Next LAS Meeting Feb 18\textsuperscript{th}

The speaker at the Feb 18th meeting will be Dr. John Bally, Dept. of Astrophysics and Planetary Science University of Colorado at the February 18th LAS meeting. His topic is "Observations of Orion with ALMA, Gemini, and HST".

Bio

Dr. John Bally received his undergraduate degree from the University of California at Berkeley in 1972. In 1980 he received his Ph.D. from the University of Massachusetts at Amherst. For 11 years he worked with the group at AT&T Bell Laboratories that discovered the Cosmic Microwave. He researches the interstellar medium, star formation, feedback and the self-regulation of star formation. His other research interests include the formation of clusters and massive stars, proto-stellar outflows and jets, molecular clouds, astrobiology, black-holes and cosmology. Observations from visual to radio wavelengths. Instrumentation. Major recent projects include the Bolocam Galactic Plane Survey and the Herschel Galactic Plane Survey (Hi-GAL). He gives popular talks on astronomy and cosmology to the general public and amateur astronomy groups. He and Bo Reipurth and have written a popular book, \textit{The Birth of Stars and Planets}

Location:
The meeting will be at the IHOP Restaurant, 2040 Ken Pratt Boulevard, Longmont. Please join us for coffee, dinner, or just desert around 6 pm; The general meeting and presentation will begin at 7 pm.

Upcoming Events

\textit{February 17\textsuperscript{th} 6pm – Space Foundation Community Night} at Erie High School, 3180 Co Rd 5, Erie, CO 80516. The Space in the Community program is designed to inspire students about the wonders of space and to reignite the imagination of all members of the community. Program will feature Dr. Leroy Chiao, a former NASA astronaut and commander of Expedition 10.

\textit{February 18\textsuperscript{th} 7 pm – “Observations of Orion with ALMA, Gemini, and HST”} presentation by Dr. John Bally at IHOP Restaurant, 2040 Ken Pratt Blvd, Longmont, CO.

\textit{March 3\textsuperscript{rd} 6 pm “Hawk Air Voyage to Pluto”} at Hygiene Elementary, 11968 N 75th St, Longmont, CO 80503.
January 28th Meeting Notes
by Joe Hudson

Annual Banquet and Business Meeting

There were 32 people present.

Vern Raben opens and moderates:
Welcome to all, introduction and
identification of officers (all were
present):
Vern Raben – President
Gary Garzone – Vice President
Mike Fellows – Treasurer
Brian Kimball – Board Member
Jim Elkins – Board Member
Tally O’Donnel – Board Member
Joe Hudson – Secretary

LAS Announcements and upcoming events
• Space Foundation event 2/17 6 pm
  at Erie High School
• LAS meeting, Dr John Bally
  Observations of Orion 2/18 7 pm
  at IHop

2015 Year in Review - Outreach
22 start parties scheduled / 9 canceled
(LAS averages ~ 20 annually)
• January: City of Superior, Carrie
  Martin (cancelled)
• February: Mead HS
• March: Skyline High School
• April: Mackintosh Academy,
  Boulder Open Space (cancelled),
  Carrie Martin (cancelled)
• May: Mountain Shadows
  (cancelled), City of Longmont Rec
  (cancelled), Rinn Valley 4H
  (cancelled)
• June: Boulder Open Space, Carbon
  Valley Rec (cancelled)
• July: City of Longmont Rec
• August: City of Longmont Library,
  City of Superior Rec,
• September: LDS boy scouts, Lyons
  Elementary, Boulder Open Space
• October: Louisville Library
• November: Louisville Library (solar
  event), National Center for
  Interactive Learning
• December: Meade HS (cancelled),
  Northridge Elementary (cancelled)

2015 Year in Review - Guest Speakers
• February 19 – Observing the Moon
  by Andrew Planck
• March 19 – Comets as Solar
  Probes by Dr. Paul Bryans
• April 16 – Image Differencing by
  Steve Hartung
• May 21 – Weirdest Stars in the
  Universe by Dr. Emily Levesque
• June 18 – New Horizons Mission to
  Pluto by Dr. Fran Bagenal
• July 16 – Open Forum
• Aug 20 – Beginners Spectroscopy
  by Vern Raben
• Sept 17 – Timely Discussion about
  Time by Dr. Suzanne Metlay
• Oct 15 – Mr. Messiers
  Neighborhood by Mike Roos
• Nov 19 – Imaging Equipment
2015 Year in Review – Library Telescope Project

- Modified and donated 6 library telescopes to Longmont Library (purchased 6 kits and 5 scopes – $1710). One scope donated by Horkheimer Foundation / Astronomical League
- As of this meeting, 36 people are waiting to check the scopes out (2 week period checkout)

2016 Officer Nominations

Vern explained the process and voting schedule. Nominations remain open until the vote.

Board nominees:
Brian Kimble
Jim Elkins
Chris Fauble
Tally O'Donnell

Officer nominees:
Vern Raben President
Gary Garzone Vice President
Mike Fellows Treasurer
Joe Hudson Secretary

Other nominations solicited – none offered.

Motion to close nominations - motion seconded.

There was voice vote for nominations – all aye, no objections.

The Year Ahead 2016 – Outreach

- Jan 16 City of Longmont Rec (done)
- Feb 17 Space in the Community St Vrain Schools Erie
- Mar 3 Hygiene Elementary – Hawk Air ’Voyage to Pluto)
- Mar 16 Mead High School in March
- Majestic View Nature Center Arvada April 16
- Longmont Rec / Sandstone June 11
- June 25 Hall Ranch (36 and hwy 7) BCPOS Astronomy Our planetary neighbors
- Aug 12 Superior Star Party Aug 12
- Sept 23 BCPOS All Things Being Equal

Upcoming Projects in 2016
(some planned / some still open)

- Planning for total solar eclipse Aug 21, 2017
- NW Nebraska Star Party Aug 5-7
- Astro Workshop at Hall Ranch after June 25 / Sept 23 star parties
- Upgrade All Sky Camera
- Radio Telescope project
- Extend the library telescope project to other libraries

Suggestion for events in 2016

- High Plains Library in Firestone (on open hill...) very receptive library staff (we can turn the parking lot lights off!)

Meeting adjourned
February Celestial Highlights

**Moon**

New moon: Feb 7th 7:40 am  
First quarter: Feb 14th 12:48 am  
Full moon: Feb 21st 11:21 am  
Third quarter: Mar 1st 4:12 pm

**Mercury**

Take a look at Mercury around 6 am low in the east-south-east sky this month. It begins the month at magnitude 0 in apparent brightness and 7.4 arc sec across. By month end it dims to -0.4 magnitude and is 5.2 arc sec across.

**Venus**

The best time to view Venus is about 6 am in the southeast. It begins the month at magnitude -4 and is 12 arc sec across. By the end of the month it decreases to 11 arc sec across and is magnitude -3.4 in brightness.

**Mars**

Optimum time to view Mars this month is between 5:40 and 5 am. It is in the constellation Libra. Mars begins the month with an apparent brightness of 0.8 and is 6.9 arc sec across. At the end of the month it will be magnitude 0.4 and will be 8.1 arc sec across. Mars opposition will be on May 22nd.

**Jupiter**

Jupiter is in the constellation Leo. Jupiter is in good position for viewing about 2:50 am as the month begins. That time changes by about ½ hour earlier per week as the month progresses (12:23 am by the end of the month).

Jupiter opposition is on March 8.

GRS mid transits above 20° altitude this month:

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<th>Time</th>
<th>Altitude</th>
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**Saturn**

Best time to view Saturn this month is around 5:45 am. Saturn is in lower part of the constellation Ophiuchus. It is magnitude +0.5 in brightness and is 16 arc sec across.
Comet C/2013 US10 (Catalina)

Comet C/2013 US10 (Catalina) begins the month at magnitude +6.5 in constellation Camelopardalis. It fades to magnitude +8.8 at month end.

Positions in February are:

Comet C/2013 X1 (PANSTARRS)

Comet C/2013 X1 (PANSTARRS) is magnitude +8.7 in constellation Pegasus.

Positions in February are:
Overhead Star Chart for
Feb 15 8 pm
Orion Nebula by Gary Garzone on Jan 1st

C/2013 US10 (Catalina) by Paul Robinson on Dec 6
Aurora by Paul Robinson on Jan 1st
M1 by Tally O’Donnell on Jan 28