

**INTERNATIONAL OBSERVE THE MOON NIGHT: A SUCCESSFUL MEANS FOR SHARING LUNAR SCIENCE WITH AN INTERNATIONAL AUDIENCE.** B. C. Hsu,<sup>1</sup> L. V. Bleacher<sup>1</sup>, D. Daou<sup>2</sup>, B. Day<sup>2</sup>, A. Jones<sup>1</sup>, A. Shaner<sup>3</sup>, S. Shipp<sup>3</sup>. <sup>1</sup>Lunar and Planetary Institute, (NASA GSFC, 8800 Greenbelt Rd, Greenbelt MD 20771 Brooke.C.Hsu@nasa.gov), <sup>2</sup>Lockheed Martin (NASA ARC, Moffett Field, CA 94043). <sup>3</sup>Lunar and Planetary Institute (3600 Bay Area Blvd, Houston, TX 77058).

**Introduction:** International Observe the Moon Night (InOMN) is designed to engage lunar science and education communities, our partner networks, amateur astronomers, space enthusiasts, and the general public in annual lunar observation campaigns that share the excitement of lunar science and exploration. Additionally, InOMN enables the public to maintain its curiosity about the Moon and gain a better understanding of the Moon's formation, its evolution, and its place in the sky.



For 2010, members of the public were encouraged to host their own InOMN events. InOMN hosts such as astronomy clubs, museums, schools, or other groups found helpful resources and shared information about InOMN events they organized on the InOMN website (<http://observethemoonnight.org>). We report on the results of the 2010 InOMN events and plans for the upcoming InOMN on October 08, 2011.

**Background:** On August 1, 2009, Education and Public Outreach (EPO) teams for the Lunar Reconnaissance Orbiter (LRO) and the Lunar CRater Observing and Sensing Satellite (LCROSS) held public events at their respective institutions (Goddard Space Flight Center (GSFC), Greenbelt MD; and Ames Research Center (ARC), Moffett Field CA) to celebrate the successful launch and capture of both satellites into lunar orbit. These events were widely attended by the public (700 at GSFC and 1300 at ARC), indicating a desire for a large-scale public event focused on lunar content [1].

With that in mind, in December of 2009, members of the lunar EPO community decided to create an annual, nation-wide event that engaged members of the public in making observations of the Moon called “National Observe the Moon Night” [1]. Because of the efforts already achieved by the International Year of Astronomy (IYA), international interest in the event grew rapidly, and “National Observe the Moon Night” quickly grew into “International Observe the Moon Night (InOMN).” The first annual InOMN was held on September 18, 2010 with the theme “Seeing the Moon in a Whole New Light”.

**InOMN 2010 Partners.** In order to ensure that InOMN was disseminated to as many people as possi-

ble, strategic partnerships were developed with national and international organizations, and a Coordinating Committee (CC) was created. In the US, the InOMN CC consisted of leaders in the NASA lunar EPO community (including the NASA Lunar Science Institute - NLSI, and the LRO, LCROSS, and Lunar Quest EPO Teams); the Lunar and Planetary Institute; the Astronomical Society of the Pacific (ASP); MoonZoo; and the ASP’s affiliate Night Sky Network. International partners included Astronomers Without Borders; Europlanet; the Gemini South Observatory; the National Institute for Astrophysics (Italy); and a few of the NLSI’s international nodes (Canada & Greece). Using their dissemination mechanisms, these partnerships ensured that InOMN was spread across the world. Telecons were held throughout the year with the national and international partners, ensuring continued communication about the latest website and planning developments.



Figure 1: A screen capture of the InOMN website (<http://observethemoonnight.org>)

**InOMN 2010 Web and Social Media.** The very nature of InOMN meant that a majority of information about the event was disseminated using electronic means. The InOMN CC used e-mail, the InOMN website (Fig. 1), and social media (@observethemoon and Facebook Event pages) to spread the word and encourage everyone to either plan their own event, attend an event, or just go outside and look up at the Moon on September 18, 2010. The InOMN website provided supporting materials for InOMN event hosts in the form of downloadable advertising materials, Moon maps, suggestions for hands-on educational activities, and links to lunar science content. A lunar photography contest was advertised and held online through the InOMN website and LunnrFlickr [2]. The MoonZoo

education team rolled out a new badge exclusively for InOMN on Facebook. Tweetup attendees around the world on September 18 were encouraged to use the InOMN hashtag (#InOMN10) to tweet about their experience.

**InOMN 2010 Outcomes.** The inaugural year for InOMN was a great success. On September 18, 2010, members of the public from around the world gathered to observe Earth's nearest neighbor. InOMN event participants shared their experiences with the world using the Web and social media, event hosts shared their experiences with evaluation data, and amateur astronomers and photographers shared their images of the Moon through the lunar photography contest. As a result of the 2010 strategic partnerships and dissemination mechanisms, there were at least **502 InOMN events held in 53 separate countries** (Figure 2).



Figure 2: Locations of 2010 InOMN events. Red bubbles indicate event locations, while blue "t"s indicate event locations that held tweet-ups.

Based on the average event participation, we estimate that there were between **250,000 – 500,000 people in attendance at all of the InOMN events** [3]. Evaluation data report that 64% of the participants heard of InOMN through the Internet, newspaper, or word of mouth. The evaluation data also indicate that 68% of InOMN hosts used material available on the InOMN website. The online lunar photography contest had 75 submissions in 6 different categories. Voting for the lunar photography contest was conducted publicly online, and the winning submission was from a group of students from Uruguay (Figure 3). Feedback from InOMN event hosts and attendees will inform our structure and dissemination strategies for 2011.



Figure 3: 2010 InOMN Photo Contest winner, "Our first telescope + camera photo," was taken by a group of students in Uruguay.

**InOMN 2011.** In 2011, InOMN will focus on cultural and personal connections to the Moon. From various interpretations of the lunar "face," early pictograms of the Moon's phases, or to the use of the lunar cycle for festivals or harvests, the Moon has an undeniable influence on human civilization. In order to encourage and facilitate the sharing of different cultural connections to the Moon, improvements to the InOMN website include a 'lunar bulletin board' where InOMN participants can post pictures and share stories of what the Moon means to them and a discussion board where InOMN participants and hosts can share experiences and tips. Art, poems, short stories, or music about the Moon all centered around the theme "What does the Moon mean to you?" will be the focus of the 2011 contest. In the lead up to October 08, 2011, the InOMN CC will be providing professional development support to amateur astronomers, museums and science institutions, and other groups interested in hosting InOMN events. A new partnership with Beyond IYA will ensure that lessons learned from International Year of Astronomy for organizing global-scale outreach events will be incorporated into the structure of InOMN.

**InOMN 2012 and Beyond.** Dates for InOMN have been set through at least the year 2014. The dates were chosen to optimize lunar phases, weather conditions, and viewing geometries. The dates and themes for InOMN beyond 2011 are: September 14, 2012 - "The Solar-Lunar Connection"; September 22, 2013 - "The Giant Whack: Making the Moon"; and October 4, 2014 - "Our Moon, One of Many."

**Conclusions.** Evaluation results, InOMN event registrations, online photograph submissions, Twitter feeds, Facebook updates, and direct feedback from 2010 indicate that there is global support for International Observe the Moon Night. This interest represents an un-tapped potential for infusing cutting edge lunar science and exploration into an event that has already reached hundreds of thousands of people. Whether it is through the eyes of western science, or through the ancient understandings and influences of the Moon on a harvest, the 2011 theme will enable individuals to relate their personal connection to Earth's nearest neighbor. We encourage everyone to mark their calendars for October 08, 2011, and join us in celebrating International Observe the Moon Night!

#### References:

- [1] Hsu B.C. et al. (2010) *NASA Lunar Sci Forum. III* Abstract. [2] Hsu B.C. et al. (2010) *EPSC Mtg.*, Abstract #EPSC-422 [3] Hsu B.C. et al. (2010) *AGU Fall Mtg.* Abstract #ED31A-0676.