2015 officers

<table>
<thead>
<tr>
<th>position</th>
<th>name</th>
<th>email</th>
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<tbody>
<tr>
<td>President</td>
<td>Amanda Bell</td>
<td><a href="mailto:pres@ncastro.org">pres@ncastro.org</a></td>
</tr>
<tr>
<td>Vice President</td>
<td>Robert Arn</td>
<td><a href="mailto:vp@ncastro.org">vp@ncastro.org</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Dave Karp</td>
<td><a href="mailto:sec@ncastro.org">sec@ncastro.org</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Greg Halac</td>
<td><a href="mailto:treas@ncastro.org">treas@ncastro.org</a></td>
</tr>
<tr>
<td>Newsletter</td>
<td>Amanda Bell</td>
<td><a href="mailto:objview@ncastro.org">objview@ncastro.org</a></td>
</tr>
<tr>
<td>Website</td>
<td>Greg Halac</td>
<td><a href="mailto:web-edit@ncastro.org">web-edit@ncastro.org</a></td>
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To contact officers, use @ncastro.org

What you’ll find in this newsletter.

page 3: meeting details
page 4-5: science news
page 6: next month calendar
page 7: NCAS info
page 8: northern colorado resources
<table>
<thead>
<tr>
<th>topic</th>
<th>‘Celestial Events That Changed History’</th>
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<tbody>
<tr>
<td>speaker</td>
<td>Dr. Roger Culver, CSU</td>
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<tr>
<td>time &amp; date</td>
<td>Thursday, February 5th at 6:15pm</td>
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<tr>
<td>location</td>
<td>Fort Collins Museum of Discovery</td>
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<tr>
<td></td>
<td>408 Mason Court, Fort Collins 80524</td>
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24 of the Most Awe-Inspiring Astrophotos of 2014: Let’s start the new year off by checking out some of the most awe-inspiring astrophotos of 2014.

High Definition Earth-Viewing System (HDEV): Activated April 2014, HDEV is mounted on the External Payload Facility of the ESA’s Columbus module. This experiment includes several commercial HD video cameras aimed at Earth.

The 10 Days of Newton: How was your ‘Festival of Newton’? Don’t feel bad if you have no idea what I’m talking about. Just enjoy this interesting op-ed on a unique solution to solving the question of Newton’s true birthday with a 10-day festival. Who would argue with that?

The Top 101 Astronomical Events to Watch for in 2015: Universe Today has compiled an easy-to-use list of (admittedly, a strange number of) astronomical events to watch for in 2015. Events are listed by month. Enjoy!

Atom Smasher Will Renew Hunt for Strange Particles in 2015: After spending two years offline for upgrades, the Large Hadron Collider will be back to work searching for more God particles and possible other dimensions in 2015.
Pluto May Harbor Wind-Whipped Dunes of Ice and Soot: After nine years in flight, NASA’s New Horizons spacecraft is about to begin observations of Pluto and its system of 5 known icy moons. New Horizons represents humanity’s closest virtual approach to the icy body which lies so far out that it takes some 248 years just to make one orbit around our Sun. *

Eight New Planets Found in Goldilocks Zone: Astronomers announced that they have found eight new planets in the ‘goldilocks’ zone of their stars, doubling the number of small planets (less than 2x diameter of Earth) believed to be in their parent star’s habitable zone. *

Disappearance of the Cosmic Spinning Top: Scientists measured the space-time warp in the gravity of a binary star and determined the mass of a neutron star -- just before it disappeared. “The pulsar is now all but invisible to even the largest telescopes on Earth. Fortunately this cosmic spinning top is expected to wobble back into view .. but it might take as long as 160 years.” *

Hubble Discovers that Milky Way Core Drives Wind at 2 Million Miles Per Hour: At least 2 million years after the heart of our Milky Way galaxy experienced a titanic eruption, astronomers are witnessing the aftermath of the explosion: billowing clouds of gas towering about 30,000 light-years above and below the plane of our galaxy. *

Asteroid to Fly By Earth Safely on January 26th: Asteroid 2004 BL86 will pass by Earth at a distance no closer than 3x the distance from Earth to the moon. Get out your telescopes or strong binoculars because if you miss it this time you’ll have to wait 200 years for another opportunity. *

Nobel Prize Winners Draw Their Discoveries in Crayon: They aren’t all physics-related but they are all worth a look. “The sketches turned out to be as varied as the Nobel laureates who drew them. But they all equally demonstrate the beauty of intellectual concepts - and of minds at work.” *
February 2015
A look at what’s happening in the world of astronomy.

Do you know an event that should be added to an upcoming calendar?
Help keep everyone informed: send it to ObjView at ncastro.org
You are the Northern Colorado Astronomical Society (NCAS).

Established in 1995 as a non-profit organization we are here to promote interest in the science and hobby of astronomy. We meet the first Thursday of each month to discuss our interests and experience in the universal world of astronomy.

Monthly talks are free and open to the public. Bring a friend!

**Come to dinner!**

Join your fellow NCAS members after the meeting for dinner & drinks with this month’s speaker. RSVP to an officer if you’d like to join us. Dutch treat.

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**Become a Member:**
Learn about benefits of membership!

**Borrow equipment here:**
Club items may be borrowed at no cost by NCAS members!
Find out more here.

**Astronomy Gear how-to Guides:**
Learn about telescopes and astrophotography.

**Member Photo Albums:**
You’ll want to see all of the amazing photos taken by our members.

**NCAS Email:**
Anyone can join the email lists but subscription requests are monitored. Only approved subscribers are allowed to post.

**Club Meeting Overview:**
Recommend a future speaker or find out how to join speakers for dinner before the NCAS meeting.

**NCAS Admin Info:**
Find group bylaws and constitution.

**NCAS Public Outreach:**
Help NCAS fulfill its primary mission: to educate and engage the public with year-round public events!
local Museums, Astronomy Clubs, Observatories and Planetariums.

Boulder Astronomy & Space Society (BASS): meetings are hosted by the UC campus at the Fiske Planetarium. Open to students and the public.

Denver Astronomical Society (DAS): promoting understanding of astronomical phenomenon at the U of Denver’s historic Chamberlin Observatory.

Estes Park Memorial Observatory (EPMO): has many goals, including encouraging enthusiasm for physics and math in kids of K-12th grade.

Fort Collins Museum of Discovery (FOCO MOD): The MoD isn’t just where we hold our meetings. Check out their calendar for current events or to find out more.

FRCC Stargazer Observatory (FRCC): thanks to a unique partnership with Village Homes, FRCC operates an astronomy lab at Observatory Village in SE Fort Collins.

FRCC Sunlight Peak Observatory (FRCC): operated on the FRCC Larimer campus directly behind the Harmony Library. Open houses held 1st Friday of each month.

Little Thompson Observatory (LTO): no-charge public access to the universe available during regularly-scheduled public star nights or schedule your own private observatory event (for free!)

Longmont Astronomical Society (LAS): promotes amateur astronomy through monthly meetings, star parties and public observing sessions. Meetings are open to the public.

Sommers-Bausch Observatory (SBO): Operated by the Department of Astrophysical and Planetary Sciences (APS) at CU Boulder. See the spring semester Friday night viewing schedule.
Want to see your astrophotos in the newsletter? Send them to: objview@ncastro.org