clicking the link below or going to [smile.amazon.com](https://smile.amazon.com) and searching for San Diego Astronomy Association. Thanks for your continued support!

<https://smile.amazon.com/ch/51-0183640>



# San Diego Astronomy Association



Go to the 2020 SAS / AAVSO Annual Symposium  
– for “Free”

The Annual Symposium on Telescope Science of the Society for Astronomical Sciences (SAS) and this year’s partner, the American Association of Variable Star Observers (AAVSO), went virtual this year. They recorded all the presentations and now you can see them too. The conference was spaced out over five 2-hour sessions.

**Day 1 (May 30, 2020)** <https://youtu.be/JhU44tDmkSI>

John Hoot: *Gaia Data Enables New Methods of Analysis and Discovery*

John C. Martin: *Beyond the Milky Way: Comparison Stars for Photometry in M31 and M33*

Wayne Green, et al.: *Towards the Flux Calibration of Small Telescope Spectra*

Anthony Rodda, et al.: *Lessons and Initial Observations with 3-D Printed Spectrograph*

**Day 2 (June 13, 2020)** <https://youtu.be/lcHldgONoQI>

Eric Dose: *Applying a Comprehensive, High-precision Catalog to Asteroid Lightcurves*

John Hoot: *Vetting the MoTess GNAT Catalog*

Gary Cole: *An Array Photo-Polarimeter for Blazar Measurements*

Bruce Howard: *More Glass for Optical SETI*

Talia Green, et al.: *Observation and Investigation of NGC 1662*

Brandon Boniacio, et al.: *Measurements of Neglected Double Stars*

**Day 3 (June 14, 2020)** [https://youtu.be/0Ew2ilq\\_r2k](https://youtu.be/0Ew2ilq_r2k)

Daniel Parrott: *Tycho software for minor planets*

Owen Dugan: *Astronomy Will Not Trail Off: Novel Methods for Removing Satellite Trails From Celestial Images*

Robert Zellem: *Exoplanet Watch: Utilizing Small Telescopes Operated by Citizen Scientists for Transiting Exoplanet Follow-up*

Joyce Guzik, et al.: *Data Analysis of Bright Main-Sequence A- and B-type Stars Observed Using the TESS and BRIDE Spacecraft*

Sahana Datar, et al.: *Comparing the Ages of NGC 1513 and NGC 2420*

Brian Cudnik, et al.: *The Prairie View Observatory: First Light*



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## **Day 4 (June 20, 2020)** <https://youtu.be/eNCuBDInVGA>

Eric Hintz, et al.: ***Confirmation of Short Period Pulsating Variables Using an Array of Robotic Telescopes***

Sujay Nair, et al.: ***Analysis of HAT-P-23 b, Qatar-1 b, WASP-2 b, and WASP-33 b with an Optimized Exoplanet Transit Interpretation Code***

Elias Koubaa, et al.: ***Assessing Habitability of Exoplanet Targets***

Sujay Nair, et al.: ***Studies of Exoplanets with Candidate TOI 717.01 and Confirmed HAT-P-3b***

Perian, et al.: ***Looking for Transit Timing Variations in TrES-1 b***

Rick Wasson: ***Observation of Gaia (DR2) Red and White Dwarf Binary Stars in the Solar Neighborhood***

## **Day 5 (June 21, 2020)** <https://youtu.be/qlfKLNNbDLA>

Arne Henden: ***New Life for the Bright Star Monitors***

Kristine Larsen: ***Identification and Analysis of Pulsating Red Giants Misclassified by ASAS and ASAS-SN***

Forrest Sims: ***The photometric and spectroscopic development of the 2019 eruption of the Recurrent Nova V3890 Sgr followed with small telescopes.***

Tom Polakis: ***Photometry of Betelgeuse through Its Recent Faint Minimum***

To get involved with either of these citizen science organizations, attend their events, and meet interesting folks, start with their websites:

- Society for Astronomical Sciences: <http://www.socastrosci.org/>
- American Association of Variable Star Observers: <https://www.aavso.org/>

SAS holds its Symposium annually in Southern California – in normal years - in June.



# San Diego Astronomy Association

## 2020 Star Party Schedule

Date	Hours	Type	Sunset	Twilight	Moonrise(set)	Illumination
9/12/2020	7:30 to 10:30 PM	Public	6:57 PM	8:21 PM	2:09 AM	28%
9/19/2020	7:30 to 10:30 PM	Member	6:48 PM	8:10 PM	(8:42 PM)	9%
10/10/2020	7:00 to 10:00 PM	Public	6:20 PM	7:42 PM	12:55 AM	44%
10/17/2020	7:00 to 10:00 PM	Member	6:12 PM	7:34 PM	(7:13 PM)	2%
11/7/2020	5:30 to 8:30 PM	Public	4:52 PM	6:16 PM	10:46 PM	61%
11/14/2020	5:30 to 8:30 PM	Member	4:47 PM	6:12 PM	6:48 AM	0%
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%

The combinations at TDS were changed on August 2nd



# San Diego Astronomy Association

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You are invited to join your fellow astronomy enthusiasts at the following events:

## General Meeting

Friday September 11th, 7:30pm PDT

Dr. Takashi Moriya from the National Astronomical Observatory of Japan will be talking about "Uncovering the Death Throes of Massive Stars Through Supernovae"

<https://ocastronomers.org/calendar/online-general-meeting-september-2020/>

## Open Spiral Bar

Saturday September 12th, 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-september-2020/>

## Beginner's Class

Friday September 4th, 7:30pm PDT

David Pearson will restart the series by giving a general overview of astronomy.

<https://ocastronomers.org/calendar/beginners-class-september-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



# San Diego Astronomy Association

## SDAA Contacts

### Club Officers and Directors

President	Dave Wood	<a href="mailto:President@sdaa.org">President@sdaa.org</a>	(858) 735-8808
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### Committees

Site Maintenance	Bill Quackenbush	<a href="mailto:TDS@sdaa.org">TDS@sdaa.org</a>	(858) 395-1007
Observatory Director	Ed Rumsey	<a href="mailto:Observatory@sdaa.org">Observatory@sdaa.org</a>	(858) 722-3846
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Grants/Fund Raising	-Vacant-	<a href="mailto:Grants@sdaa.org">Grants@sdaa.org</a>	
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Governing Documents	TBD		
TDS Network	Dave Wood	<a href="mailto:TDSNet@sdaa.org">TDSNet@sdaa.org</a>	(858) 735-8808
Amateur Telescope Making	-Vacant-		
ALCOR (Astronomical League Correspondent)	Dave Decker	<a href="mailto:ALCOR@sdaa.org">ALCOR@sdaa.org</a>	(619) 972-1003

#### SDAA Editorial Staff

Editor - Andrea Kuhl

[newsletter@sdaa.org](mailto: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](mailto:Newsletter@SDAA.Org).





# San Diego Astronomy Association

NASA Night Sky Notes

September 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](https://nightsky.jpl.nasa.gov) to find local clubs, events, and more!

## Summer Triangle Corner: Altair

David Prosper

Altair is the final stop on our trip around the Summer Triangle! The last star in the asterism to rise for Northern Hemisphere observers before summer begins, brilliant Altair is high overhead at sunset at the end of the season in September. Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears “squished.”

A very bright star, Altair has its own notable place in the mythologies of cultures around the world. As discussed in our previous edition, Altair represents the cowherd Niulang in the ancient Chinese tale of the “Cowherd and the Weaver Girl.” Altair is the brightest star in the constellation of Aquila the Eagle; while described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia! They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently one of the first home computers was named after the star: the Altair 8800.

Altair’s rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to astronomers, eventually resulting in direct images of the star’s shape and surface by using a technique called *interferometry*, which combines the light from two or more instruments to produce a single image. Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost “pumpkin-like” shape instead of a round sphere, along with a dimming effect along the widened equator, and the observations confirmed this! This equatorial dimming is due to a phenomenon called *gravity darkening*. Altair is wider at the equator than it is at the poles due to centrifugal force, resulting in the star’s mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn’t mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.

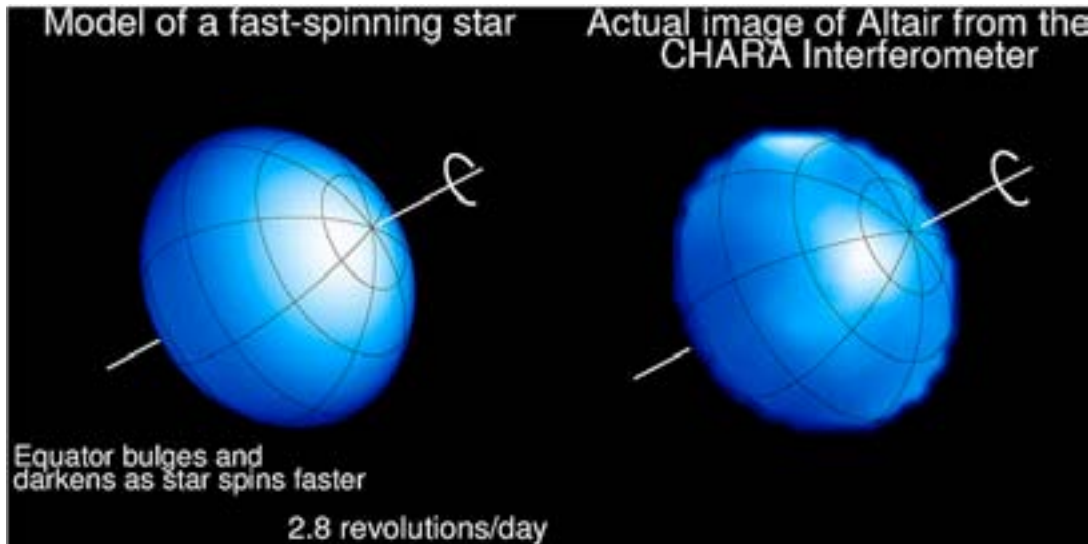
As summer winds down, you can still take a Trip Around the Summer Triangle with this activity from the Night Sky Network. Mark some of the sights in and around the Summer Triangle at: [bit.ly/TriangleTrip](https://bit.ly/TriangleTrip). You can discover more about NASA’s observations of Altair and other fast and furious stars at [nasa.gov](https://nasa.gov).



# San Diego Astronomy Association

NASA Night Sky Notes

September 2020



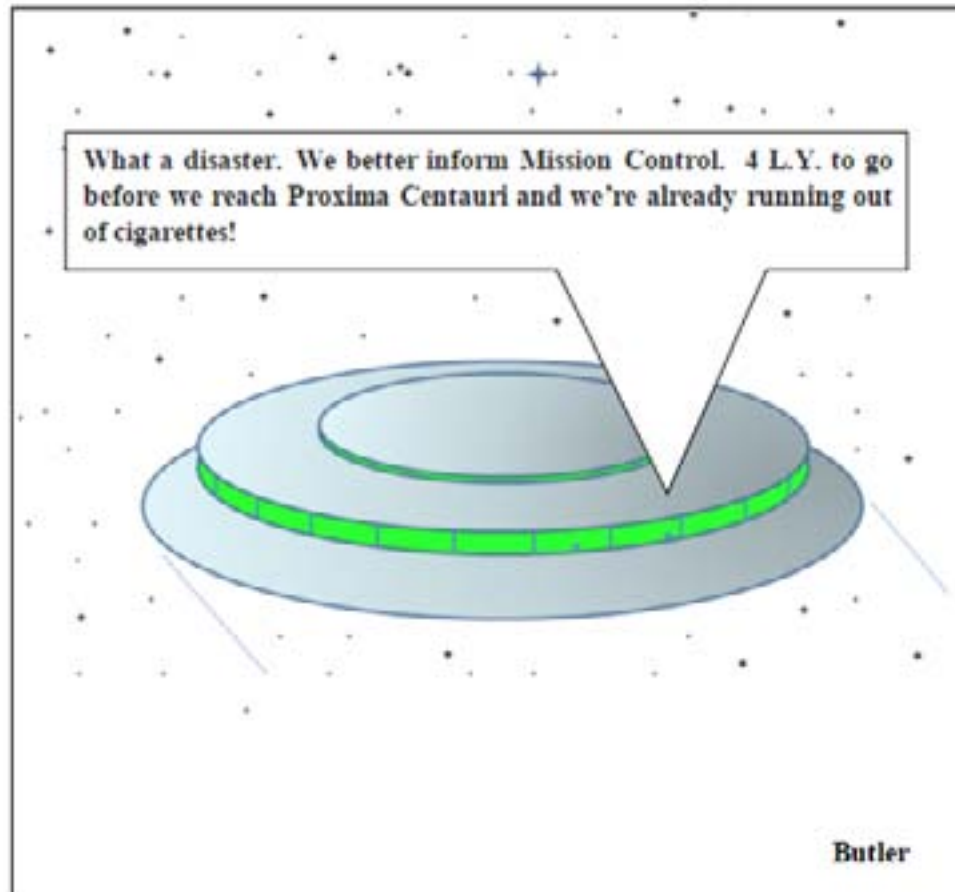
The image on the right was created using optical interferometry: the light from four telescopes was combined to produce this image of Altair's surface. Image credit: Ming Zhao. More info: [bit.ly/altairvsmode](http://bit.ly/altairvsmode)



Altair is up high in the early evening in September. Note Altair's two bright "companions" on either side of the star. Can you imagine them as a formation of an eagle and two swans, like the Koori?



# 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.