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Title:

“Native Skywatchers & Starry, Starry Nights - An Interdisciplinary, Indigenous, Community-Based Collaboration During Covid-19 and Beyond”

Abstract of your submission (max 3000 characters) *

During this time of global hardship caused by the covid-19 pandemic, broken systems are being uncovered and we are seeing inequities with a new lens. Ground-based telescopes are closed to in person research teams. Remote work allows opportunity. New ways to communicate astronomy with the public are being forged.

Building on the existing *Native Skywatchers* research and programming initiative in a unique merger with the *Starry, Starry Nights* program (UC-Santa Cruz), this project gives students and educators a rare and innovative engagement opportunity, to drop in on a live telescopic observing session and wrap their brains around cutting edge research related to: the fate of the Sun, stars pulsing like a heartbeat, merging ultra-diffuse galaxies, and the amount of dark matter in our galaxy.

Designed by Lee (2007), the *Native Skywatchers* initiative seeks to remember and revitalize indigenous star and earth knowledge. The overarching goal of *Native Skywatchers* is to communicate the knowledge that indigenous people traditionally practiced a sustainable way of living and sustainable engineering through a living and participatory relationship with the above and below, sky and earth.

Starry, Starry Nights (2021), is an initiative that gives students and teachers access to real-time observations with the Keck 10-m telescope on Mauna Kea on the Big Island of Hawai'i and the Lick Observatory's Shane 3-m telescope on Mount Hamilton in California. The aim is to encourage and enable a larger fraction of Indigenous youth and their educators to participate first hand in science.

Now is the time to bring our ingenuity to bear on education models that bring more students of color into STEM. The key to the innovation in communicating science *is acknowledging that culture and worldview play an essential role in learning STEM* (Kawagley and Barnhardt 1998, Lee 2020; O'Donnell, Prather, and Behroozi 2020; Canning et al. 2019; Freeman et al. 2014; Hawkins and Vera 2021). As we acknowledge the role that culture plays in learning STEM, we must also acknowledge story as narrative pedagogy. As we acknowledge the role that storytelling has played in Indigenous cultures throughout time, past and present, we elevate not only the Indigenous voice, but also Indigenous methodology as a powerful tool of inclusive teaching and learning STEM.

Presented here are the preliminary results of a project entitled, *“Native Skywatchers-Starry, Starry Nights”*. We bring together Western and Indigenous science in the context of the theme, *“We Are Star Dust”*, to inspire students' curiosity, to ignite their motivation, and to create a supportive learning space so they can tell their story of relationship to sky. Our effort uniquely creates experiences for students of color by centering Indigenous knowledge, people, place, and pedagogy so that they do not have to sacrifice their cultural identity in order to participate fully in STEM.