General Meeting News

David Blair

TAAS General Meeting Program for August 13

Hélène Dickel
ADJUNCT PROFESSOR OF PHYSICS AND ASTRONOMY, UNM

Molecules in Interstellar Space

IN 1963, the hydroxyl radical became the first molecule discovered in interstellar space. Since then, more than 140 different molecules—one containing 13 atoms—have been detected using radio techniques. Professor Dickel will discuss this interstellar medium, its chemistry and role in star formation, and the instrumentation that has revealed it.

She will examine the dense cores of giant molecular clouds from which massive stars form and the interactions of these newly-formed stars and attendant H II (ionized hydrogen) regions on the remaining molecular gas.

Next Astronomy 101 Topic: Variable Stars

Dave Pitonzo

WITH the advent of robotic and computerized telescopic surveys, it seems as though there are fewer arenas in which amateur astronomers can contribute to the science of astronomy. Most supernovae and many comets are now found robotically, before they become visible to amateurs. One area, though, where amateurs still contribute is in the systematic observation of variable stars. Our own Tom Grzybowski has been pursuing this aspect of our hobby for the past several years and has agreed to share his experiences and methods with us. So please join us for the August 13 edition of Astronomy 101 at 6:00 p.m. in Regener Hall—Observing Variable Stars—and learn how you can contribute to astronomical discovery!

continued on page 4 . . .
The Albuquerque Astronomical Society and The City of Albuquerque Cultural Services Department in conjunction with Arts in the Park present Cosmic Carnival

at the Anderson Abruzzo Albuquerque International Balloon Museum

Join TAAS and many others for an afternoon of astronomy and science related exhibits and activities.

TAAS will have Solar Telescopes set up for viewing our star, the Sun. Learn a little about the NM night sky in our portable planetarium, enjoy hands on exhibits from Explora and many more.

Enter to win a Telescope courtesy of TAAS (must be present to win).

Sandia National Labs - Rio Rancho Astronomical Society
Museum of Natural History and Science - NRAO Very Large Array (VLA)
Sunspot National Solar Observatory - UNM Physics and Astronomy
New Mexicans for Science and Reason - Explora

contact Dee Friesen friesend@comcast.net
I’m writing this month’s column while at GNTO on our July 30 New Moon observing night while waiting for a clearing in the clouds so Kevin McKeown and Sandra Lynn (two of TAAS’s most excellent meteor observers) can make some counts of the Delta Aquarid meteor shower, which happens to reach its maximum tonight.

We’ve had a great turnout tonight, considering that just about everyone who came drove through rain showers to get here. We’ve had over 20 people (several first time visitors again) and at least 8 scopes, including the Isengard (thanks, Lisa!) and the small dome CCD camera setup on the 11” SCT where I gave an abbreviated CCD training/demo (more on that later). With plenty of good conversation and company, we’ve all had a good time, in spite of the typical monsoon weather.

Here’s Lisa’s report from the Isengard:

“…went well despite the clouds. TAAS newbies Ronald and Mike received prizes, one prize being a new Astronomy magazine and the other a pair of socks depicting Draco’s destruction of the Golden Gate bridge (more likely it was Godzilla but who’s to say?). The Isengard was busy much of the night—visitors were very curious. Our best view was M10, a glob in Ophiuchus that appeared in glorious contrast to the surrounding darkness. Kevin McKeown lent a hand when objects were elusive.”

For the rest of this year, the substantial meteor showers are all happening near full moons, so it will be 2012 before we get another chance for a good meteor display in these parts.

It looked like Carl Frish had taken advantage of the moisture to groom “our” road as it was in excellent shape—thanks so much, Carl! In other hardware news, before sunset, I got HAL back up and connected after last month’s hardware failure. HAL is our observatory computer that logs and communicates the weather station information to our Web site. With it back up, you can conveniently check the current GNTO weather and weather history from the GNTO page on the TAAS site.

I am in charge of GNTO’s CCD imaging program. I had several people contact me this month to ask for training on the GNTO CCD equipment so I held a training/demo session tonight. We had some equipment glitches (well, that never happens, does it?), so we were a bit late getting started. By that time the weather had cleared, there was a big sucker hole to the south, and we had 8 people in the small dome (that’s the most we’ve ever had, with one person sitting in the doorway.) I think everyone got a good introduction to the process and the various (sometimes balky) equipment, computers, and software. Of course, we only covered the first part of the digital astro-imaging process—there’s that whole image processing thing to do after you’ve captured the bits. Maybe we should have a TAAS meeting or an Astronomy 101 class devoted to that subject? If you have those skills (I don’t!), contact David Blair and get on the schedule!

continued on page 8…
### August 2011

<table>
<thead>
<tr>
<th>Sunday</th>
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<td>17 ATM SIG Meeting</td>
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<td>26 Sidereal Times deadline, UNM Observatory Open Observing</td>
<td>27 GNTO NM</td>
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...Jupiter continued from page 1

The southern hemisphere of Jupiter (north is up) at the same time that the Great Red Spot (GRS) is rotating into view just above Europa. On the right, taken 50 minutes later, the GRS is approaching the central meridian, and Europa, with approximately the same surface brightness as the background cloud bands, is lost to view. This image was taken 30 minutes before sunrise, when Jupiter had climbed to an altitude of 60 degrees in steady air.

The images were taken with an Imaging Source DBK-21AU04-AS color planetary video camera on an Orion 180 mm f/15 Maksutov-Cassegrain scope, mounted on an Orion Atlas mount. The small Orion scope is my current favorite for planetary imaging, having tried a C-11 and a long-focus 10” Newtonian during the last decade. A Meade adjustable Barlow lens was used at ~2.5x. For each image, 800 frames were rated, registered, stacked, and wavelet-processed with Registax freeware. Final composition was done with The GIMP (freeware, Linux OS).

—James (Skip) Dearing

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...General Meeting News continued from page 1

Her presentation will also focus on radio astronomy, particularly the Long Wavelength Array, a low-frequency radio telescope under construction in central New Mexico. Professor Dickel is currently involved at UNM in the development of the Long Wavelength Array. She has served as a noted speaker for the American Astronomical Society, American Chemical Society, American Physical Society, and other organizations.

Saturday, August 13, at Regener Hall at 7:00 p.m. See the map on the last page of this issue.
Saturday, August 13, 2011, 7:00 P.M.
Regener Hall
University of New Mexico
(See map, back page)

Molecules in Interstellar Space
Hélène Dickel
ADJUNCT PROFESSOR OF PHYSICS AND ASTRONOMY,
UNIVERSITY OF NEW MEXICO

6:00 P.M. ASTRONOMY 101: OBSERVING VARIABLE STARS
A FEW MONTHS ago, I introduced an observing program that should be easy to complete with diligence and a reasonably sized telescope. We’re going to continue that project in a minute, but first I wanted to touch once again upon my desire to make this column interactive. Do you personally want this newsletter to be more enjoyable, useful and dare I say it, retainable? You have the chance to do so by interacting with me through the e-mail address taas.observer@comcast.net. It would be gratifying to know that someone out there in TAAS is attacking this project with gusto and determination. Please, send me your comments and/or observations.

Now back to our project. Herewith, I present the next set of 10 Arp objects—all galaxies and scattered all over the sky—for your observing pleasure. It’s a short list this month due to the combination of our usual summer “monsoon” pattern and the presence of the Milky Way high in the sky. Once again, all of the Arp objects here are given in Table 3, “One Hundred Recommended Arp Fields,” presented in the book *The Arp Atlas of Peculiar Galaxies – A Chronicle and Observer’s Guide* by Jeff Kanipe and Dennis Webb, copyright 2006 and published by Willmann-Bell, Inc., www.willbell.com.

Here are some notes to keep in mind:

1. The objects presented could be observed all in one night or you could work on last month’s set and also observe some of these. In preparing all the lists for this project, I will try and select a set of objects for each monthly installment that can be observed over the course of a couple of months, so get cracking!
2. The magnitude listed is either for a single object or the brightest in a group. The easiest object to observe is Arp 29, also known as NGC 6946, a large, bright face-on spiral in Cepheus. The most difficult will be Arp 209 in Hercules, a tiny smudge of a galaxy that has an irregular shape.
3. There are three Arps (240, 271 and 93) that are each composed of two galaxies in close proximity.
4. Arp 226 in Aquarius, is also known as the “Atoms for Peace Galaxy” as it loosely resembles a logo created by the Atomic Energy Commission back in the mid-fifties.
5. It is important to study the areas around the group fields carefully as there are usually other galaxies involved or nearby.

Complete this list along with last month’s and you’ll be almost seven-tenths of the way toward observing the best 100 Arps. As always, keep your eyes on deep sky!

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<tr>
<td>240</td>
<td>NGC 5257 and 5258</td>
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<td>13 39.92</td>
<td>0 50.0</td>
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<td>-6 3.0</td>
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<td>14 32.43</td>
<td>8 4.8</td>
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<td>20 32.5</td>
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<td>16 32.67</td>
<td>78 11.9</td>
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<td>17 29.60</td>
<td>75 42.3</td>
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<tr>
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<td>NGC 6946</td>
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<td>20 34.87</td>
<td>60 9.2</td>
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<td>22 35.77</td>
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NGC6960 is the western part of the Veil Nebula located by the bright orange star 52 Cygnus.

Equipment: AT102ED f/7 SBIG ST8300M FW5 SG-4 auto-guider with 80mm f/5 guidescope, iOptron iEQ45 mount. Exposed RGB 90x1-minute images. Software: CCDSoft V5, Photoshop Elements V9, MaxIm DL V5. July 2011, Tijeras, NM.

—John Laning

TAAS Members Seen atop Explora

Bob Hufnagel

John Laning

Photos: Bill Firth
IF YOU are interested in getting into CCD Astrophotography or you have been checked out on our equipment and want to use it some GNTO night, please contact me via e-mail at gnto@taas.org to make arrangements. Most observing nights, I can have your excellent GNTO CCD imaging equipment ready to go in the 10-foot dome shortly after dark. After I set up the equipment, even if you’ve never seen it before, it only takes a couple of hours to show anyone what they need to know to start taking great digital astrophotographs without having to purchase any expensive equipment yourself. You can use our equipment and my “expert” experience (definitely note the quotes there) to get familiar enough with the process to you’remake your own purchase decisions, or you can continue to use the GNTO resources.

GNTO committee meetings are open to all TAAS members. These are a great way to get more involved with your observatory. Our next meeting will be on August 4, which may be before this issue of Sidereal Times goes to press, but we have a dinnertime meeting every other month at 7 p.m. on a Thursday. If you are interested in keeping your observatory a going concern, any TAAS member can be on the GNTO committee—just send me an e-mail and start coming to the meetings—that’s all it takes! There are always some hot topics on the agenda, and it takes a lot of people to keep the place running. We can use all the help we can get.

GNTO is open to all TAAS members and their guests and we have at least one or two observing night gatherings every month, weather permitting. On observing nights we have the usual crowd of astronomy and astronomy-equipment “experts” (if you get an outfit, you can be an expert, too) wandering in and out of the comfortable Robert Ortega Building. Also, the Guest Trailer is open with coffee, hot chocolate, and any snacks you might want to share. In addition to the 16” Isengard scope in the big dome and the Big Glass that the club’s “Old Guard” often bring to these observing nights, we’ve got four loaner Dobsonian scopes at GNTO and a bunch of other great equipment waiting for you. Please plan your next trip to GNTO soon. If you have any questions about GNTO or committee meetings, please contact me, Steve Welch, e-mail: gnto@taas.org, 505-866-7668 (home) or 303-530-2661 (mobile).
Welcome to New or Returning TAAS Members

ASHLEY DENARDIS
ROBERT KATZ
OLIVER QUICK
LINDA SPENSLEY
KARA WILLIAMS

Monthly Membership Report
JUNE 2011

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<th>Past Month</th>
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<tr>
<td>Family</td>
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<td>Complimentary</td>
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<tr>
<td>Total Members</td>
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Explanation of Dues and Membership Renewal Date

New memberships will be posted as beginning the first day of the month regardless of what day during that month the check is received. Notice of renewal will be sent out the month before the due date. You will have until the end of the month after your renewal date to send your membership check.

If you fail to pay and renew at that time, your membership will lapse. When you pay on a lapsed membership you will be reinstated in the month that the membership was originally due. (If dues were due in March and you did not renew until May or June or July, etc., the date of your renewal will be in March. If your dues are due in April and you pay in March, your membership will still be renewed in April.)

In a nutshell, if you pay late or early your membership date stays the same and your next year’s dues will be due on that date next year.

—Dan Clark

Donations to TAAS

GENERAL
Albert Brettner, Alex Burd, Jerry Love, David Trujillo

EDUCATION
Ashley DeNardis

GNTO
David Trujillo

DARK SKY
Alex Burd, Ed Juddo

Location, Location, Location

• Chaco Canyon
6185’ elevation
Latitude: 036° 01’ 50”N
Longitude: 107° 54’ 36”W
36.03° -107.91°
36° 1.83’ -107° 54.60’

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

• UNM Campus Observatory
5180’ elevation
Latitude: 35° 5’ 29”N
Longitude: 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 Pete Eschman or Steve Welch for GNTO information.

Membership Services

for:
• Membership Inquiries
• Events Information
• Volunteer Opportunities

Contact Bill Firth at membership@taas.org

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

Contact Dan Clark at treasurer@taas.org

P.O. Box 50581
Albuquerque, NM 87181

The Official Newsletter of The Albuquerque Astronomical Society
Meeting Minutes

TAAS Board Meeting
Thursday, July 14, 2011

Directors present: Steve Snider (President), David Blair (Vice President), Art VanDereedt (Secretary), Lynne Olson (Events Coordinator), Dan Clark (Treasurer), Steve Welch (GTNO Director), Tom Davies, (Education Coordinator), Daniel Zirzow (UNM Coordinator), Ray Collins (ATM Coordinator), Melissa Kirk, Dave Pitonzo

Missing Members – Bob Havlen, Steve Riegel

Meeting brought to order at 7:05 p.m.

I. Approval of Agenda – By acclamation

II. Approval of Minutes – By acclamation

III. Committee Reports

   a. Education (Tom Davies) – Nothing going on until September.

   b. Finance (Dan Clark) June Treasurer’s Report:

   Accounts Summary Current Previous Change
   $36,300.74 $35,390.84 $242.36

   Donations – 8 for $265.00

   Membership – 11 Lapsed Members; 5 New Members

   41 Complimentary; 8 Honorary

   Discussion – There was a brief discussion about the policy of continuing to extend complimentary members to faculty who had loaner telescopes and it was agreed to do so.

   c. GNTO (Steve Welch)

   Recent Events – July 2 good turnout, lots of first-time and new visitors, great Binocular Event by Dee, cool ISS pass near Saturn. There was also a discussion concerning computer problems at GTNO. Weather Station is down temporarily.

   Next Event – July 30

   d. Membership – Increasing membership was discussed briefly again, along with the need for increasing membership in a younger audience. The need for membership goals was mentioned again.

   e. ATM/Special Projects – Nothing happening.

   f. Others

   Oak Flat Discussion – With the continuing problem of using Oak Flat (area being closed because of fire issues), there was a discussion about making use of the Open Space Visitor Center instead; Dee Friesen is the POC.

IV. Current Activities

   a. General Meeting 7/16/2011 – David Blair gave a summary of the setup for the second part of great debate this week. Laney Dickel will speak in August on “Molecules in Interstellar Space.”

   b. UNM Campus Observatory – Closed for the summer; reopens August 26.

   c. Oak Flat Report – The July event has been canceled due to the issues of the fire season, with no plans until further notice.

V. Future Activities

   a. Cosmic Carnival – Plans still on; Dee Friesen is POC.

   b. Banquet Planning – Reservations were made for January 14, 2012, at Elegante; there was a discussion about lining up speakers for the event.

   c. Maize Maze – General discussion with possible dates in mind. Best date under consideration right now is September 3 depending on the Oak Flat situation, but it was necessary to make sure of date with people at Rio Grande Community Farm.

   d. Vesta Fiesta – August 6 at Open Space Visitor Center; TAAS participation with telescopes and sky tour; presentation on Dawn Mission by Tom Prettyman; indoor demos by UNM Astronomy; on calendar.

VI. Old Business

   The AED was purchased. There was brief discussion about the need now for training. Delivered to Steve Welch, who will contact trainers and trainees.

VII. New Business

   Possible purchase of 25” Telescope – The 25-inch Obsession telescope was made available to TAAS for purchase at a discount price through a third party. A lengthy discussion followed on whether this would be a good idea, as well as how it would be utilized. The motion was tabled with a 3-5 negative vote against further pursuing purchasing the telescope.

   The 25” telescope discussion also addressed ideas for future planning. A motion was made for board members to offer suggestions for future planning at our next board meeting. Steve Welch will give a presentation on science that amateur astronomers can do at the next meeting.

VIII. BOD remarks/discussion – None.

IX. Adjourned at 9:20 p.m.
## 2011 TAAS Board of Directors/Staff

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<th>Position</th>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
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<tr>
<td>President</td>
<td>Steve Snider</td>
<td><a href="mailto:president@taas.org">president@taas.org</a></td>
<td>505-292-0463 (H)</td>
</tr>
<tr>
<td></td>
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<td>slsnider423 at yahoo dot com</td>
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<tr>
<td>Vice President / General Meeting Coordinator</td>
<td>David Blair</td>
<td><a href="mailto:vp@taas.org">vp@taas.org</a></td>
<td>505-296-9632, 505-205-9562 (C)</td>
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<td>Secretary / Librarian</td>
<td>Arthur VanDereedt</td>
<td><a href="mailto:secretary@taas.org">secretary@taas.org</a></td>
<td>505-821-0530</td>
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<td>vandeta at msn dot com, 505-821-0530</td>
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<td>Treasurer</td>
<td>Dan Clark</td>
<td><a href="mailto:treasurer@taas.org">treasurer@taas.org</a></td>
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<td>Doctor / ATM Coordinator</td>
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<td></td>
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<td>ray at rinzai dot com, 505-344-9686 (H)</td>
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<tr>
<td>Director / Education Coordinator</td>
<td>Tom Davies</td>
<td><a href="mailto:education_coord@taas.org">education_coord@taas.org</a></td>
<td>505-821-1232</td>
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<td>Director / Public Relations</td>
<td>Steve Riegel</td>
<td><a href="mailto:pr@taas.org">pr@taas.org</a></td>
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