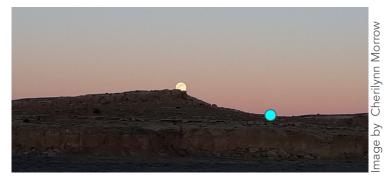
PUNCH Public Engagement

Did You Know....

Monthly Newsletter Issue 14: Dec 2023

Shining New Light on Diverse Views of the Sun with our Ancient & Modern Sun-Watching Theme

...that the December full moon in the years 2023 to 2026 rises at its extreme northward position as part of the <u>18.6 Major</u> <u>Lunar Standstill (MLS) cycle</u>? The image below shows the December 2023 moonrise viewed from a Great Kiva in Chaco Canyon. The turquoise dot indicates the approximate position of the summer solstice sunrise when viewed from the same location. There is abundant evidence that ancient Sun-watchers in Chaco Culture were aware of this long cycle of the Moon and encoded their knowledge in places like this.



PUNCH Outreach at the AGU Meeting (11 - 15 Dec)

PUNCH Outreach engaged with learners of all ages in myriad ways at the <u>AGU conference</u>, including both oral and poster presentations, plus six hours of service at the NASA booth with our <u>outreach products</u>. Below, PUNCH Project Scientist, Sarah Gibson, facilitates the indoor demo of our <u>3-Hole</u> <u>PUNCH Pinhole Projector</u> for early-career scientists Anshu Kumari and Zubair Shaikh. Notice that Anshu is playfully holding the Projector upside down to create images of the masked light source while Zubair ponders the inverted shapes and images he sees on the projection surface.



Learning from Youth at a Boys & Girls Club

During AGU week, PUNCH Outreach also contributed activities to an outreach event at the Girls & Boys Club of East Palo Alto organized by Christine Shupla and Sanlyn Buxner. The youngsters loved that we facilitated the indoor demo of our <u>3-Hole PUNCH Pinhole Projector</u> under a table to adjust for bright ambient light (below, left)



Among the facilitators was Denise Hill, the Communications Lead for NASA Heliophysics, who proudly displayed her <u>PUNCH Team Card</u> (above, right). These 18 cards represent some of the hundreds of people who contribute to the success of the PUNCH mission.

Your Solar Photo of the Month

Every month we feature a photo <u>submitted by readers</u> that portrays a personal experience of the Sun.

"I posted on Facebook about the winter solstice. As a yoga teacher, I likened this time to a pause at the bottom of an exhale before it cycles back to an inhale. explained that readers had not missed a solstice sunrise if they missed it on 21 December because the sunrise appears to pause on the horizon for several days during solstice time. This playful pic was my favorite response to the post." - Cherilynn Morrow



Photo by Cindy Hana Crommett

Visit <u>punch.space.swri.edu</u> for more about the **NASA** PUNCH mission and its <u>Outreach program</u>. For questions or photo submissions: Outreach Deputy Program Manager (jtrump@slco.org) & Outreach Director (cherilynn.morrow@gmail.com). <u>View the Newsletter Archive</u>.