

**The Red Power Movement and the Cosmos:
Decolonizing Astronomy and Protecting Sacred Land**

Izzy Perez

University of Colorado, Boulder, Department of Astronomy and Physics

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The study of the cosmos is an awe-inspiring pursuit, but the ways we approach it often reflect colonial systems that prioritize profit and power over respect for sacred spaces and Indigenous knowledge. For centuries, Indigenous communities have fought to protect their lands and traditions from exploitation, and this struggle now extends to the stars. From the protests against the Thirty Meter Telescope on Mauna Kea to resistance against the commercialization of celestial bodies, these efforts reveal a deeper conflict between colonial approaches to science and the values of Indigenous sovereignty and preservation of Indigenous identity. The Red Power movement has long worked to challenge these systems, advocating for Indigenous voices to be included in decisions about land and science. The ongoing fight for sacred spaces, as well as the push to value Indigenous knowledge in space education, demonstrates how the Red Power movement highlights the importance of decolonizing astronomy.

One of the Red Power movement's focuses is on Indigenous sovereignty and the protection of cultural traditions. It challenges colonial systems that have taken over sacred spaces, erased knowledge, and ignored Indigenous identities. This fight continues today in protests like the one against astronomical development on Mauna Kea. These protests show the ongoing need to stand up for Indigenous rights and challenge unsustainable systems.

Mauna Kea is a dormant volcano in Hawaii and holds deep spiritual importance for Native Hawaiians. It is a sacred place where people connect spiritually and hold ceremonies. For generations, it has been treated with care and respect by the Native Hawaiians. In contrast, Western scientists view the mountain as a perfect location for telescopes because of its high altitude and clear skies. This clash between sacred values and science has caused years of conflict, with Native Hawaiians working to protect the mountain from development.

The construction of the Thirty Meter Telescope on Mauna Kea is a clear example of this struggle on Mauna Kea. After years of delays due to protests and legal battles, construction was set to begin in 2019. According to the *Nature* article, “Hawaii Telescope Protest Shuts Down 13 Observatories on Mauna Kea,” Native Hawaiians gathered at the base of the mountain to block construction.¹ Protesters established a place of refuge, sang, held signs, and expressed their opposition to the project. On July 17, police arrested 33 Native Hawaiian elders who had been blocking the road. Although they were released the same day, the arrests symbolized how the government has criminalized their efforts to protect their sacred land.

This fight mirrors the actions of the Red Power movement during events like the occupation of Alcatraz in 1969. In both cases, Indigenous people are reclaiming spaces that hold cultural and spiritual significance. The occupation of Alcatraz was a pivotal moment in Native activism, demanding the return of stolen land and greater recognition of sovereignty. Similarly, the Mauna Kea protests represent a fight to protect a sacred place and challenge a system that often ignores Indigenous values in favor of scientific or economic goals.

The protests do not reject science. Instead, they call for a more ethical approach that respects the connection between people, the land, and the universe. The *Nature* article highlights how astronomers like Andrea Ghez, an astrophysicist who utilized one of the telescopes of Mauna Kea to get our first glimpses of the black hole in the center of our galaxy, understand the importance of Mauna Kea to Native Hawaiians and hope for a peaceful solution. She has said, “If I lose a night in order that everyone can figure out how to move forward in the long run, that’s far more important than one night of observing.”² This shows that science can move

¹ Witze, Alexandra. “Hawaii Telescope Protest Shuts Down 13 Observatories on Mauna Kea”

² Witze, Alexandra. “Hawaii Telescope Protest Shuts Down 13 Observatories on Mauna Kea”

forward in a way that listens to Indigenous voices, but it requires effort and a willingness to change.

The protests also reveal the challenges Indigenous communities face in being heard. Hawaii Governor David Ige issued an emergency proclamation to give law enforcement more authority to remove protesters.³ The article explains that this action reflects a broader issue where state institutions prioritize money and scientific development over Native rights and cultural preservation. This problem extends beyond Hawaii. Indigenous perspectives are often ignored or undervalued in many areas, including education, which focuses heavily on Western ideas.

The Red Power movement has always challenged these systems, arguing that education should empower Indigenous people rather than be a tool of forced assimilation. The Mauna Kea protests follow this same principle by showing that the fight is not just about a single telescope being built, but rather, it is about changing how decisions are made and how science is practiced. The goal is to include Indigenous knowledge and values in scientific exploration, not treat them as obstacles. These protests are about much more than halting construction. They are about protecting a way of life and showing that progress does not have to come at the expense of sacred places. The Red Power movement demonstrates that there are ways to move forward that respect both Indigenous communities and the land.

This principle includes the lands of Earth, as well as the lands of our solar system. As technologies for reaching space have become more accessible to private companies, the commercialization of space activities has skyrocketed. Once a purely scientific endeavor, space exploration is now being transformed into a marketplace. Companies like Astrobotic have found controversial ways to profit, such as marketing the opportunity to send human remains and even

³ Witze, Alexandra. "Hawaii Telescope Protest Shuts Down 13 Observatories on Mauna Kea"

pets' ashes to the Moon. While this may seem like a unique way to immortalize loved ones and offset the costs of scientific missions, it reflects a deeper disregard for the sacredness of celestial bodies. The same disrespect that has historically plagued land and nature has now extended into space.

For the Diné (the People of the Navajo Nation), the Moon is far more than a celestial object. It is a relative, often referred to as "Grandmother Moon," a sacred entity that has guided ancestors for generations. Alvin Harvey, a PhD candidate at MIT and a Diné scholar, describes the unease many Indigenous Peoples feel about these missions. He notes that this act goes beyond scientific exploration; it intrudes on the spiritual relationship many Indigenous communities have with the Moon.⁴ This unease underscores the need to treat celestial bodies with care and respect, rather than commodifying them for profit.

The Red Power movement has long emphasized decolonization as a way to challenge consumerism and scientific materialism, both of which are embodied in the commercialization of space. The practice of sending ashes to the Moon commodifies a sacred space, turning it into a marketplace for memorials. This approach contrasts sharply with Indigenous values. Decolonization efforts by the Red Power movement such as the protection of sacred lands and resistance to exploitative practices serve as a model for how space exploration could be approached, but currently doesn't seem to cross any space companies business plans.

When Astrobotic announced its Peregrine mission with the goal of spreading the ashes of 70 people and one dog on the Moon, the Navajo Nation president, Buu Nygren, and other Indigenous leaders called for the mission to be halted. They argued that such actions fail to respect Indigenous values and violate the sanctity of celestial spaces. NASA, however, claimed it

⁴ Harvey, Alvin D. 2024. "Stop Sending Human Remains to the Moon."

had no control over the payload carried by Astrobotic, despite being one of the company's largest funders. This dismissal reflects a broader pattern of ignoring Indigenous voices in decision-making, even when those decisions directly impact their spiritual and cultural heritage.

This is a pattern. In 1998, NASA sent a portion of planetary scientist Eugene Shoemaker's ashes aboard the Lunar Prospector.⁵ At the time, Navajo Nation president Albert Hale condemned the act, leading NASA to issue an apology and promise consultation for future missions. In response, NASA met with community members and traditional-knowledge holders in Pinon, Arizona, hosting a Talking Circle in a Navajo hogan. This moment represented a step forward, but the recent Peregrine mission shows that such promises have not been consistently upheld. This highlights an ongoing struggle within the Red Power movement: holding institutions accountable and ensuring that Indigenous perspectives are not merely acknowledged but integrated into policy decisions.

The commercialization of space is part of a broader history of colonization, where the exploitation of land and resources comes at the expense of Indigenous values and sovereignty. The Red Power movement, through actions such as the occupation of Alcatraz and advocacy for sacred sites like Mauna Kea, has consistently fought to reclaim agency over land and heritage. These efforts provide a blueprint for resisting similar exploitation in space. Just as the movement has demanded the return of sacred lands, it can advocate for a celestial decolonization that respects the Moon and other celestial bodies..

The issue reflects a larger problem in Western science education: its detachment from ethical and emotional connections. In the podcast *Ancestral Science*, Harvey points out the systems that train space scientists often emphasize a materialistic approach, stripping away

⁵ Harvey, Alvin D. 2024. "Stop Sending Human Remains to the Moon."

ethical considerations that Indigenous knowledge systems prioritize.⁶ This detachment serves to alienate Indigenous youth, who may feel their traditions are incompatible with scientific fields. However, the Red Power movement's emphasis on preserving Indigenous knowledge and rejecting consumerism offers a framework for transforming space exploration and Western science education.

Indigenous perspectives offer a way forward. By integrating traditional knowledge with Western science, space exploration can shift from being an act of colonization to one of collaboration. This approach not only honors the sacredness of celestial bodies but also inspires Indigenous youth to see a future where their heritage and science coexist.

Harvey says “We now have an opportunity for Indigenous People to help guide the caretaking of space, just as they guide the protection and restoration of environments on Earth.”⁷ The Moon should be viewed not as a frontier to be exploited but as something that deserves respect and honor.

Both of these issues regarding disrespect represent a broader issue of Western education and the need to colonize in science. School systems have historically marginalized Indigenous students and perspectives, but the Red Power movement has created pathways for reimagining science and education.

Henry Roe Cloud, a Ho-Chunk activist and one of the first Native Americans to graduate from Yale, recognized the harm federal boarding schools caused by erasing Indigenous knowledge and identity. As highlighted in the article “Ho-Chunk Warrior, Intellectual, and

⁶ Harvey, Alvin. “Space Justice and Cosmic Relationality.”

⁷ Harvey, Alvin D. 2024. “Stop Sending Human Remains to the Moon.”

Activist Henry Roe Cloud Fights for the Apaches,”⁸ these schools stripped students of their languages and traditions, forcing assimilation into Western culture. Cloud worked to transform this system. He believed education should empower Indigenous students to lead in their communities while preserving their identities. Through his founding of the American Indian Institute, he focused on leadership development and cultural preservation. Cloud’s vision directly opposed federal assimilation policies, proving education could uphold Indigenous sovereignty

Alvin Harvey’s experiences as a Navajo Dene Ph.D. student at MIT demonstrate how the challenges Cloud faced persist today, though in different forms. Harvey describes MIT as a space deeply entrenched in colonial ideologies, where Western science is considered the only valid way of understanding the world. For Harvey, navigating this environment often feels isolating and conflicting with his cultural values. Harvey spoke about the difficulty of bringing Indigenous knowledge into academic institutions that have historically excluded it. For example, he practices “two-eyed seeing,”⁹ a concept that blends Indigenous and Western ways of knowing. This method acknowledges the strengths of both systems while emphasizing the need to center relationality and community. Harvey explained how he draws on guidance from Navajo elders to balance the demands of academia with the sacredness of Indigenous knowledge. He also uses his platform to advocate for including Indigenous methodologies, such as oral traditions and community-based learning, into STEM fields

Harvey also touches on the tension of working within a colonial system while trying to dismantle it. Like Cloud, he sees education as a tool for sovereignty, but he also struggles with the emotional and spiritual toll it takes. At MIT, Harvey often feels he must validate Indigenous

⁸ Ramirez, None Renya K. 2013. “Ho-Chunk Warrior, Intellectual, and Activist: Henry Roe Cloud Fights for the Apaches.”

⁹ Harvey, Alvin. “Space Justice and Cosmic Relationality.”

knowledge to his peers and professors, which he sees as both necessary and frustrating.¹⁰ This tension mirrors the Red Power movement's broader critique of education as a site of both indigenous knowledge oppression.

The Red Power movement shows us that the fight for Indigenous sovereignty and the protection of sacred spaces extends far beyond land disputes; it reaches up into the cosmos and deep into our education systems. Protests like those at Mauna Kea reveal how Indigenous communities stand against scientific endeavors that prioritize development over respect for cultural traditions. Similarly, the commercialization of celestial bodies, such as sending human ashes to the Moon, reflects a deep disregard for the sacredness of these spaces. The movement's efforts to include Indigenous knowledge in education, exemplified by figures like Alvin Harvey, demonstrate how reclaiming science is a step toward decolonization. Education has long been a tool of colonialism, erasing traditional knowledge in favor of Western ideals. The Red Power movement challenges this by advocating for systems that empower Indigenous students to see their cultural heritage as an asset, not an obstacle, in fields like astronomy and beyond.

This issue is not limited to astronomy. Every field of study from biology, history, engineering, to economics are primarily built using colonial frameworks. These disciplines often prioritize exploitation, control, and capitalism, perpetuating systems that fail to value or listen to Indigenous perspectives. Decolonizing education and science means rethinking how we teach, research, and practice across all areas, ensuring that diverse worldviews are respected and integrated. Only by embracing these changes can we build a more accurate understanding of the world.

¹⁰ Harvey, Alvin. "Space Justice and Cosmic Relationality."

References

- Harvey, Alvin. n.d. “Space Justice and Cosmic Relationality.” Ancestral Science.
<https://podcasts.apple.com/us/podcast/space-justice-cosmic-relationality/id1688883209?i=1000631178634>.
- Harvey, Alvin D. 2024. “Stop Sending Human Remains to the Moon.” *Nature* 625 (7995): 425.
<https://doi.org/10.1038/d41586-024-00106-8>.
- Ramirez, None Renya K. 2013. “Ho-Chunk Warrior, Intellectual, and Activist: Henry Roe Cloud Fights for the Apaches.” *The American Indian Quarterly* 37 (3): 291.
<https://doi.org/10.5250/amerindiquar.37.3.0291>.
- Witze, Alexandra. 2019. “Hawaii Telescope Protest Shuts Down 13 Observatories on Mauna Kea.” *Nature*, July. <https://doi.org/10.1038/d41586-019-02222-2>.