DESIGNING ACCESSIBLE CONFERENCES OR: HOW WE COULD LEARN TO STOP WORRYING AND LOVE POSTER SESSIONS. Jennifer L. Piatek[1] , [1]Department of Geological Sciences, Central Connecticut State University, New Britain, CT (piatekjel@ccsu.edu)

Introduction: Viewing and giving conference presentations are a necessary part of any science career, required for successful networking to build collaborations and to gain critical feedback about ongoing research. Unfortunately, often these presentations are given in formats and/or venues that are not accessible to all viewers or presenters. A more inclusive approach to conference design and presentation format would provide enhanced opportunities for all scientists to present work and develop fruitful collaborations.

Background: Demographic studies of professional scientists from the National Science Foundation indicate that individuals who fit the survey definitions of disability are underrepresented in science and engineering professions (only 10% of those employed in these fields [1] vs. 12.6% for the general population [2]), a difference that increases further when looking only at physics and astronomy employment (5% of those employed in these disciplines [1]). In addition, the metrics for "disability" used in these surveys ("moderate/severed difficulty" or "unable to do" tasks such as seeing with glasses; hearing with hearing aids; walking without assistance; lifting 10 pounds; or concentrating, remembering, or making decisions [1]) does not consider temporary conditions or those that may not fit within the somewhat specific definitions (e.g. color vision deficiency, severe dietary allergies, chronic illnesses, and/or neurodivergence). Therefore it is likely that these demographics undercount the number of scientists who might encounter issues with conference accessibility and would benefit from changes to conference formats: in addition, changes to make conferences more accessible are likely to have benefits for all attendees, not just those who request/ require accommodations.

Conference presentations often fall into one of two categories: posters or oral presentations: some of the accessibility issues and solutions are discussed here.

Poster sessions are ideal opportunities for networking, spurring impromptu discussions over presented research, and social connection. These sessions, however, can be difficult or impossible for some attendees to navigate successfully. These events are often crowded (difficult for those with mobility limitations) and noisy (possibly leading to sensory overload and/or increased anxiety), excluding some attendees from viewing posters and interacting with presenters. In addition, lack of conference signage or signs with too-small fonts and/or small text-heavy posters with limited graphics can present additional visual challenges. Poster presenters can face difficulties due to a lack of available seating (usually assumed that presenters will stand by their posters), limited options for beverages if water fountains/coolers are not available within the venue, and the cost of printing/transporting posters if not covered by their grant funds/institutions.

Fortunately, some of these limitations can be addressed with conference planning; setting poster boards so there are multiple lanes of travel that are wide enough to accommodate both presenters and attendees with mobility devices (should they need them), providing chairs for presenters on request, and ensuring that non-alcoholic beverages are available nearby. Costs and hassles of traveling with posters can be accommodated by providing enough time between abstract acceptance and the conference for attendees to take advantage of lower cost fabric printing options, providing access to on-site printing services, and including poster printing costs as allowable expenses in travel grants.

Oral sessions can be the preferred way for presenters to share ongoing work, but also present challenges for some attendees. Although most speakers utilize text slides, these are not reliable alternatives for those who have difficulty understanding the spoken presentation. Session podiums are often raised and require navigation of stairs to present (or to chair a session) and chairs in session rooms do not always have aisles wide enough to pass mobility devices (or are partially blocked by microphones set up for question/answer sessions). Attendees at oral sessions may encounter difficulty navigating aisles to get to microphones to ask questions, and presenters may have difficulty understanding spoken questions even with use of the microphone.

Some of the solutions to these issues can be taken from recent experiences with virtual conferences. Captions should be provided in a location that is visible for all attendees (a screen to one side and/or via a mobile app), and are ideally provided by live captioners attending the meeting or proofread prior to being attached to pre-recorded talks [for more on captions, see 3]. Questions for presenters, rather than asked by attendees queued at microphones, can be collected online during the presentation and selected to be read by the session chair and shared with the presenter as text to avoid issues with misunderstood questions.

Recommendations & Resources:

Some specific (but not comprehensive) recommendations relevant to both virtual and in-person meetings:

- identifying and advertising a specific contact person for accessibility requests, and maintaining confidentiality with such requests.
- presentation guidelines that reflect accessibility standards for font size and color palette.
- required use of microphones at oral sessions (including session chairs and during question/answer and discussion periods).
- live captioning of oral sessions and other audio presentations (town halls, etc.)
- ability to submit questions to presenters via a text interface, and for presenters to read questions
- available seating at all events, even if most attendees are expected to stand (e.g. poster sessions)
- ensuring adequate space between chairs or poster boards to accommodate presenters, viewers, and passers-by, including mobility devices.
- designated volunteers who can assist attendees with navigating conference spaces.

There are many online resources available to assist organizers to assist in preparing accessible meetings. Examples include:

- a guide to accessible conferences from SIGACCESS [http://www.sigaccess.org/welcome-to-sigaccess/resources/accessible-conference-guide/]
- a planning guide for "temoporary events" from the ADA National Network [https://adata.org/guide/planning-guide-making-temporary-events-accessible-people-disabilities],
- guidance from disabled scientists such as https://blog.ucsusa.org/science-blogger/how-to-make-professional-conferences-more-accessible-for-disabled-people-guidance-from-actual-disabled-scientists or "Ways to make meetings accessible" [https://www.nature.com/articles/d41586-019-03852-2**].**

Summary: Scientific conferences and meetings are one of the primary ways scientists communicate ongoing research and develop collaborations. Unfortunately, traditional conference layouts and presentation formats can be inaccessible for some, potentially leading to exclusion of the contributions of those scientists. Changes to make our meetings and presentations more accessible will increase the ability of all in the community to share science and develop collaborative projects and will lead to a more inclusive planetary science workforce.

References: [1] National Science Foundation, 2017. National survey of college graduates (https://www.nsf.gov/statistics/2020/nsf20300/), Survey of doctorate recipients (https://www.nsf.gov/statistics/srvydoctoratework/) and Survey of earned doctorates (https://www.nsf.gov/statistics/srvydoctorates/).

[2] American Community Survey, U.S. Census Bureau (overall statistics summarized at https://www.census.gov/acs/www/about/why-we-ask-each-question/disability/).

[3] Piatek J. L., Brooks S. M., Masiero J. R., Molaro J. L., Rathbun J. A., and Roberts, J.H. 2021. All Conference Talks Need Captions, *LPSC 52*. abstract #2723. iPoster available online via http://lpsc2021.ipostersessions.com/Default.aspx?s=34-CD-17-70-50-3E-E1-8B-26-F7-BD-25-4D-EF-ED-89