

# FirstLight

## Newsletter of the Alachua Astronomy Club, Inc.



29° 39' N, 82° 21' W

Volume 14 Number 9

September 2001

### AAC EVENTS

#### August Club Meeting Announcement

**Date** Tuesday, September 11, 2001

**Time** 7:30 p.m.

**Place** Doyle Conner Building, 1911 S.W. 34 Street, Gainesville, FL

**Speaker** Jack Fox

**Title** "Earth, Moon, Mars and Beyond!"

#### Preview

A presentation of NASA's past, present and future missions. Includes discussions of Russian MIR space station, International Space Station, Space Shuttle replacement, Hubble Space Telescope, Mars Pathfinder, other current and future interplanetary missions.

Biography: Jack Fox is Manager of Spaceport Technology Projects for Spaceport Engineering and Technology at the Kennedy Space Center. He is responsible for the development of Spaceport technologies involving Range and Weather, Command and Control, Integrated Vehicle Health Management, Exploration Ground Systems, Launch Site Support Systems and Flight Experiments for possible application on the Space Shuttle, future launch vehicles and spacecraft.

Jack received a Bachelor of Science Degree in 1983 in Aeronautical and Astronautical Engineering from the Ohio State University. He also received a Master of Science Degree in 1995 in Engineering Management from the University of Central Florida.



**Jack Fox at Launch Pad**

### AAC Star Parties and Events

Tuesday, September 4 -- AAC Executive Council Meeting, 6:30 p.m. at Shoney's Restaurant on Archer Road.

Saturday, September 15 -- *Rosemary Hill Observatory (RHO)* -- Special tour only for AAC. Sign up sheet available at the September 11 meeting (or notify Dr. Howard Cohen by September 11). You must arrive at Randy Palmer's house before 6:30 PM on Saturday to carpool to the observatory. The tour will take about one hour. **NOTE: Do not be late! Vistors can not travel to RHO without an escort.** We will not do any observing from RHO but will see its facilities and learn about the work done at UF's professional observatory. RHO contains two principal telescopes: an 18-inch Ritchey-Crétian Cassegrain Reflector and a 30-inch Newtonian-Cassegrain Reflector.

*See maps to Randy's house and RHO, inside*



**AAC Executive Meeting**  
**August 7, 2001**  
**Shoney's Restaurant, Gainesville, FL**

Attending: Randy Palmer (RP) [P], Howard Cohen (HC) [VP], Mike Toomey (MT) [S], Mark Barnett (MB) [T], Alicia Kemper (AK), Pam Mydock (PM), Cindy Bartlett, Marian Cohen (MC), Stephen G. Thomas (SGT), Ron Irby (RI), Chuck Broward (CB)

- I. Approval of minutes format at regular meetings shall now be conducted prior to meeting, by signatures of 3 officers, of the previous week's Board meeting (not the previous month's BOD/general meeting). Copies will be available to members at that time, and published in FirstLight. - MT
- II. The AAC received Sky & Telescope magazine and Astronomy League Astronomy Day award for Best New Idea. -MT
- III. Inventory of club telescope loaners (to be listed at end of club minutes, see below). -MT
- IV. Science-Fair awards for 2001-2002
  - A. MT suggest the AAC allocate \$500 for one or more Sci-Fair prizes to be announced in schools early this Fall.
  - B. MB [T] requested to provide a rough schedule of fixed annual expenses to see if above can be budgeted. - HC
  - C. AK will research disseminating award information to schools/students.
  - D. Tabled to September BOD meeting.
- V. Solar Walk project continues (slowly) as some artistic details are reviewed by artist. -MT
- VI. Bylaws - MB
  - A. MB headed a committee in July to suggest bylaw revisions. PM, MC, MT participated.
  - B. Recommendations included major revisions (noted below) as well as some minor grammatical revisions.
    1. New membership dues pro-rated quarterly rather than monthly; waiver of 4<sup>th</sup> quarter dues.
    2. Composition of Board to include 4 members, plus 3 or 5 directors-at-large, without committee or chair obligation [BOD endorses 5 directors by 4-2 vote]; substitutes for presently named committee chairs.
    3. Discretionary spending by the BOD up to \$300 or \$500 per expenditure without approval by general membership [BOD endorses \$500 by 5-0-1 vote]; to approve annual/fixed expenses (such as Newsletter, AL dues, insurance, etc.) a budget would be submitted for approval to the general membership each January.
    4. VP shall add responsibility of "Parliamentarian"; discarding program schedule.
    5. T will disperse funds authorized by membership OR board of directors.
    6. Nomination committee will comprise of 2 officers and 1 general member; committee will add 3/5 directors to slate in addition to 4 officers.
    7. P, VP, S and T office will be limited to 3 consecutive year terms.
    8. Impeachment provision added.
  - C. Bylaw suggestions will be read at August meeting and printed in FirstLight for review and comment by general membership. Approval sought by September meeting (prior to Nomination Committee formation).
  - D. Non-bylaw suggested dues revision: addition of associate rates for family members to receive voting, office holding and club member privileges. General club functions (meetings, star parties) will remain free to the public (i.e. families are still encouraged to participate w/ or w/o associate memberships).
- VII. Web Site - HC
  - A. Committee met in July, consisting of HC, PM, DS, MT, Blake Edwards, Scott McCartney, et al
  - B. Interland (web host) account to be set up this month for testing.
  - C. Correction to July minutes - web host will be \$25/month with 1 year prepayment (not \$20/month).
- VIII. Nomination committee members tentatively assigned: RI, MB, CB
- IX. Mentor Program - SGT is seeking 2 mentors for 2 new members.
- X. Proposal for club fund-raiser from Annie Welch presented by PM; more details requested. -PM/AK
- XI. Events - a few various upcoming dates -RP
  - A. August 17 - Christian Singles Career Meeting -AK
  - B. October 20 - Villages Star Party
  - C. October 27 - Kanapaha Moonlight Walk
  - D. November 10 - Flying 10 (Kitty Hawke) Star Party (AAC)
  - E. November 16-17 - Chiefland Fall Star Party

- MT  
###



**FirstLight** September 2001

## Club Telescope Borrowing Schedule for AAC Members

	<u>August</u>	<u>September</u>	<u>November</u>	<u>December</u>
C-8	Chuck Broward	TBA	TBA	TBA
Dob-8	Bud Cridlin	<b>Sign up now!</b>	TBA	TBA
RLT	Bud Cridlin	(in shop for service)	TBA	TBA

Contact the Secretary (Mike Toomey) or the Telescope Custodian (Bud Cridlin) for availability.



*Jeff Pettitt demonstrated his Hydrogen Alpha solar filter in the Shoney's parking lot before the August 2001 AAC meeting.*

## Old Friends

**by Stephen Thomas**

It was one of those mornings when I just couldn't sleep. "5:18 a.m. Now what?" Maggie the cat was lying, restless, at my feet just waiting for an excuse to pounce. Candi the Girlfriend was awake. Not only awake, but conscious and in the shower. Mind you, this is a girl who could easily win a spot on the US Olympic sleeping team. "Wow." A quick trip out to the kitchen didn't help my insomnia, as I painfully discovered a coffee table and various cat toys strewn about the pitch black living room floor.

Now I was wide-awake. So I decided to visit a few old friends I hadn't seen in months. Last time we got together they were up all night and down by now, but I got word recently that they were early risers these days and they were always so glad to see me. "Should I mention my new Red friend who visits from the southeast every evening? Maybe they know him."

No need for formalities at 5:30 a.m. A pair of shorts, sandals, an inside-out tee shirt and my new toy was all I needed as I

headed out the door. A few steps later, a gaze eastward, and there they were. As bright and colorful as I remembered. We quickly became reacquainted and reminisced about the old days. I mentioned how they never seemed to age, always colorful, full of life and energy, and they just smiled brightly.

After a few minutes I realized that over the past few months they seemed to have grown apart, but you certainly wouldn't think anything wrong by being with them. Always complementing each other's qualities. Playing off each other's observations. I thought about that old cliché which goes something like – looking out from the inside, or was it in from the outside? It didn't matter. I was suddenly sleepy. Old friends getting together on a clear summer morning.

Not a bad way to start the day. I said goodbye to my friends Jupiter and Saturn, put my new telescope to bed, and started the rest of my day.

*A Brief Column for the Beginning Stargazer Introducing a New Astronomical Term Each Month*

**A**stronomy is rich with terminology. This column will help beginning stargazers ease into the world of astronomy by *briefly introducing* a new but *basic astronomical term* (word, acronym or abbreviation) each month. This list, which began January 1999 with the letter *a*, is alphabetical but uses successive letters for each month's entry. (We will return to the letter *a* after twenty-six months.)

(The February 2001 column ended with *z* so we are now in the second cycle of twenty-six terms. See the February 2001 issue for a cumulative index.)

Note: This month's term will explain why some people are always 12 hours late!

## Word of the Month for September 2001

**Greenwich Civil Time (GCT)** The mean solar time on the Greenwich meridian (when the Sun is at *upper transit* or *culmination*,\* that is near noon) **plus 12 hours**. So **GCT** begins at "midnight."

**GCT** is equivalent to **Universal Time (UT)**\*\*

However, the term **GCT** never became popular.

Rather, most people today refer to **GCT** as **Greenwich Mean Time (GMT)** and make **GMT** equivalent to **UT**.

Strictly speaking equating **GCT** to **GMT** and thus **GMT** to **UT** is incorrect.

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\**Transit* or *culmination* refers to the moment when a celestial object is on the *celestial meridian*, an imaginary circle that divides the sky into east and west halves. Thus, upper transit or culmination occurs when the celestial object, during its daily passage across the sky, is at its highest point above the horizon. (So, local noon occurs when the Sun is a upper transit.)

\*\*See *FirstLight*, September 2000 for a discussion of **Universal Time (UT)**.

In astronomy zero hours *mean time* occurs when the Sun is at *upper transit* (near noon). But **civil time adds 12 hours to mean time**. This makes zero hours civil time coincide with midnight rather than noon. (So a new day begins at midnight rather than noon.)

Before 1925 astronomers recorded their observations using **GMT** to avoid changing dates in the middle of the night. However, people (including astronomers!) "live by the Sun." Thus, people needed to "live" by civil time (12 hours ahead of **GMT**) to avoid a date change in the middle of the day rather than at midnight as astronomers were doing while observing at night.

The use of two times (**GMT** and **GMT + 12h**) became annoying and confusing. In 1925, **GMT** was renamed **Greenwich Astronomical Time (GMAT)** and essentially abandoned. (Many today regard both **GCT** and **GMAT** as obsolete terms.)

To emphasize the switch in astronomy from mean to civil ("civilian") time, the 1925 edition of the *American Ephemeris and Nautical Almanac* or *AENA* (now the *Astronomical Almanac*) had printed instructions about this change on its *outside cover*! Here was noted the change from **GMT** to **GMT plus 12 hours** (i.e., **GCT**) along with instructions on how to apply the 12-hour difference!

(Anyone using copies of the *AENA* before 1925 must be careful about time references or they will be 12 hours off from today's use of "civil time.")

Although many people continue to use the expression "mean time" for **UT**, it is best to avoid any mention of **GMT** and simply use **UT**. This will avoid confusion with those who still regard the astronomical definition of mean time as representing a new day beginning at noon and a civil day as beginning at midnight.

✧

References. J. Mitton 1991, *Concise Dictionary of Astronomy* (Oxford Univ. Press); I. Ridpath 1997, *A Dictionary of Astronomy* (Oxford Univ. Press); M. Wagman, *Sky & Telescope*, April 1991, pp. 380–381.

## **BYLAWS OF THE ALACHUA ASTRONOMY CLUB, INC. (new text shown with underlines)**

### ***Revision Dates:***

1988 September 8

1995 September 12, major revision

1995 November 14, minor correction

1999 January 12, incorporation as AAC, Inc. and expand paragraph *Name and Purpose*

2001 August 14:

#1 minor wording change in paragraph *Name and Purpose*:

#2 fix typo in paragraph *Membership*:

#3 simplify wording in paragraph *Meetings*:

#4 delete reference to president/treasurer and replace “months” with “quarters” in paragraph *Dues*:

#5 add clarification in paragraph *Business*:

#6 re-define Board of Director, duties, and financial authority in paragraph *Management of the Club*:

#7 change duties in paragraph *Vice President*:

#8 add “or Board of Directors” to authorization and delete redundant wording in paragraph *Treasurer*:

#9 clarify election procedures, restrict offices to 3 consecutive years, and add provision for special elections in paragraph *Elections*

### ***Name and Purpose***

We constitute ourselves as the Alachua Astronomy Club, Inc., wishing to secure the fellowship, pleasures, and benefits of an association with persons commonly interested in astronomy. We hereby enact these Bylaws to help govern our club. The specific purpose for which this corporation is organized is to promote the science of astronomy by:

1. Providing opportunities for the local community to learn about and become interested in astronomy, such as, but not limited to, astronomy lectures, demonstrations, and sky observing events;
2. Making astronomy in general more accessible and visible to the general public, through public and media outreach; and
3. Providing opportunities, at low cost, for its general membership to learn and improve skills related to amateur astronomy, such as, but not limited to, sky observing, amateur scientific research, and the selection, construction, and use of astronomical equipment.

### ***Membership***

Membership in this club will be open to anyone with an interest in astronomy. A “member in good standing” is one who is up to date in the payment of his or her dues. The “general membership” will consist of all members in good standing.

### ***Meetings***































“Meetings” shall mean regularly scheduled club meetings each month at a date and location designated by the general membership. Where not indicated to the contrary, Robert’s Rules of Order shall be followed in the conduct of the meetings.

### ***Dues***

Dues shall be established by vote of the general membership and become effective January 1, following. New members' dues shall be pro-rated according to the number of quarters left in the calendar year.

# September 2001

Sun      Mon      Tues      Wed      Thur      Fri      Sat

						1  Moon 19:34 05:50 Sun 07:07 19:51 Moon at apogee 406,330 km
2  Moon 20:07 06:44 Sun 07:07 19:50  Full Moon, 17:43	3  Moon 20:38 07:38 Sun 07:08 19:49	4  Moon 21:08 08:30 Sun 07:08 19:48	5  Moon 21:39 09:24 Sun 07:09 19:47	6  Moon 22:09 10:17 Sun 07:09 19:46	7  Moon 22:42 11:12 Sun 07:10 19:44	8  Moon 23:18 12:08 Sun 07:11 19:43
9  Moon 23:59 13:07 Sun 07:11 19:42	10  Moon ----- 14:08 Sun 07:12 19:41 Saturn 0.2 deg S of the moon. Occul. Last Qtr., 15:01	11  Moon 00:46 15:09 Sun 07:12 19:40	12  Moon 01:41 16:09 Sun 07:13 19:38	13  Moon 02:42 17:07 Sun 07:13 19:37	14  Moon 03:49 17:59 Sun 07:14 19:36	15  Moon 04:59 18:46 Sun 07:14 19:35
16  Moon 06:10 19:29 Sun 07:15 19:33  Moon at perigee 358,128 km	17  Moon 07:19 20:08 Sun 07:15 19:32  New Moon, 06:28	18  Moon 08:27 20:46 Sun 07:16 19:31	19  Moon 09:34 21:24 Sun 07:16 19:30	20  Moon 10:39 22:03 Sun 07:17 19:28	21  Moon 11:43 22:43 Sun 07:17 19:27	22  Moon 12:45 23:28 Sun 07:18 19:26
23  Moon 13:45 ----- Sun 07:19 19:25	24  Moon 14:40 00:14 Sun 07:19 19:23  First Qtr., 05:32	25  Moon 15:31 01:04 Sun 07:20 19:22  Mars 2 deg S of moon	26  Moon 16:17 01:56 Sun 07:20 19:21	27  Moon 16:58 02:50 Sun 07:21 19:20	28  Moon 17:35 03:44 Sun 07:21 19:19	29  Moon 18:09 04:38 Sun 07:22 19:17  Moon at apogee 405,787 km
30  Moon 18:41 05:32 Sun 07:22 19:16						

## Monthly Meetings

9/4 - Executive Council 6:30 p.m.  
Shoney's Restaurant  
(across from Target)  
3857 S.W. Archer Road,  
Gainesville, Fl.

9/11 - Regular Monthly Meeting 7:30 p.m.  
Doyle Conner Bldg 1911 SW 34<sup>th</sup> St.  
Speaker - Roy Johanson - NASA  
Subject - TBA

## Star Parties

9/15 - Randy Palmer's (see  
web-site for directions)

## Cool September Objects

NGC 6604 - Serpens - Cluster w/nebulosity  
NGC 6723 - Sagittarius - Globular Cluster  
NGC 6811 - Cygnus - Open cluster  
NGC 6823 - Vulpecula - Open cluster  
NGC 7009 - Aquarius - Planetary nebula  
NGC 7082 - Cygnus - Open cluster

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**Alachua Astronomy Club, Inc. (AAC)** meets every second Tuesday of each month, at 7:30 p.m., in the Doyle Conner Building, 1911 SW 34th Street, Gainesville, Alachua County, Florida, USA.

**World Wide Web Home Page at URL <http://www.astro.ufl.edu/aac>**

General public and beginning stargazers are invited to all meetings, star parties and club events. No equipment needed. Call a club officer (most area codes 352) for more information or e-mail [fcipam@nersp.nerdc.ufl.edu](mailto:fcipam@nersp.nerdc.ufl.edu)

President Randy Palmer  
Bronson (486-3658)

Star Parties Bud Cridlin  
Gainesville (374-8599)

Education Liaison Alicia Kemper  
Gainesville (373-1616)

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## FirstLight

Alachua Astronomy Club, Inc.  
P.O. Box 13744  
Gainesville FL 32604-1744



Tour Rosemary Hill Observatory  
with AAC on September 15, 2001

## ***Business***

A quorum shall be defined as at least 25 per cent of the members in good standing, including one officer. A quorum is necessary to conduct club business. A vote taken during a meeting will be binding on the club only if a majority of members present approves the motion.

## ***Management of the Club***

The affairs and business of the club shall be conducted and managed by a Board of Directors. The Board will include the following elected officers: President, Vice President, Secretary, and Treasurer, all of whom will be elected annually by the general membership. All elected officers and directors shall be members in good standing for the year in which they will hold office. Each officer is responsible for the accomplishment of the duties defined herein.

Additional Board members will include five (5) directors, elected annually along with the slate of four (4) officers by the general membership.

The Board may approve up to five hundred dollars (\$500) per disbursement for club business. Larger appropriations will be voted on by the general membership.

## ***President***

The President shall preside at all club meetings and shall see that all club business is conducted in a manner that is consistent with these Bylaws. Whenever necessary, the President shall create committees and appoint chairpersons who will thereupon recruit committee members to assist them in adequately conducting club activities. All chairpersons are responsible to the President.

## ***Vice President***

The Vice President shall assume all duties of the President in the President's absence. Additional responsibilities for the Vice President will include Parliamentary duties, to interpret and arbitrate parliamentary procedures per these Bylaws.

## ***Secretary***

The Secretary shall be responsible for all correspondence, the accurate recording of all motions and official actions taken at all meetings, and for keeping up to date all membership records, club property records, and all other important club documents.

## ***Treasurer***

The Treasurer shall be responsible for the collection and disbursement of all club moneys authorized by the general membership or the Board of Directors. The Treasurer shall keep up-to-date comprehensive records.

## ***Elections***

Elections shall be held once a year, at the November meeting. The President shall appoint a nominating committee, consisting of two members from the Board of Directors and one from the general membership, to meet during the month of September and present a slate of officers and directors at the October meeting. Additional nominations will be accepted from the floor at that time, and also at the November meeting immediately prior to the election. Terms of office shall be for one year, with the restriction of three consecutive years for re-election to the offices of President, Vice President, Secretary, and Treasurer. There are no time limitations for elected directors.

If any elected official fails to perform their duties, the general membership may vote for removal by a 2/3 majority of members present at any meeting where a quorum is present. The club may then conduct a special election for replacement.

## ***Amendments***

These Bylaws may be amended or changed at any meeting where a quorum is present, on a motion by a member in good standing, which is seconded, and then passed by a 2/3 majority of all members present.