

Lessons Learned and Outcomes from 10 Years of Evaluating International Observe the Moon Night

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Abstract

International Observe the Moon Night is an annual worldwide public event that encourages observation, appreciation, and understanding of our Moon and its connection to NASA planetary science and exploration. Everyone on Earth is invited to join the celebration by hosting a public or private event or attending an International Observe the Moon event – and uniting on one day each year to look at and learn about the Moon together. October 5, 2019 marks the 10th annual worldwide celebration of the Moon. Since 2010, an estimated 1.4 million people from across the globe have participated in International Observe the Moon Night events at museums/science centers, libraries, planetaria, observatories, K-12 schools, universities, public parks, community centers, private residences and businesses. Event hosts along with their partners help support and achieve global participation in International Observe the Moon Night. Between 2010 and 2018, a total of 5,551 events were registered worldwide. Over the last nine years, International Observe the Moon Night events have taken place in 107 different countries. Results of the evaluation of International Observe the Moon Night shows that the events continue to be successful in raising visitors' awareness of lunar science and exploration, providing audiences with information about lunar science and exploration – along with access to lunar mission data and science results, inspiring visitors to want to learn more about the Moon, and providing connections to opportunities to do so. Each year, formative evaluation is used to make recommendations to the International Observe the Moon Night coordinating committee to make iterative changes for the next year. Worldwide evaluation data collection has included registration data, host surveys, visitor surveys, and social media data. The evaluation has been revised over the past ten years based on evolving program goals and resources available. Data collection has also included visitor interviews, observations, and alternative data collection strategies. We will discuss the challenges and successes of different evaluation strategies in evaluating the success of this program. Additionally, we will discuss the challenges and lessons learned in evaluating a large science outreach program that spans across so many countries and sites.

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About International Observe the Moon Night

International Observe the Moon Night is an annual worldwide public event that encourages observation, appreciation, and understanding of our Moon and its connection to NASA planetary science and exploration. Everyone on Earth is invited to join the celebration by hosting or attending an event - and uniting on one day each year to look at and learn about the Moon together.

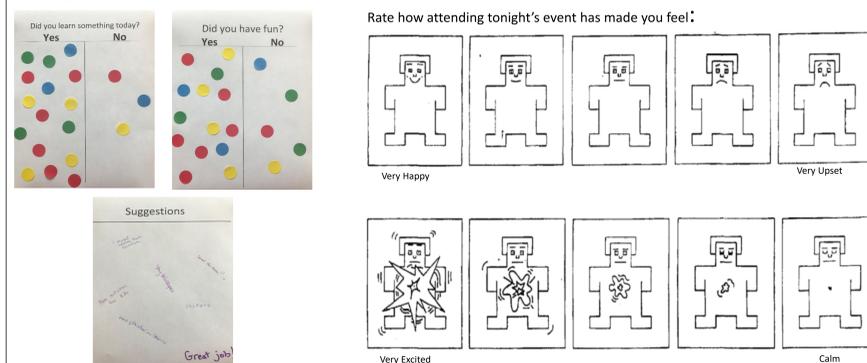
International Observe the Moon Night is sponsored by NASA's Lunar Reconnaissance Orbiter (LRO) in collaboration with NASA's Solar System Exploration Research Virtual Institute (SSERVI), the NASA's Space Science Education Consortium, CosmoQuest, Night Sky Network, and Science Festival Alliance. Other key partners include the NASA Museum Alliance and NASA Solar System Ambassadors.

Each year, events are hosted by a variety of institutions including astronomy clubs, observatories, schools, and universities, museums, planetaria, schools, universities, observatories, parks, private businesses and private homes. Events hosts are supported with event flyers, information sheets, Moon maps for observing, activities to use during events, presentations, certificates of participation, and evaluation materials to be used by hosts.



Data Collection

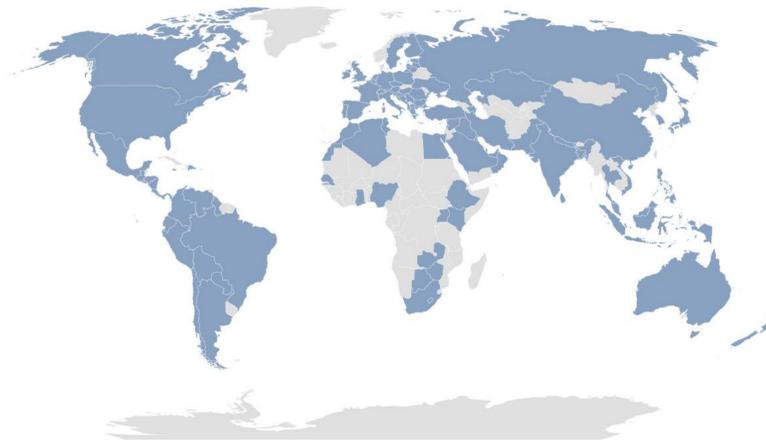
Each year data is collected from online host registration forms, post-event host surveys, emails to coordinators, surveys of visitors at different events around the globe, and analysis of social media. In past years, we have also done on-site interviews of visitors, event observations, audience voting to collect additional visitor data.



Summary of 10 years of events

- 2019 celebrated the 10th year of the International Observe the Moon Night.
- Over **1.6 million people** have participated in International Observe the Moon Night in the past ten years from across the globe.
- **Over 7,400** events have been registered in **over 100 countries** around the world, **in all 50 US states, Guam, Puerto Rico, and the District of Columbia.**

The map below shows 2019 participation, with participating countries in blue.



Summary of 2019

- In 2019, there were a total of 1,892 events registered, 991 public events and 901 private events.
- An estimated **255,000** visitors attended events within 102 different countries, all 50 states, Puerto Rico, Guam, and the District of Columbia.
- **65%** of events occurred outside of the United States

Findings

10 years of evaluation results demonstrate that:

- **International Observe the Moon Night events are successful in raising visitors' awareness of lunar science and exploration, providing audiences with information about lunar science and exploration, and inspiring visitors to want to learn more about the Moon.**
- **Facilitators' goals for International Observe the Moon Night events are to facilitate fun experiences, increase science literacy, raise visitors' awareness of lunar science and exploration, attract new visitors to their institution, to raise awareness of their facility or group, and to collaborate with local partners.**
- **Facilitators make use of International Observe the Moon Night materials including logos, Moon maps and images, NASA Moon related websites, posters, certificates of participation, and advertising flyers. They report that the quality of provided materials is high.**
- **Facilitators report positive experiences hosting their International Observe the Moon Night events and value the opportunity to be part of a larger global event.**



Social media

Ongoing innovations in social media pose new opportunities and challenges for both promoting events and measuring their impact. In 2019, we collected information from a variety of sources including an online reach of 2,488,968 participants through website visits, Facebook, Instagram, and Snapchat interactions. Additionally, we analyze how people used tweets to promote events, share stories, and leverage information about other events. We were able to determine what worked well and missed opportunities (e.g. cross promotion with other events)

Challenges

Evaluating large-scale distributed events poses challenges to evaluation:

1. You must rely on individual sites to collect data without dedicated or trained individuals to do so
2. You are relying on volunteers to provide information.
3. There is no validity check on the data being provided.
4. There is diversity of information being provided by different sites.



Lessons Learned

1. Using evaluation to provide feedback from hosts about serving their needs has been one of the most valuable pieces of the evaluation.
2. Providing informational webinars and unique surveys to sites has increased data collection by hosts around the world.
3. Unique incentives supports greater participation in registration and evaluations (e.g. access to special images, raffles, bouncing images off the Moon).

Looking forward

Upcoming dates for International Observe the Moon Night

- September 26, 2020
- October 16, 2021
- October 1, 2022



International Observe the Moon Night is sponsored by NASA's Lunar Reconnaissance Orbiter, NASA's Solar System Exploration Research Virtual Institute (SSERVI), and the Lunar and Planetary Institute.

<https://moon.nasa.gov/observe-the-moon/annual-event/overview/>