

FIELD EXPEDITION CODES OF CONDUCT FOR INCREASING SAFETY AND INCLUSIVITY. J. A. Richardson^{1,2}, N. L. Whelley^{1,2}, P. L. Whelley^{1,2}, C. E. Barry² and K. E. Young², ¹Department of Astronomy, University of Maryland, College Park, MD 20742, ²Solar System Exploration Division, NASA Goddard Space Flight Center, Greenbelt, MD 20771 (jacob.a.richardson@nasa.gov)

Field expeditions in support of planetary science are important to advance our understanding of planetary processes and enhance the science community through training and often interdisciplinary collaborative efforts. Still, field work faces unique safety risks and barriers to entry, due to the physical nature of the field but also from team behavior and sometimes inhospitable communities near common field sites. Most urgently, the Survey of Academic Field Experiences (SAFE) report found that 64% of field researchers had personally experienced sexual harassment and 20% reported sexual assault in the field [1]. More than simply being detrimental to science outcomes in the field, these violent experiences are antithetical to the standards our community should uphold.

Planning for Safety and Inclusivity: Physical and mental safety are important considerations when planning field research and safety plans should be developed in parallel with the science methodology [2]. Early recognition of safety issues and barriers to access can improve field science outcomes by (1) identifying whether science at a field site would be hampered by safety risks to team members, (2) enabling more scientists to join field expeditions, and (3) promoting a culture that relieves participants from balancing research and safety considerations throughout field work as an individual burden.

Fieldwork can represent a barrier to entry for researchers interested in planetary analog science and geoscience in general. A lack of field accessibility for students with disabilities is a critical barrier to career retention [3]. Real and perceived threats to personal safety due to communities near field sites in the U.S. and abroad impact several marginalized communities of geoscientists who might justifiably avoid field work. For example, some planetary analog field sites are close to white supremacist hate groups [4]. Additionally, one-third of LGBTQ+ geoscientist respondents to a recent survey [5] reported refusing field work altogether due to concerns about personal safety.

With logistical preparation, travel and field environments can often be made accessible to researchers with physical, sensory, or developmental disabilities [3]. Providing safety training, including First Aid, anti-harassment courses such as Bystander Intervention Training, and even self-defense training, to all participants can empower individuals with tools needed to feel safe in remote field locations [2,6].

The Role of Codes of Conduct: Codes of Conduct for field work outline community norms, expectations,

and responsibilities for the behavior and actions of the field team. However, in the SAFE report, fewer than 40% of respondents [1] recalled seeing a Code of Conduct during field work, and avenues to report harassment or assault are often not transparent. Ensuring that behavioral expectations of the entire field team are clear, understood, and accepted by all field participants is vital to both the physical and mental safety of field scientists.

Accountability in response to grievances is a critically important aspect of providing a safe field environment [2] and should be explained in a Code of Conduct [7]. Codes of Conduct that list core values and expectations but do not outline an enforcement strategy have less efficacy [7]. In field research, enforcement policies should work immediately to curtail problematic or dangerous behavior as well as long-term to prevent similar behavior from returning during successive field expeditions.

Our planetary analogs field team at NASA Goddard Space Flight Center, the Goddard Instrument Field Team, has approached the need to be transparent about field expectations by creating a Field Code of Conduct and a collection of field safety resources. We deliver physical copies of the Code of Conduct and safety resources to each team member before and again at the beginning of a field expedition. We ask all participants to agree to its terms. We have found that Codes of Conduct are best when they are readable and brief—ours is two pages—and accompanied with more in-depth resources. When problems arise in the field, we use the Code of Conduct as a tool to communicate expectations. If more urgent problems arise, we follow actions spelled out in the Code of Conduct to ensure our team members are safe during and after field research.

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References: [1] Clancy, K.B.H. et al. (2014) *PLoS ONE*, 9(7): e102172. [2] Richardson, J.A. et al. (2020) *NASEM Decadal Survey*, White Paper #447, <https://baas.aas.org/pub/2021n4i447> [3] Marshall, A.M. & Thatcher, S. (2019) *Eos*, 100. [4] <https://www.splcenter.org/hate-map>. [5] Olcott, A.N. & Downen, M.R. (2020) *Eos*, 101. [6] Demery, A.-J.C. & Pipkin, M.A. (2021) *Nature Eco. & Evol.*, 5. [7] Diniega, S. et al. (2020) *NASEM Decadal Survey*, White Paper #448. <https://baas.aas.org/pub/2021n4i448>.