No General Meeting in December

It turns out that we do not have a speaker for either Astronomy 101 or the General Meeting planned for Saturday, Dec. 22, so the board has cancelled the meetings. Enjoy the holidays.

GNTO will be open on Saturday, Dec. 29. Hopefully we will have clear skies for the final observing session of 2018.

Our next Club Event will be the Perihelion Banquet/Annual Member Meeting on Jan. 12. TAAS Officers for 2019 will be voted in. For details, see Lynne Olson's article, or check the TAAS.org website. You can make your reservation now!

Looking forward to seeing you all at GNTO and the Perihelion Banquet.

—Jim Fordice

TAAS PERIHELION BANQUET
Saturday, January 12th - 6:00pm
Ramada Midtown Hotel
Speaker: Mike Rice, New Mexico Skies

The holidays are here, and soon it will be time for New Year’s 2019, followed by TAAS’s biggest social event of the year: the annual Perihelion Banquet, on Saturday, Jan. 12.

Plan to celebrate the past year of TAAS and its friendships old and new, beginning at 6:00pm at the Ramada Midtown (formerly the Elegante) just east of University at 2020 Menaul.

You will be checked in on our guest list (having already signed up and paid), given a ticket for the door prize drawing, and then you can find a table with friends and perhaps visit the cash bar. Buffet dinner will begin at 6:45pm.
As 2018 comes to a close I have reflected a bit on TAAS and my role in the society. I am honored and delighted to be trusted with leading this fine organization. TAAS’s contributions to Albuquerque in terms of supporting local amateur astronomers and providing educational outreach and public events is remarkable. Truly amazing is the number and breadth of the activities we conduct. Our success comes from your willingness to participate and your wonderful enthusiasm when representing TAAS at schools and public events. I feel very privileged to be your President.

As 2019 dawns I am looking forward to continuing our success. There are two particular efforts that I want to highlight.

The first effort is that you will see four Valle de Oro Star Parties on the 2019 calendar. Valle de Oro is a National Wildlife Refuge located on 2nd Street south of Rio Bravo. It occupies land that used to be a dairy. The refuge is making changes to the existing fields to be a better wildlife refuge and they are building a new visitor center. They are also working on a designation as an Urban Dark Sky Place from the International Dark-Sky Association (darksky.org). To that end they have selected appropriate lighting for the visitor center. We have provided them some funding to purchase a Sky Quality Meter and to support installation of better lighting in the areas surrounding the refuge. I encourage you to visit Valle de Oro and to put March 8 on your calendar and plan to attend our first star party there.

The second effort is our preparations to host the 2010 Astronomical League Conference (ALCON) on July 15-18, 2020. Our Planning Committee has three meetings. For at least the first part of 2019 the committee plans to meet monthly. As we mature the planning and draw closer to the convention, we will need to recruit more people to participate in the preparations. Already identified is the need for someone to serve as the Co-Registrar starting next Spring and for someone to lead the Publicity effort. If you are interested in one of those positions or want to serve in some other capacity, please contact me. This is a great opportunity for TAAS to shine and to show astronomers from all over the country how great it is to live in New Mexico and be able to observe under our dark skies.

As we enter the new year I wish all of you: Clear Skies. (Every Night!) •

Thank You! to Knightware

We want to convey our great appreciation and thanks to Phyllis Lang of Knightware for donating a copy of SQM Reader Pro software for use with the Sky Quality Meter (SQM) that will be installed at GNTO. SQM Reader Pro will be used to create the graphics that will display the data collected from the SQM. Pete Eschman is testing the SQM at his home. You can view the SQM Reader Pro output at http://www.complex.org/gnto/SQM.html.

SQM Reader Pro is a Knightware product. You can read about it and their other products at https://knightware.biz. Thanks Phyllis!

—Jim Fordice

Photos for Perihelion, Please!

**As you send me images (to: bobship10@gmail.com), I’ll build the show. You will receive credit for each picture I use. I plan to select between 100 and 150 pictures, depending on quality and number of the year’s events represented. Each month’s activities are on our Web site under the heading, Upcoming Events with date and location. With your contribution, we can look forward to seeing lots of smiling faces in the slide show at next year’s banquet.**

—Bob Shipley, TAAS board secretary

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—Bob Shipley, TAAS board secretary

**“DRAGONFLY” GALAXY OBSERVING!**

Mike relates the origins, present operations and future plans for this innovative approach to studying galaxies and learning more about the intricate nature of their existence. His talk will be accompanied by images illustrating what is now seen around the galaxies.

Mike Rice and Lynn Rice are proprietors of New Mexico Skies, which is part of the Dragonfly team headed by Roberto Abraham at University of Toronto (Professor of Astronomy and Head of Research) and Pieter van Dokkum (Chairman of the Department of Astronomy at Yale) as the two Principal Investigators.

Mike built Dragonfly, repairs it, modifies it and assists with the imaging. He and the New Mexico Skies staff are full technical partners with the academic colleagues, as NMS hosts the project and all are enthused about what Dragonfly is accomplishing and its potential for the future.

—Lynne Olson

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SQM Reader Pro is a Knightware product. You can read about it and their other products at https://knightware.biz. Thanks Phyllis!

—Jim Fordice

**TAAS PERIHELION BANQUET**

**SPEAKER, MIKE RICE, NEW MEXICO SKIES**

Mike Rice and Lynn Rice are proprietors of New Mexico Skies, which is part of the Dragonfly team headed by Roberto Abraham at University of Toronto (Professor of Astronomy and Head of Research) and Pieter van Dokkum (Chairman of the Department of Astronomy at Yale) as the two Principal Investigators.

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—Lynne Olson
November 3 - 3rd Quarter Moon Observing:
Alan Scott was the Opener. He reported:
We had a wonderful evening down at GNTO last night. Weather was surprisingly pleasant indoors (in the heated warming shed), but nippy (and calm) outside. The evening started windy, but this calmed down by about 8 or 9 p.m. Temperatures ranged from about 60° near sunset to 34° when I left.

Turnout was good. The attendees were Tom Liles, Benjamin Jones, Bridget de Saint Phalle, George Friedman, Eric Edwards, Kurt Sandquist, Viola Sanchez, and Vance Ley.

High cirrus clouds came and went all night. To my eyes, transparency was poor to good (depending on the clouds), seeing was good all night. I worked on binocular doubles and cussed myself out for not doing these observations when my eyes were younger. Live and learn.

As a reminder, we do have numerous on-site telescopes that users can borrow. George and his friends used the 16" and seemed to have a great time. Eric borrowed a refractor and placed it on his own mount. He seemed to have a good time, until his batteries died and reminded him to go home. I didn't open the Isengard, but for any TAAS members that attend the training class, you could be the proud owner (for the night) of a really sweet 16" refractor in a dome. Just let the opener know if you want to use a scope for the night. Watch TAAS Talk for notice of Isengard training.

As always when going to GNTO, be careful on the dirt roads. If you haven't been there before, be sure to go in the daytime. There was a pool of water on the road one place, requiring the driver to use the bypass (parallel road 15 feet to the east of the main road). Also, always watch out for cattle. As I was driving home, I came upon young cattle with lots of energy and attitude just to the side of the road, trying to figure out which way to run so they could destroy the grill of my car. Fortunately, good sense (and car brakes) prevailed.

November 9 - Special Observing Session:
Eric Edwards opened the Observing Field. He reported that it was great, but cold. He used the short permanent steel pier. He closed up at 9:20 p.m. after wide field imaging for two hours. He saw a meteor. He targeted Sagitta and NGC 7000, 1 hour each.

November 10 - New Moon Observing:
Will Ferrell was the Opener. He reported:
Not a great night at GNTO even though we had a good turnout. Attendees were Tom Liles, Jim Kaminski, Fernando Torres, Rebecca Fanning, Brice Burgess, Peter Lindstrom, Peter Renslow, Nick Bachicha, Tara Sieber, Cody Smith, and Eric Edwards.

The wind was very brisk through the night until I left. I read Alan's report on White Ridge. It was as if we were on different continents. Our temperature at GNTO was seasonal but wind chill made it unpleasant. Nonetheless, we had a good turnout of 12 participants.

We had an hour at dusk without clouds. Winds died down somewhat but it was still windy enough that Tom Liles was unable to do the photography he wanted to do. Then we started having some cloud cover which peaked at perhaps 50%. Eric Edwards was unable to do his imaging because his exposures were continually interrupted when clouds covered the constellation he was shooting.

Jim Kaminsky set up a screen which kept most of the wind off him. He kindly agreed to find Neptune and Uranus as I did not bring a telescope. Neptune was in cloud cover, so we could not observe it. He found Uranus and kicked up the magnitude. The color was great. Thank you, Jim.

The wind calmed down as we were closing the dome. The sky cleared not long after that. I left at 10:20 p.m. Had I been patient,

continued on page 5 . . .
**Jupiter**, captured at the Oak Flat star party on July 21, using a C11 Edge mounted on a Losmandy G11. The camera was an ASI120mm w/ ASI color filters and filter wheel. 3000 frames were captured in each channel. No Barlow lens was used, resulting in an effective focal length of 2800 mm (the native fl of the C11). The best 25% was selected and combined using AutoStakert 2. Sharpening was done using Registax 6. The individual frames were derotated and combined using WinJupos and slightly processed in Photoshop.

—*Vance Ley*
I could have had good viewing from 11 p.m. on.

December 1 - 3rd Quarter Moon Observing:
Dee Friesen was the Opener. He reported that the conditions at GNTO settled down nicely after sunset at 4:54 p.m. The wind velocity went down to about 5 mph and the temperature was at 47°F at sunset and was 43°F three hours later when they closed the field. The sky remained clear with good seeing and transparency until 8 p.m. when it rapidly became overcast until 8:30 p.m.

In attendance were Bill Wallace, Eric Edwards, Melissa Kirk and me. Later in the evening Bridgett de Saint Phalle arrived.

Bill Wallace assisted Eric in setting up the Isengard for viewing. Eric shared with everyone a spectacular view of NGC 247 (spiral galaxy in Cetus). Melissa worked on a video project for school outreach. I used some new computer/photo techniques to better understand my photography procedures.

Dee spent the evening viewing the “Night Sky Tour” that was contained in the hand-pad of his 8” Celestron Evolution telescope. The highlight of that tour was NGC 253 (Sculptor galaxy), Gamma Arietis, Almach, and Archid (Eta Cassiopeia).

All visitors left the observing about 8:45 p.m. and reflected on the evening’s observing at Penny’s Diner on the way home.

Upcoming Events:
- Dec. 29: 3rd Quarter Moon Observing
- Jan. 5: New Moon Observing
- Feb. 2: 3rd Quarter Moon Observing
- Feb. 9: New Moon Observing

Don’t forget that the GNTO Observing Field is available for use by TAAS members anytime. Check the TAAS website for the procedure to follow. Contact me if you have any questions.

As always, check TAAS_Talk and the TAAS website for last-minute changes and updates. GNTO events are open to all TAAS members and their guests.

GNTO Director: GNTO@TAAS.org or 505-803-3640.

Happy Holidays!
Sharpless Sh2-140 is located in Cepheus near Zeta Cep. It is about 3000 light-years from us. The 30’ size converts to 25 light-years in diameter. The B0 V star HD 211800 ionizes part of the molecular cloud L1204. This was taken 3 miles north of Oak Flat on my backyard patio on Oct. 23, 2017; I had to go to my archives due to clouds, cold, equipment problems and a trip to CA.


—John Laning
Last Explora Adult Night of 2018

TAAS turned out to help Explora with their last Adult Night of the year on Friday, Nov. 16.

TAAS members Fernando Torres, John Laning, Tom and Cheryl Graham, Steve Snyder, Peter Lindstrom, Mike Kernodle, and I all helped the public get a glimpse at the wonders of the night sky. It was not a very clear glimpse, however, as the sky started out hazy and soon turned to cloudy, but the Moon and Mars did make appearances.

I counted about 160 people going out to the telescopes, but I was busy trying to set things up most of the evening, so there were certainly more. We were moved to the East deck because there was an ice sculpting demonstration on the West deck. Explora was kind enough to purchase black material to cover the large windows on the East side, and the result was very good. Of course, there wasn’t much we could do about the Albuquerque light dome.

But we also didn’t have enough light for my displays, so Explora personnel went on a mission to find lamps in offices. We ended up with two lamps which did the job but will need to be replaced next time we are on the East deck. Since we were not easily seen in the dark hall, Cheryl Graham took Tom’s telescope and set up inside where everyone could see her and pointed the guests our way. That turned out to work very well, as the number of people going out to the telescopes increased substantially.

The next Explora Adult Night will be on Jan. 18, 2019, when the theme will be “Get Fit: Science of Fitness.” I will send out an invitation ahead of time for that. Thanks to everyone who stepped up and made this event a success, as usual.

—Bob Hufnagel

Need help with your Telescope?

Attend the ATM meeting and receive assistance.

First and third Wednesday of the month.

Manzano Mesa Multi-Gen Cantor
501 Elizabeth St SE, Albuquerque, NM

map is available at www.TAAS.org
Gemini, the twins, and Monoceros, the unicorn, rise above the mountains on the evening of Nov. 10, 2018. Auriga is above Gemini, and Taurus, the bull, is above Orion. Perseus, with its Seven Sisters, rides in the sky above Auriga and the bull. This image is an average of five photos, each 20 seconds in duration, taken with ISO 6400, from Tijeras, NM.

—Melissa Kirk
Donations to TAAS

•
Jeff Boggs
Howard Brewington
Aaron H. Diaz
Eric Dose
Amy D. Estelle
The GE Foundation
Paul Lin
William C. Wallace

The Albuquerque Astronomical Society is a 501(c)(3) organization. Donations are deductible as charitable contributions on the donor's federal income tax return.

Monthly Membership Report
November 2018

<table>
<thead>
<tr>
<th>Membership</th>
<th>Current Month</th>
<th>Past Month</th>
<th>Change</th>
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<tr>
<td>Regular</td>
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<td>254</td>
<td>-5</td>
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<tr>
<td>Family</td>
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<td>161</td>
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<tr>
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<td>25</td>
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<tr>
<td>Military</td>
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<td>0</td>
<td>2</td>
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<tr>
<td>Honorary</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total Members</td>
<td>457</td>
<td>462</td>
<td>-5</td>
</tr>
</tbody>
</table>

Welcome to New or Returning TAAS Members

Janelle Barlow
Lewis Barlow
David Bolander
Daniel Caimi
Aaron Diaz
Thomas Dickinson
Amy Glasser
Dakota Hill
Dixie Hornby
Cameron Lamar
Cheryle Long
James Long
Jeffrey Mishlove
David Robinson
Barbara Roesch
Joseph Roesch
Matthew Salazar

Explanation of Dues and Membership Renewal Date

New memberships are registered immediately if you pay online. If you pay by check, your membership is registered when your check is received by the treasurer.

Renewal notices will be sent out via e-mail beginning 60 days before your membership expires. If your membership is renewed before it expires or within 90 days after it expires, your new expiration date will be advanced one year from the previous expiration date and your membership will be continuous.

If dues payment is received more than 90 days after the expiration date, you will be reinstated as a member with an expiration date set as one year from the receipt of payment.

Location, Location, Location

• Chaco Canyon
6185’ elevation
Latitude  Longitude
36° 01’ 50”N 107° 54’36”W
36.03’  -107.91’
36° 1.83’  -107° 54.60’

• Oak Flat
7680’ elevation
Latitude  Longitude
34° 59’ 48”N 106° 19’ 17”W
34.99’  -106.32’
34° 59.80’  -106’ 19.28’

• UNM Campus Observatory
5180’ elevation
Latitude  Longitude
35° 5’ 29”N 106° 37’ 17”W
35.09’  -106.62’
35° 5.48’  -106° 37.29’

For security reasons, GNTO location is available by request only, so please contact Jim Fordice, GNTO Director, for GNTO information, e-mail GNTO@TAAS.org.

Membership Services

for:
• Membership Inquiries
• Events Information
• Volunteer Opportunities

Contact Bob Anderson at membership@TAAS.org

for:
• Membership Dues
• Address/e-mail changes

Contact Doug LeGrand at treasurer@TAAS.org

TAAS
P.O. Box 50581
Albuquerque, NM 87181

Donations to TAAS

The deadline for the next issue of The Sidereal Times is Wednesday, January 2. The newsletter editors’ e-mail address is editor@TAAS.org.
## 2018 TAAS Board of Directors/Staff

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
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<tbody>
<tr>
<td>President</td>
<td>Jim Fordice</td>
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</table>

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**Explora Adult Night Coordinator**  Bob Hufnagel  505-890-8122  rhufnagel@comcast.net

**Fabulous Fifty Coordinator**  Phil Fleming  505-870-5604  wpflem2010@gmail.com

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**UNM Observatory Coordinator**  Boris Venet  505-507-7838  venetb@sprintmail.com

**Webmaster**  John Purnell  209-355-5166  webmaster@TAAS.org
The Albuquerque Astronomical Society

P.O. Box 50581
Albuquerque, NM 87181-0581

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from Astronomy Magazine
for Outstanding Public Programming.

TAAS is honored to receive an
“Editor’s Pick 2013 Best of the City”
award from Albuquerque Magazine.

BEST PLACE TO STARGAZE
CELESTIAL EDITION

MEMBERSHIP

You can join TAAS or renew your membership online. Just go to www.taas.org and select “Join Us!” or “Renew Your Membership” from the main menu on the left side. Annual dues are $30 for a regular membership, $15 for educators and active military, and $5 for students. Only regular members are eligible to vote in society matters. Our new member information packet can be viewed or downloaded from the same location on the website. You can pay your dues on line through PayPal, by Visa, MasterCard, or American Express. To pay by check, mail your check to TAAS, P.O. Box 50581, Albuquerque, NM 87181-0581 or give it to the treasurer at one of our meetings.

ARTICLES/ADVERTISEMENTS

Articles, personal astronomical classified advertisements and advertisements for businesses related to astronomy must be submitted by the deadline shown on the Society calendar (generally the Friday near the new Moon). Rates for commercial ads (per issue) are $120 per page, $60 per half page, $30 per quarter page, $7 for business card size. The newsletter editor reserves the right to include and/or edit any article or advertisement. E-mail attachments in Microsoft Word or compatible word processor format; ASCII and RTF are acceptable. One space between paragraphs is preferred. One column is approximately 350 words. Contact the Newsletter Editor at editor@TAAS.org for more information.

Note that the Sidereal Times is no longer mailed. It is posted on the TAAS website, www.TAAS.org.

Send submissions or correspondence to editor@TAAS.org.

TAAS ONLINE

TAAS website: http://www.TAAS.org

The TAAS website includes:

• Programs . . .
• TAAS 200
• TAAS Fabulous Fifty
• Educational Outreach: School Star Parties, Solar Astronomy Outreach
• Equipment Trader
• Telescope Loaner Program
• Telescope Making and Maintenance . . . And more
• Online Sidereal Times
• Calendar of TAAS Events
• Members’ Guide
• Links to Astronomy Resources and Members’ Blogs

E-mail: TAAS@TAAS.org

Members’ Google Group:
TAAS_talk@googlegroups.com

MAGAZINES

TAAS no longer offers magazine subscriptions.