

Cultural Astronomy, Indigenous Astronomy and Public Engagement

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Abstract. Our poster is a report on how we combine cultural astronomy and Indigenous astronomy for our public engagement activities. We report on our target audiences, our engagement goals and the rubrics that we use for measuring success. We make comments on the ways that cultural astronomy and Indigenous astronomy public engagement can be used to further the goal of creating a more inclusive astronomy. Adams brings indigenous star lore from the Arabic-speaking world to visitors of Lowell Observatory as well as audiences in Arizona. Gonzalez-Garcia, the current president of the Société Européenne pour l’Astronomie dans la Culture (SEAC), reports on the public engagement activities undertaken at various SEAC meetings and the responses of the local attendees. Hamacher engages with Indigenous and other communities in Australia sharing the ancient sky knowledge of the Indigenous Australians. Lee engages with Indigenous communities in the Americas through workshops that educate as well as create artwork related to Indigenous star knowledge.

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1. Introduction

Cultural Astronomy is the interdisciplinary study of humans and the many ways they relate to the sky, including how humans make meanings associated with the sky, how they use the sky, and how the sky inspires creative and artistic works. The scientists authoring this article use cultural astronomy as part of their science outreach and engagement activities. Such engagements ground the audience within the ethnic group of focus, then present the cultural astronomy content alongside the astronomy and other sciences needed for comprehension, and there is audience assessment. Examples of cultural astronomy engagement are in the next section, followed by assessment tips.

2. Cultural Astronomy Events

Duane Hamacher’s engagement events show how First Peoples observed and understood astronomical movements and phenomena, such as solar and lunar dynamics, eclipses, planetary motions, stellar movements, and knowing how to read changes in the properties of stars to forecast weather and predict seasonal change. Danielle K. Adams designs and presents programs that focus on Arabian astronomy as well as how Arabs drew the night sky with overlapping layers of cultural meaning at Lowell Observatory. Antonio Cesar Gonzalez-Garcia in his

duties as SEAC president oversaw multiple cultural astronomy events associated with the SEAC conferences; events included displays of artworks such as temporary light displays to celestially enhanced functional items like clothing and chairs, as well as lectures for the public by prominent cultural astronomers. Annette S. Lee’s work as both a scientist and artist has led to many successful digital storytelling and spoken word art productions, as well as other valuable resources centering Indigenous American astronomy. The beauty of cultural astronomy events is that the diversity is embedded because it has to be presented within its cultural context showing that people around the world and across time have had access to the sky.

3. Assessment Tips

Headcounts of the number of people attending events can be done by assistants that are assigned to that task; for Adams & Gonzalez-Garcia, their events are often ticketed making counting the number of attendees automatic. For online events, both feedback and demographic information can be collected via polls embedded within the meeting program or externally. Such polls can be part of the conference or event registration as well. Online programs broadcast via YouTube allow for additional measures of audience retention and engagement.

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