The Andromeda Galaxy and Its Place in the Local Group

Featured Speaker: Dr. Ylva Pihlström

TAAS General Meeting
Saturday, October 7, 7:00 p.m.
Science and Math Learning Center,
UNM Campus

(See www.taas.org for Article and Map)

Following a short Society meeting, we are honored to have Dr. Pihlström as our speaker. She has chosen to focus on the Andromeda Galaxy and its relationship to its neighbors, and we will let her tell you about her presentation:

"The Andromeda Galaxy provides a beautiful night sky viewing opportunity and
continued on page 2 . . .

Autumn TAAS Fab 50 Session
Friday, October 13, 7:00 p.m.

by Dee Friesen

The TAAS Fab 50 FALL SESSION will be held on October 13 at 7:00 p.m. at the All Saints Orthodox Church, 10440 4th Street NW, Albuquerque. The popular Fab 50 program is designed for people new to astronomy and interested in learning the night sky.

TAAS experienced astronomer Dr. Phil Fleming will lead the session. He will give a short presentation on the objects in the fall sky. A free map of the night sky will be provided with instructions to attendees to use in the outdoor observing session after the presentation. TAAS members will be present with telescopes to provide views of the night sky.

Details of the TAAS Fab 50 program along with a map to the All Saints Orthodox Church are provided on the TAAS website www.taas.org.

continued on page 2 . . .

Placitas Star Party
Placitas Community Library
Sat., October 14
Solar 2:00 p.m.–Sunset
Night 6:30–10:00 p.m.

by Lynne Olson

The ALL-FREE PUBLIC STAR PARTY at the Placitas Community Library grounds will be co-hosted by The Albuquerque Astronomical Society, Las Placitas Association, and the Placitas library from 6:30–10:00 p.m. on Saturday, October 14.

Always anticipated, this event takes place in an area with very little light pollution (Library staff makes sure all lights in and around their building are red!), nice facilities, and autumnal weather and skies.

School Star Party
Cleveland Middle School
Tue., October 24

2......Telescope Loan Program Update
3......Cosmic Carnival, Dark Sky NM in Animas, Enchanted Skies Star Party
4......Under the Dome
5......Oak Flat V Report
6......Astrophoto: IC1396
7......Report from Okie-Tex 2017
8......Astrophoto: Asteroid 3122 Florence
9......School Star Party in Cuba
10......Astrophoto: M33
11......TAAS Reports & Notices
11......TAAS Directors & Staff
...Placitas Star Party continued from page 1

Telescopes of all types and sizes will be provided by TAAS members for observing the astronomical targets of the season in the dark-sky environment. Please arrive before dusk and get oriented in daylight (sunset is at 6:28 p.m.), providing time for the members of TAAS to show the setup of their scopes and share their knowledge of the targets of the evening.

The library kindly offers hot apple cider and cookies to the visitors and provides volunteers to help with parking, adding to the easy-going atmosphere.

Nights will be chilly, so come prepared with jackets and head coverings. Please remember that only dim red headlamps and flashlights are to be used in the observing area and dimmest lights possible for headlights into and out of the parking area after dark for latecomers.

Questions can be sent to TAAS@TAAS.org. See www.taas.org for details.

TAAS members are encouraged to bring telescopes to the event, both for the enjoyment of the visiting public—and their own. Parking and setup for those bringing telescopes will be in the parking area in front of the library (parking for those without scopes is in the general parking on the west side).

---

Deadrivemore is one of the most distant objects we can see with the unaided eye. It is also our next-door neighbor at a distance of about 2.5 million light-years. The Milky Way and Andromeda both belong to a group of galaxies, the Local Group. Together, the Milky Way and Andromeda provide the main dynamical forces within the Local Group, and their three-dimensional motions provide clues to the evolution of the Local Group system—for instance, is Andromeda going to collide with the Milky Way or spiral around it? In this presentation, I will discuss work aiming to find answers to Andromeda’s motion and, consequently, its fate.

Dr. Pihlström is originally from Sweden, where she graduated from Chalmers University of Technology at Gothenburg with a Ph.D. in Radio and Space Science in 2001, preceded by a M.Sc. in Electrical Engineering in 1996. She is an Associate Professor in the Physics and Astronomy Department at UNM, a Radio Astronomer, and has an active grant until August 2018 looking at the dynamics of the bulge and bar structure found in the central region of the Milky Way.

---

Telescope Loan Program Update

by Jim Fordice

The Celestron NexStar 8i telescope has caught its last photons (the mount failed) and has been retired. I have used funds from the auction to purchase a new Celestron NexStar 8SE. It should be ready for issue by mid-October.

My plan for the still very good 8i OTA is to obtain a Go-To equatorial mount for it and build a second 8” SCT package. To obtain the funds for the equatorial mount I will sell the Meade LX200 12” SCT that has not had much use and is too large for the loan program. Another 8” SCT will be far more useful. The Meade is listed for sale on the Equipment Trader. It is in very good condition.

---

<table>
<thead>
<tr>
<th>Loan Program Statistics</th>
<th># of Scopes</th>
<th># on Loan</th>
<th># Available</th>
<th>% on Loan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
<td>38</td>
<td>2</td>
<td>95%</td>
</tr>
</tbody>
</table>

Type:  
- Reflectors: 23
- Refractors: 7
- Catadioptrics: 10

Size:  
- Large (>8”): 12
- Medium (5”-8”): 16
- Small (<5”): 13

Tracking:  
- Manual: 26
- Push-To: 5
- Go-To: 5
- Tracking: 9

As of: 9/22/17

...General Meeting News continued from page 1

Telescope Loan Program Update

November 2017

The Official Newsletter of The Albuquerque Astronomical Society
The 2017 TAAS celebration will be held on Saturday, October 21, from 1:00 to 5:00 p.m. The annual event will take place at the Albuquerque Open Space Visitor Center at 6500 Coors Blvd. NW.

Exhibitors from the local museums and other institutions will be present with activities for children of all ages. The TAAS planetarium will be set up for shows for visitors.

TAAS volunteers are needed for the following:
1. Setup of the TAAS display booth. The display needs to be moved from the TAAS storage unit to the Visitor Center and set up. After Cosmic Carnival the display needs to be returned to the TAAS storage unit.
2. People to sit at the TAAS both and share conversations about TAAS and astronomy with the visitors.
3. People to bring telescopes to view the Sun and other visible astronomical objects (i.e., Venus).

TAAS Secretary Bob Shipley is coordinating the Cosmic Carnival volunteer effort, so please contact him with your details about volunteering. Bob can be reached at secretary@TAAS.org. TAAS is hosting a star party in the evening as we have done in the past. Lynne Olson is coordinating the evening event and will provide the details to TAAS members.

Dark Sky New Mexico is sponsoring a star party in Animas, New Mexico, October 13-14, and TAAS is co-hosting the event.

“This event will include dark sky observing under the best sky in the United States, viewing deep-sky treasures through a variety of telescopes, and a daylong seminar of exclusive talks from well-known deep-sky observers Dave Eicher and Michael Bakich,” Dark Sky New Mexico says.

Best of all, TAAS members receive a 50% discount off the regular $125 price. When buying your tickets, select “General Admission” (the discount is not available on the rate for Seniors, Students, Teachers, Military/veterans, and Government Employees). Click “Next” and enter the special super-secret code in the “discount code” box to get your 50% discount. To get the super-secret code, current TAAS members (and only members) can e-mail webmaster@TAAS.org.

REGISTRATION IS OPEN FOR Enchanted Skies Star Party 2017
October 17-22, 2017
Magdalena, NM
http://www.enchantedskies.org/
See you there!
The Sidereal Times October 2017

Under the Dome
Notes from and about GNTO
Jim Fordice

September 16, 3rd Quarter Moon Observing:
Dale Murray was the Opener on September 16. Joining him were Vance Ley, Eric Moomey, Greg Parkhurst, Jim Roucis, Jim Lawrence, Boris Venet, Viola Sanchez, Kevin McKeown, and Melissa Kirk.

Dale arrived at 6:00 p.m. to find that Vance Ley had arrived a few minutes before and had partially opened the site. Eric and Greg were there with Vance waiting to take part in the imaging training.

The weather was not promising. The temperature was around 82 degrees with light winds but the sky had widely scattered clouds and about three small storm cells producing rain with electrical activity. The Clear Sky Chart indicated the skies would worsen with a short spell of clearing between 9:00 p.m. and 10:00 p.m. but becoming overcast for the remainder of the night. This was not to be the case. Sunset was at 7:12 p.m. and the skies started clearing, particularly to the south. The seeing was somewhat unsteady but improved as the night progressed.

Vance, Eric, and Greg went through the imaging training while I installed a handle on the 16" loaner Dobsonian.

This was Jim Roucis’ first time at GNTO so Dale showed him around the facility. He only brought a pair of binoculars since the weather forecast was so poor. Since Dale had brought out the 16" Dob to install the handle he left it outside for Jim to use. He spent several hours using this scope until he left around 10:00 p.m.

Melissa and Kevin stayed past 11:00 p.m. Jim Lawrence reported some of the steadiest skies he has ever seen at about 1:00 a.m. and departed at 1:30 a.m.

Three people stayed overnight. Vance left the site around 6:00 a.m. and Viola stayed for at least another hour. Dale started securing the site at 8:00 a.m. and left at 8:30 a.m.

Upcoming Events:
- October 14: 3rd Quarter Moon Observing
- October 21: New Moon Observing
- November 11: 3rd Quarter Moon Observing
- November 18: 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.

TAAS General Meeting

Saturday, October 7, 7:00 P.M.
Science and Math Learning Center, UNM Campus

The Andromeda Galaxy and Its Place in the Local Group
Featured Speaker: Dr. Ylva Pihlström

The Official Newsletter of The Albuquerque Astronomical Society
OAK FLAT PUBLIC STAR PARTY V REPORT
SATURDAY, SEPTEMBER 9

BY LYNN OLSON

This was a wonderful last Oak Flat star party of the summer! Although the evening began with many clouds, they parted at 8:00 P.M., per the Oak Flat Clear Sky Chart, and a large number of TAAS telescopes showed up (about 20). This was matched by the over 100 visitors who made the trip to the mountains. We could show Jupiter, Saturn, many Messiers, asterisms and deep-sky objects; Kevin McKeown gave a fine constellation tour; and even got ooh-aahs for a few meteors. Lots of families and first-timers enjoyed our program, and stayed until about 10:30 P.M., when some clouds returned.

Our biggest thanks to Martin Hilario, who has been the backbone of this series, co-opening and full closing all five star parties. Also, our appreciation to the Tijeras Ranger Station, which made sure we had clean restrooms, a mowed field, and free access to both Juniper and Yucca for the season.

Martin Hilario, Tom Grzybowski, John Laning, Bruce Meyer, Jim Roucis, Kevin McKeown (constellation tour), Melissa Kirk, Fernando Torres, Jon Schuchardt, Kurt Brockman, Matt Spletzer, Shane and Becky Ramotowski, Jim Kaminski, Marla and Jon Spencer Brown, Kara and Bryan Hughes, Alan and Gloria Maurer, Dave Ray, Mike Salazar, Lynne Olson, Dale Murray, and Bob Anderson represented TAAS.
IC 1396 is a large area of nebulosity in the direction of the constellation Cepheus. It is approximately 100 light-years across and about 2,400 light-years distant. The famous Elephant’s Trunk nebula, IC 1396a, can be seen in the upper center-left of this image. The Elephant’s Trunk is a star-birth region, like the “pillars of creation” in M16, The Eagle Nebula. The nebula is excited by the bright star in the center-left of the field, HD206267, a magnitude 5.7 O-type star.

I had originally set out to image the Elephant’s Trunk using my C11 at f/7 (1960 mm f.l.), however the wind was gusting up to ~12 mph, making this unlikely at best. So, I switched to my AT65 (420 mm f.l.) at f/6.5 and was able to capture 18 x 10’ sub-frames. I had to try a variety of processing measures, using PixInsight, DSS, and Photoshop, before I arrived at what I consider to be an acceptable image.

—Vance Ley
The 2017 Okie-Tex Star Party (OTSP) recently concluded with a little over 500 registered attendees, many with spouses, children, and/or dogs. TAAS was well represented with three featured speakers (Phil Fleming, Dee Friesen, and Alan Scott) and many other attendees (including Larry Cash, Dan and Pearl Clark, Greg Dillon, Pete Eschman, Amy Estelle, Will Ferrell, Sandy Fleming, Jim Fordice, Dave Frizzell, Martin Hilario, Jim Kaminski, Christina and Doug LeGrand, Gordon Pegue, Becky and Shane Ramotowski, Dan and Vera Rossbach, Gordon Schaefering, Fernando Torres, Chris Watts, and perhaps a few others that I missed).

For about half of the nights the weather permitted decent, dark-sky observing (with a best SQM-L reading of ~21.75, compared to GNTO of ~21.5 and my backyard of ~20). On Sunday night, we were treated to a long-lasting and continuously brilliant light show from distant lightning (in the early morning hours two very windy and fierce thunderstorms passed over the field, or so I was told since I was sound asleep). Daytime temperatures were often very warm (85+) with the clouds parting (in general) for very-dark-sky observing and temperatures in the low 50s. Then overcast skies and windy storms revisited.

The picture was taken mid-week of the “TAAS Compound” where many of our members observed.

Next year’s OTSP will be October 6 to 14, with information to be developed and posted at http://www.okie-tex.com/.

Jim Kaminski’s sunspot sketches made at Okie-Tex
Near-Earth Asteroid Florence at UNMO — Two Androids and an iPhone

by Martin Hilario

The top photo depicts two Androids and an iPhone, each with a picture of Asteroid 3122 Florence taken at 10:36, 10:52, and 11:06 p.m. through a 17-mm eyepiece to show how quickly Florence moved through the field of view. The asteroid was recovered by Kevin, Doug, and Christina Legrand in their 18" Starmaster Dobsonian at UNMO Observatory Friday night, September 1, offering many visitors marvelous views of a near-earth object.

NASA’s 70-m Goldstone Solar System Radar discovered two moons orbiting around the large 2.8-mile-wide asteroid, and follow-up observations were performed by the Arecibo Observatory’s 305-m radio telescope to investigate the rotation rates and surface features of the triple-asteroid system. It passed between HD 198704 (mag 6.8) and TYC 1090-0310-1 (mag 10.0) in Delphinus at over 30,000 miles per hour at only 18 times the Earth–Moon distance. The asteroid is notated by the small red arrow on each phone picture.

Above: Smartphone images by Juli Fowler (left), Becky Ramotowski (middle), and Martin Hilario (right). Photo editing by Becky Ramotowski.

Below: Starmaster image by Juli Fowler.
A School Star Party in Cuba

by Tom Graham

So there I was . . . Many of you have heard stories like this and here is one more. Thursday the 21st of September there was a star party in Cuba. Cuba, New Mexico, lies about 70 miles from Albuquerque in some of, in my opinion, the most beautiful country in New Mexico with some very dark skies. The weather was clear, clouds in some portions, clear, then really clear.

I was told it started out with Mike Salazar and his wife Debbie having their niece and nephew down from Cuba to look through Mike’s telescope. They saw some great stuff and then asked if it would be possible to bring a star party to their school. Well Mike, relatively new to TAAS put on his thinking cap and thought he may be able to kill two birds with one stone (hope this is not politically unacceptable) and thought of the members going to Chaco Canyon. It was set. We could also bring RVs and spend the night. I’m in!

Word went out and the party was a go. I arrived at 4:45 P.M. and saw the power company with a boom truck turning off the lights in the parking lot—hmm someone has influence. Later I found out this was a community event and the community was all out to help make it a success. I ate my dinner and waited for others to show up when Boris V. arrived with the whole kit and caboodle of displays from cameras, a telescope, lenses, and more. A short time later Martin H. drives up and I ask what new gadgets he has, because every event I have been to he has some new stuff and he did not let us down this trip. Mike and Debbie Salazar arrive and she has cookies, water, fruit and gift certificates to El Bruno’s for $50.00 EACH! (Shawn made the cookies.) All is true except the gift certificate part. Then in a little Mini Cooper, Kelsy T. arrives and is ready to go with her Dob. I put a hard lean on her for the Education group as she is a natural with the crowds.

As it was getting dark the clouds tried to mess up this event but we worked around it. Martin and Boris had tables out and were working the sizeable crowd. I had an 11” Celestron and we got Saturn in with many folks seeing the rings for the first time. We got a very thin crescent of the Moon as it was setting and got more oohs and aahs. This made the trip worth it. Then I tried to align, tried again and again, now it is the definition-of-insanity thing kicking in and I tried something different and was able to show off Andromeda. Meanwhile, Martin has his camera looking at nebulas in real time with some very technical gear and people were going crazy (including me trying to get aligned). Kelsy was giving a sky tour and Boris was involved with several folks. Mike was wowing the crowd now and then with the heavens. At one point when the crowd had dispersed and it was Martin, Boris, and myself, we just pointed the scope and none of us knew what we were looking at but it sure was fun! Martin and Boris were exchanging lenses and using Martin’s amazing new toys. They were speaking English, but I was an observer. Observing is what I like and it was a great night.

The community, teachers, and students were so appreciative of us coming to their school that you can feel the impact we are having with kids. This result makes the outreach we do so important and also makes one just feel good.
M33 is a face-on spiral galaxy in Triangulum at a distance of about 3 million light-years. Its size is about 60 minutes or over 30,000 light-years in diameter. It is located about 4 degrees west of Alpha Tri.

Equipment: AT8RC f/8 (new TPO focuser), iOptron CEM60 mount, SBIG ST8300M with FW5 camera, guided with SBIG SG-4 on an AT72ED f/6.

Software: CCDSoft V5.210, ImagesPlus V5.25a

Exposure: RGB 8 x 5 minutes for total 2 hours exposure

Location: 3 miles north of Oak Flat on my backyard patio on September 21, 2017, from 9:00 to 11:45 P.M. MDT.

NOTE: Skies were salt and pepper in the eyepiece.

—John Laning
Donations to TAAS

Guy Kent

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
September 2017

<table>
<thead>
<tr>
<th>Membership</th>
<th>Current Month</th>
<th>Past Month</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>263</td>
<td>271</td>
<td>-8</td>
</tr>
<tr>
<td>Family</td>
<td>162</td>
<td>168</td>
<td>-6</td>
</tr>
<tr>
<td>Educator</td>
<td>14</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>27</td>
<td>28</td>
<td>-1</td>
</tr>
<tr>
<td>Military</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Honorary</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total Members</td>
<td>473</td>
<td>487</td>
<td>-14</td>
</tr>
</tbody>
</table>

Editor’s Note
The deadline for the next issue of The Sidereal Times is Friday, October 20. The newsletter editor’s e-mail address is editor@TAAS.org.

Welcome to New or Returning TAAS Members

Gina Arnold
Dane Edwards
Eric Edwards
Gabrielle Edwards
Jennifer Edwards
Eugenio Griego
Paul Holzmann
Timothy Howard
Diane Lindstrom
James Lindstrom
Peter Lindstrom
Gloria Maurer
R. Alan Maurer
Benjamin Wallace

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: 36° 01’ 50"N
  - Longitude: 107° 54’36"W
- Oak Flat 7680’ elevation
  - Latitude: 34° 59’ 48"N
  - Longitude: 106° 19’ 17"W
- UNM Campus Observatory 5180’ elevation
  - Latitude: 35° 5’ 29"N
  - Longitude: 106° 37’ 17"W

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
- Event 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
### 2017 TAAS Board of Directors/Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dale Murray</td>
<td>President</td>
<td><a href="mailto:president@TAAS.org">president@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>John Miller</td>
<td>Vice President</td>
<td><a href="mailto:vp@taas.org">vp@taas.org</a></td>
<td>505-821-0234</td>
</tr>
<tr>
<td>Bob Shipley</td>
<td>Secretary</td>
<td><a href="mailto:bobship10@gmail.com">bobship10@gmail.com</a></td>
<td>505-872-8366</td>
</tr>
<tr>
<td>Doug LeGrand</td>
<td>Treasurer</td>
<td><a href="mailto:treasurer@TAAS.org">treasurer@TAAS.org</a></td>
<td>505-559-0252</td>
</tr>
<tr>
<td>Robert Anderson</td>
<td>Director, Membership Coordinator</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td>505-275-1916</td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Director, Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Telescope Loan Coordinator</td>
<td><a href="mailto:telescope_loans@TAAS.org">telescope_loans@TAAS.org</a></td>
<td>505-803-3640</td>
</tr>
<tr>
<td>Tom Grzybowski</td>
<td>Director</td>
<td><a href="mailto:education_coord@TAAS.org">education_coord@TAAS.org</a></td>
<td>505-363-9427</td>
</tr>
<tr>
<td>Martin Hilario</td>
<td>Director</td>
<td><a href="mailto:mhilario2@gmail.com">mhilario2@gmail.com</a></td>
<td>213-999-2582</td>
</tr>
<tr>
<td>Gordon Pogue</td>
<td>Director</td>
<td><a href="mailto:gpegue@comcast.net">gpegue@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Bob Havlen</td>
<td>Director</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robert Anderson</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Lynne Olson</td>
<td>Events Coordinator</td>
<td><a href="mailto:events_coord@TAAS.org">events_coord@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Bob Anderson</td>
<td>Grants Coordinator</td>
<td><a href="mailto:grants@TAAS.org">grants@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Barry Spletzer</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Lynne Olson</td>
<td>Events Coordinator</td>
<td><a href="mailto:events_coord@TAAS.org">events_coord@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Barry Spletzer</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Lynne Olson</td>
<td>Events Coordinator</td>
<td><a href="mailto:events_coord@TAAS.org">events_coord@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Barry Spletzer</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Lynne Olson</td>
<td>Events Coordinator</td>
<td><a href="mailto:events_coord@TAAS.org">events_coord@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Barry Spletzer</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Jim Fordice</td>
<td>Observatory Director</td>
<td><a href="mailto:gnto@TAAS.org">gnto@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Lynne Olson</td>
<td>Events Coordinator</td>
<td><a href="mailto:events_coord@TAAS.org">events_coord@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Barry Spletzer</td>
<td>Membership Chair</td>
<td><a href="mailto:membership@TAAS.org">membership@TAAS.org</a></td>
<td></td>
</tr>
<tr>
<td>Gary Cooper</td>
<td>Newsletter Editor</td>
<td><a href="mailto:editor@TAAS.org">editor@TAAS.org</a></td>
<td></td>
</tr>
</tbody>
</table>

### Contact Information

**ATM Coordinator**
- Ray Collins
- 505-344-9686 (H)
- atm@TAAS.org

**Dark Sky Coordinator**
- David Penasa
- 505-269-8717(W)
- darksky@TAAS.org

**Education Outreach**
- Trish Logan
- 505-856-2537
- education_coord@TAAS.org

**Events Coordinator**
- Lynne Olson
- 505-228-4384 (C)
- events_coord@TAAS.org

**Grants Coordinator**
- Barry Spletzer
- 505-275-1916
- grants@TAAS.org

**Membership Chair**
- Bob Anderson
- 505-228-4384 (C)
- membership@TAAS.org

**Newsletter Editor**
- Gary Cooper
- 505-350-7949
- scout_coordinator@TAAS.org

**Observatory Director**
- Jim Fordice
- 505-314-6273
- telescope_loans@TAAS.org

**Public Relations**
- Lynne Olson
- 505-856-2537
- pr@TAAS.org

**Scout Coordinator**
- Chaz Jetty
- 505-344-9686 (H)
- atm@TAAS.org

**Solar Outreach Coordinator**
- Roger Kennedy
- 505-344-9686 (H)
- atm@TAAS.org

**Telescope Loan Coordinator**
- Jim Fordice
- 505-505-5055
- telescope_loans@TAAS.org

**UNM Observatory Coordinator**
- Fernando Torres
- 505-505-5055
- unm_coord@TAAS.org

**Volunteer Coordinator**
- Barry Spletzer
- 505-228-4384 (C)
- webmaster@TAAS.org

**Webmaster**
- Barry Spletzer
- 505-228-4384 (C)
- webmaster@TAAS.org
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

TAAS is honored to receive an “OUT-OF-THIS-WORLD” AWARD 2011 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

MAGAZINES

The Albuquerque Astronomical Society
P.O. Box 50581
Albuquerque, NM 87181-0581

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

TAAS ONLINE

The Albuquerque Astronomical Society
P.O. Box 50581
Albuquerque, NM 87181-0581

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

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