Connecting the latest astronomy research to public

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Abstract

We organized a two-hour session on June 26, “Connecting the latest astronomy research to public”, and expanded our discussion on how we deliver the exciting new results to the general public. Panelists were researchers, science communicators, and curators. After the presentations by each panelist, we had panel discussions including audiences. The discussion started from the nuance of “outreach”, then covered many topics such as interactive approaches to the public, usage of the astronomy data, and the possibility of planetarium.

The program of the session

The session started from the talks by panelists. The titles are:

Jackie Bondell (Swinburne Univ. Technology, Australia)
"What is a Black Hole? What is a Gravitational Wave?"

Hisaaki Shinkai (Osaka Inst. Tech., Japan)
"The latest catalogue of Gravitational Wave by LIGO-Virgo-KAGRA collaboration"

Keitaro Takahashi (Kumamoto Univ., Japan)
"Welcoming Curiosity: SETI, the SKA, and the Public"

Pin-Wei Wang (National Museum of Natural Sciences, Taiwan)
"Curving Spacetime, Bridging Minds: Exhibiting Black Holes and Gravitational Waves for the Public"

Diana Haikal (Swinburne Univ. Technology, Australia)
"OzGrav Outreach and Engagement Activities: Connecting Discovery to Experience"

Kelly Blumenthal (IAU Office for Astronomy Outreach)
"Public engagement with and communication of science: The keystone of the scientific ecosystem"

The contents of each talk are reported by following articles.

The panel discussion: "Connecting the latest astronomy research to public".

We then moved to panel discussions in free style. We sometime received comments from audiences. Some issues are:

- When researchers talk about their areas of expertise, they often tend to cite detailed figures and mathematical formulas, which are frequently not well received by the general public. If researchers explain to science museum curators what they want to convey, the curators have the expertise to translate that message for a general audience.
- Many researchers are reluctant to engage in outreach activities. Perhaps that's to be expected. We can't expect everyone to be a jack-of-all-trades.
- Researchers often use the term "outreach," but it has a top-down connotation and isn't the best choice. Some better alternatives include "science communication," "public engagement," "dissemination," and "knowledge sharing."
- Public engagement should not be viewed as a one-way transfer of knowledge from researchers to the public. Effective engagement begins with understanding what audiences are curious about and creating opportunities for dialogue, participation, and shared experiences. Curiosity often comes before understanding, and audience-centred communication can help people build a deeper connection with astronomy.
- Science museums and planetariums can also offer practical support to researchers under today's institutional pressures. Universities are facing declining enrollment and growing demands for social responsibility, and public engagement is often part of that burden. Museums have the venues, audiences, and communication expertise to take on this work. In exchange, research energy flows into the museum. It is a trade that benefits both sides, rather than an extra task placed on researchers.
- Researchers, planetariums, museums and science communicators each bring complementary expertise. Researchers contribute the latest scientific discoveries and data, while planetariums and museums provide expertise in storytelling, visualization and audience engagement. Working together enables complex astronomy research to be transformed into meaningful experiences for diverse audiences.
- Science museums, planetariums and other institutions are undertaking numerous initiatives to convey topics through interactive experiences. Technologies such as virtual reality, large-scale visualization environments and interactive exhibits allow audiences to experience scientific discoveries rather than simply learn about them. It's important to note that these programs are being actively offered not only for the general public but also for educators, and sharing examples of successful practice internationally should be encouraged.

- We want to promote the use of data provided as a result of scientific research. It goes without saying that astronomical data should be used as material for planetariums, and it is also an attractive tool for allowing the general public to “experience science.” In the past, there were projects such as SETI@Home and Einstein@Home that allowed the general public to participate in research, but participation in such projects is limited to a select few.

Summary

While comments covered a wide range of topics, the common thread was a desire to widely convey the joy and depth of science. Planetariums are considered the best tool for sparking interest among the general public. We need to develop and share various initiatives to determine how we can build on the inspiration we provide in planetariums and take it to the next level—such as guiding people toward even greater enjoyment of science and nurturing the next generation of scientists. Researchers are more than willing to cooperate in this effort. Let’s maintain close communication to further “public engagement.”

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