

Proposal to form the AAS Working Group on Disability and Accessibility

(Submitted to the AAS Council on November 9, 2015)

Cover Letter

Dear AAS Council:

We, the undersigned members of the American Astronomical Society, propose that the AAS charter a new Working Group on Disability and Accessibility, hereafter WGDA.

Disabilities are common in America today, with 19% of the American population having a disability, and half of those reported as “severe” (2010 Census report). Approximately 26% of American adults experience mental illness. In an academic context, representation of students with disabilities decreases over the course of academic preparation (Fig. 1). In a survey of the 2013 AAS membership, 2% or fewer respondents identified as having a disability (hearing, vision, or mobility impairment; note that this does not include cognitive, developmental, or mental health disabilities). Persons with disabilities are dramatically underrepresented in STEM fields and astronomy in particular.

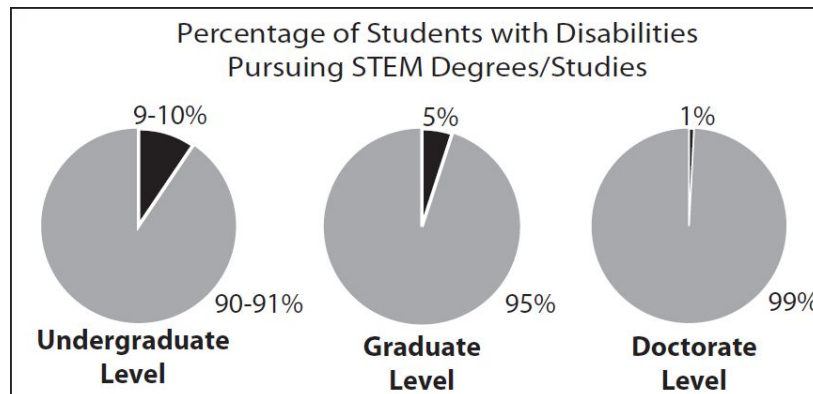


Figure 1: The percentage of students with disabilities pursuing STEM Degrees/Studies at different career stages [from Accommodating Students with Disabilities in Science, Technology, Engineering, and Mathematics (STEM): Findings from Research and Practice for Middle Grades through University Education]. At the undergraduate level, 9-10% of students reported disabilities. At the graduate level, 5% of students reported disabilities. By the doctorate level, this number has decreased to 1%.

Disability is a common experience, but stigma against disability is rife. Mental illness and other “invisible” disabilities are especially stigmatized and often ignored in conversations about access. Our field, as a subset of our society, contains this stigma against disability. Our field which often sees itself as pushing the limits, can offer an environment for enhanced stigmatization and discrimination based on disability. This environment typifies ableism: discrimination, prejudice, and stereotyping against disabled people on the basis of their actual or presumed disability.

In 1990, the Americans with Disability Act (ADA) went into effect. This legal protection was revolutionary civil rights legislation, but in many situations is used as a box to check or as a shield rather than a guideline to improve overall accessibility. Many of us work at institutions that have policies in our departments and classrooms shaped by the ADA. This step is necessary but not sufficient. A great deal of work remains to reach a truly accessible future.

There have always been astronomers with disabilities, both visible and invisible. Annie Jump Cannon was deaf from the middle of childhood onward, but many of us familiar with her work had never known that. It is important to remember that we are not making special exceptions when we focus on accessibility, we are honoring a tradition of our field. In some ways, the fields of physics and astrophysics have long been disciplines that celebrated scientists who were non-neurotypical in particular ways. However, there is a broad spectrum of neurodiversity and current classroom and professional environments rarely recognize this.

Systems exist in many of our institutions that are meant to provide some measure of accessibility. Unfortunately these systems often place an undue burden on those who require access, assistance, or services. A compliance-based system does not go far enough. We aspire to a way of working together that does not require disclosure of disability, and where diverse needs are being met with each of our interactions and activities. A mindset of diverse access makes the experience of learning, working, and collaborating stronger for all.

Historically, there has been a tendency for people with disabilities to not be included in our own advocacy efforts. Even though allyship by able-bodied and neurotypical people is vital, this has over time evolved into a situation

where we frequently find ourselves marginalized from our own experience. A prominent modern example is the organization Autism Speaks, in which the board of directors includes zero autistic people. This is in contrast to the Autistic Self-Advocacy Network, which centers Autistic members as organizers, activists, leaders and policy makers creating change. Those of us who are disabled can and do advocate for ourselves; this working group is building on a history of self-advocacy by following the motto popularized during the 1990's by the modern disability activism movement: "Nothing about us without us."

We strive for unity among all astronomers to work together to ensure that accessibility is treated as a human right and will do so by keeping a concerted focus on elevating the voices of persons with disabilities. We will do this via representation of disabled and neurodivergent astronomers on the coordinating committee, and by proactively seeking input from underrepresented persons with disability in the community.

As part of this proposal, the newly created working group will have liaisons to the three currently existing AAS committees working toward equity and inclusion in astronomy. The purpose of these liaisons will be to account for intersectionality: disability is an axis across which anyone can move throughout their lives, in conjunction with all of one's intersectional identities. We hope that the Committee on the Status of Minorities in Astronomy (CSMA), the Committee on the Status of Women in Astronomy (CSWA), the Committee for Sexual-Orientation & Gender Minorities in Astronomy (SGMA), and WGDA will simultaneously support each other and hold each other accountable.

We are excited about moving forward and bringing the ideas of universal design to the AAS, to our workplaces (including departments, labs, and observatories), to our conferences, and our classrooms.

Signatories

Alicia Aarnio (University of Michigan)
Wanda Díaz-Merced
Lauren Gilbert (Caltech)
Jennifer L. Hoffman (University of Denver)
Jessica Kirkpatrick

Karen Knierman (Arizona State University)
Elisabeth A.C. Mills (University of Arizona, NRAO)
Jackie Monkiewicz (Arizona State University)
Nicholas Murphy (Smithsonian Astrophysical Observatory)
Jason Nordhaus (Rochester Institute of Technology, National Technical Institute for the Deaf)
Jesse Shanahan (Wesleyan University)
Sarah Tuttle (UT Austin/McDonald Observatory)

Working Group Name

This name of this working group shall be: Working Group on Disability and Accessibility (WGDA)

Governance and Membership

The working group is governed by a coordinating committee appointed by the AAS Council that may include anywhere between five and ten members, including two co-chairs. Members of the working group are drawn from the community and appointed by the coordinating committee. Nominations (including self-nominations) to serve on the working group will be accepted by the coordinating committee at any time.

In 2016, the members and co-chairs of the coordinating committee will be:

- Alicia Aarnio
- Wanda Díaz-Merced (co-chair)
- Jessica Kirkpatrick (liaison between WGDA and CSWA)
- Jackie Monkiewicz
- Nicholas Murphy (co-chair)
- Jason Nordhaus
- Jesse Shanahan
- Sarah Tuttle (liaison between WGDA and CSWA)

Charge of Working Group

WGDA is tasked with promoting inclusion of and equity of opportunity for disabled astronomers at all career stages. Ableism is discrimination in favor

of able-bodied or neurotypical people; it is an entire system of thinking and doing that hurts disabled people and is a form of structural oppression. Disability is defined as any mental, cognitive, or physical condition that, due to society's structure, results in a significant barrier to engaging with society. Disabilities may be invisible or visible, and diagnosed or undiagnosed. Disablement occurs when biological and neurological realities collide with society and culture; it is not a problem located in someone's mind or body, but in society.

Astronomy exists in the context of this society and is based in ableism. To that end, WGDA will work to:

- Identify, document, and eliminate the barriers to access (including access to information) that impact disabled astronomers and students;
- Actively address the intersections of ableism with racism, sexism, heterosexism, cissexism, and classism;
- Increase accessibility for disabled astronomers and students;
- Support the current professional astronomy community to bring people with disabilities into the workforce;
- Recognize disability by teaching disability history, specifically including the disability history of astronomy;
- Work to discourage the erasure of disability in astronomy;
- Promoting knowledge of the roots of ableism and the effects in our classrooms and workplaces to change it;
- Change the culture within astronomy to remove the stigma associated with disability and to value accessibility as a human right;
- Promote the development and use of access tools and software; and
- Build community among disabled astronomers and students.

Projects

To advance the goals given in its charge, WGDA will initially pursue the following projects. As progress is made on these issues, further items of concern will likely be added.

1. Establish a presence on the AAS website;
2. Establish an accessible, independent website to contain accessibility resources and recommendations;

3. Develop best practices guides on accessibility and inclusion for departments, institutions, and conference organizers;
4. Develop resources for disabled undergraduate and graduate students;
5. Build active collaborations with the CSMA, SGMA, and the CSWA by appointing and accepting liaisons to and from each of these committees whose primary responsibility will be to take an intersectional approach to disability justice; and
6. Work with AAS journals toward more accessible formats.

Timeline

While these are multi-year projects, WGDA expects to have made significant progress on the following tasks by the beginning of 2017:

- Establish our web page;
- Develop one best practices guide;
- Appoint liaisons to the CSWA, CSMA, and SGMA;
- Host a networking event at an AAS meeting;
- Collaborate with the AAS meeting committee to introduce accessibility and universal design components; and
- Work with AAS publishers to make journals more accessible.

Note: This proposal assumes that the AAS Bylaws will be amended to allow Junior Members to serve on the steering committees of working groups, and to allow more than one chair of the steering committees of working groups.

Biographical information of Coordinating Committee Nominees:

Alicia Aarnio is an Assistant Research Scientist at the University of Michigan. She studies young stellar objects ranging from solar-type to a few solar masses, seeking to understand star-disk interaction and the solar-stellar connection as it pertains to the evolution of stellar magnetic activity. In her department at UM, Alicia has been active in promoting inclusion, assisting in proposing for funds to bring external speakers for presentations on equity and inclusion, leading a discussion on Inclusive Astronomy, and encouraging representation in departmental colloquia in terms of both science and identity as colloquium committee co-chair. Alicia is a mental health advocate, striving to promote awareness and de-stigmatization of mental health issues. Her goals are to increase access to resources for those who need them and to provide pathways for departments which prioritize dignity and respect through not forcing self-disclosure of disabilities.

Wanda Diaz Merced has a Bachelors in Physics with minor in special education from the University of Puerto Rico, a Masters in special education and the teaching of physics from U Mass. Boston and a multidisciplinary PhD in Computer Science and Space Physics data analysis from the University of Glasgow in Scotland. Wanda Diaz is working on the development of multimodal data accessibility tools and analysis perception techniques as part of the coordination of the Astrosense initiative (IAU Office of Astronomy for development) and co chairing the multimodal access committee at the NSBP (National Society of Black Physicists). Following a top-to-bottom approach Wanda has worked on training intervention for astronomers who suffer late onset chronic conditions to be able to continue performing their work. Wanda has done research on radio astronomy, solar physics, interplanetary magnetic fields, cataclysmic variable stars and right now is doing research on long pulsating stars (e.g. CH Cigny).

Jessica Kirkpatrick is a Data Scientist for the Hired. Jessica joined Hired after leading ed-tech start-up InstaEDU through a successful acquisition by Chegg as the Director of Data Science. She is also on the editorial board for Data4America. Before making her transition to the private sector in 2012, Jessica earned a Ph.D. in Astrophysics from UC Berkeley, where she studied

some of the most distant and brightest known objects in the universe, quasars, and worked with large and complex data sets. Today, instead of spending her days finding patterns in the structure of the universe, she spends them finding patterns in the behaviors of people in order to make technology work better for us all. In addition to her work in private industry, Jessica maintains an active role in giving back to the astrophysics community. She is the blogger-in-chief for Women-in-Astronomy, and a contributor to Astrobetter, Women 2.0, and Lady Paragons. She is also a member of the American Astronomical Society's Committee on the Status of Women in Astronomy and runs workshops on overcoming the Impostor Syndrome. Jessica was diagnosed with a learning disability as a high school student, and founded the Learning Difference Association at Occidental College. She continues to do advocacy work for people with disabilities.

Jackie Monkiewicz is a “non-traditional” PhD student in astrophysics at the Arizona State University School of Earth & Space Exploration. She completed her Bachelor’s of Science in Physics and Astronomy at Case Western Reserve University. After acquiring a Master’s in astrophysics at the University of Arizona, she worked as the National Optical Astronomy Observatory as a data analyst for the Spitzer Space Telescope Far-Infrared Deep Extragalactic Legacy project (FIDEL; Supervisor: Dr. Mark Dickinson.) Her PhD research is a multi-wavelength survey of the physical and chemical properties of low-metallicity starbursting galaxies as analogs for the protogalaxies impacting the intergalactic medium during the epoch of reionization. (Advisor: Prof. Judd Bowman.) Jackie is currently working as a teaching assistant to develop the first university-accredited massive open online course (MOOC) for the ASU/edX Global Freshman Academy. (Supervisor: Prof. Francis Timmes) She attended Inclusive Astronomy 2015 via a scholarship provided by NSF and Vanderbilt University. She has organized conferences and committees both inside and outside of astronomy, both as a volunteer and paid organizer. She is a disabled student.

Nick Murphy is an astrophysicist based at the Harvard-Smithsonian Center for Astrophysics. As a solar physicist, he uses numerical simulations and analytical theory to understand the basic plasma processes that govern energy release during solar flares. He actively works to build connections between plasma astrophysics, heliophysics, and laboratory plasma physics. While in graduate school at the University of Wisconsin in Madison, he served as a vice-president of contract enforcement for the graduate

employee union and represented graduate employees who faced overwork, hostile work environments, harassment, and pregnancy discrimination. Nick was a member of the Committee on the Status of Women in Astronomy from 2012 until 2014, during which time he advocated for the committee to take an actively intersectional approach. Nick was a principal organizer of Inclusive Astronomy 2015, where he worked to collaboratively develop the accessibility policy and ensure that disability was represented in the conference program. Outside of astronomy, Nick has been an organizer for the Boston Knapsack Anti-Racism Group for several years and is a member of the Boston chapter of the Autistic Self-Advocacy Network.

Jason Nordhaus is an Assistant Professor at the National Technical Institute for the Deaf (NTID), one of the nine colleges that comprise Rochester Institute of Technology (RIT) and one of the premier institutions for deaf education in the world. Additionally, he is a professor in the Astrophysical Sciences and Technology graduate program in the College of Science and a faculty member in the Center for Computational Relativity and Gravitation. Professor Nordhaus is committed to increasing the participation of deaf individuals in astronomy and routinely involves deaf students in research work. In addition, Professor Nordhaus has been working to recruit deaf individuals at the graduate level as RIT/NTID represents the only university in the United States to possess a deaf college and an astronomy Ph.D. program. Before joining the RIT faculty, Professor Nordhaus was an NSF Astronomy & Astrophysics Postdoctoral Fellow and a Postdoctoral fellow in the Department of Astrophysical Sciences at Princeton. He received his Ph.D. from the University of Rochester in 2008.

Jesse Shanahan is a graduate student studying astrophysics at Wesleyan University. She began her career as an Echols Scholar at the University of Virginia and was a dedicated researcher of North African linguistics. Despite switching careers to pursue her love of science, she remains a language lover and still translates French, Arabic, and Latin poetry for fun. At Wesleyan University, she studies supermassive black holes and active galactic nuclei with Dr. Edward Moran. In her spare time, she organizes public outreach events at local schools, specializing in special needs and at-risk classrooms. In her first year of graduate school, she founded an astronomy outreach program for kids, which has received attention from press and remains a popular bi-monthly event at Van Vleck Observatory. She also provides virtual and in-home tutoring for K-12 in math, writing, test

preparation, and study skills.

Throughout her career, Jesse has advocated staunchly for inclusive equity and is a founding member of the Astronomy Anti-Racism Group (AARG!). She continues to be a dedicated disability rights activist and is currently in the process of forming the first working group on disability justice and accessibility in astronomy.

Dr. Sarah Tuttle is currently a research associate at McDonald Observatory at the University of Texas at Austin. She is the instrument scientist for VIRUS, the massively replicated spectrograph for the Hobby Eberly Telescope Dark Energy Experiment (HETDEX) as well as the project scientist for LRS2, the low resolution spectrograph soon to be commissioned on the HET.

Dr. Tuttle completed her PhD at Columbia University in 2010 with Dr. David Schiminovich. Her thesis focused on the construction and flight of the FIREBall spectrograph, the first UV fiber fed spectrograph. When not in lab, Sarah is on the board of the Lilith Fund for Reproductive Justice, an abortion fund based in Austin, Texas. She recently accepted a tenure-track faculty position with the University of Washington, Seattle beginning September 2016.