

# Towards Equitable, Diverse, and Inclusive science collaborations: The Multimessenger Diversity Network

Ellen Bechtol and Jim Madsen for the Multimessenger Diversity Network  
and the IceCube Collaboration, ICRC 2021

## What is this contribution about?

This poster describes the Multimessenger Diversity Network, a community of practice focused on broadening participation in the field of multimessenger astronomy research collaborations. The Multimessenger Diversity Network (MDN), formed in 2018, extends the basic principle of multimessenger astronomy – that working collaboratively with different approaches enhances understanding and enables previously impossible discoveries – to equity, diversity, and inclusion (EDI) in science research collaborations. With support from the National Science Foundation INCLUDES program, the MDN focuses on increasing EDI by sharing knowledge, experiences, training, and resources among representatives from multimessenger science collaborations. Representatives to the MDN become engagement leads in their collaboration, extending the reach of the community of practice. This poster provides an overview of the MDN followed by a description of initial impacts and lessons learned.

## Why is it relevant / interesting?

Increasing diversity in the fields of physics and astronomy is important to ensure scientific progress by making sure all talent is being tapped, in addition to the ethical and social justice motivation. This is especially true in large scientific collaborations which increasingly play a primary role in a researcher's professional interactions and research opportunities. The MDN is comprised of representatives from nine multimessenger astronomy and astrophysics experiments. Current participating collaborations include the *Fermi* Gamma-ray Space Telescope, IceCube Neutrino Observatory, Laser Interferometer Space Antenna, Vera C. Rubin Observatory, LIGO Scientific Collaboration, North American Nanohertz Observatory for Gravitational Waves, Pierre Auger Observatory, Neil Gehrels *Swift* Observatory, and the Very Energetic Radiation Imaging Telescope Array System.

## What has been done?

Monthly meetings of the network provide opportunities for members to share experiences and knowledge, learn from others, and seek and provide support. A website ([astromdn.github.io](http://astromdn.github.io)), along with presentations at conferences, and a submitted Astro2020 State of the Profession white paper, lend legitimacy to the often volunteer-based EDI efforts of collaborations. A part-time community manager runs the monthly meetings, responds to inquiries, helps represent the MDN at conferences, and promotes engagement within the group.

## What is the result?

The strength of the MDN lies in the community connections which provide opportunities to share experiences, describe lessons learned, exchange documentation for best practices, and present models of a variety of EDI efforts. For example, the VERITAS Collaboration has moved forward with two major DEI efforts, namely the recognition of collaboration service through annual VERITAS Outstanding Contribution Awards, as well as the adoption of an official Collaboration Code of Conduct. Both of these positive changes were motivated through the communication of procedures already in place within other MDN member collaborations. Similarly, the recently launched *Fermi*-LAT graduate student mentoring program is serving as a blueprint for similar programs in other collaborations.

Despite the growth in awareness and importance of EDI in STEM in recent years, this work is still overwhelmingly volunteer-based, i.e. not necessarily counted in the work load. It is challenging for individuals, many of whom were already addressing work-life balance issues and are often from underrepresented groups, to dedicate time to EDI efforts. The MDN advocates for greater recognition of EDI contributions as a critical component of science research collaborations. The outlook for the MDN is encouraging despite significant EDI challenges that are often being addressed on top of other expectations that usually have higher priority. The MDN promotes the value of EDI to both achieve better outcomes and also the recognition of the need and value of this work.