

Response to Editor

Thank you for considering our paper. The paper is now much improved thanks to your feedback and the careful and insightful reviews we received. We are submitting a revised version of the paper based on this feedback. Below we outline each of the changes that have been made.

Thanks,
Tom Narock

- Following comments from Goldstein and Parsons, we have changed the citation style for the open source data and software. We have generated DOI citations from Zenodo (software) and Figshare (data). These citations (e.g. Narock et al. (2018) and Narock et al. (2019)) now replace the previous URLs.
- We have updated the abstract per multiple comments.
- Based on feedback from two reviewers we have updated the title. It has been changed to: Identifying and Improving AGU Collaborations Using Network Analysis and Scientometrics. Per Parsons' comment, we have also update the text to clarify our use of the term "scientometrics".
- Based on the comment from Goldstein, we reviewed the data in Table 2 and found the percentages were in fact incorrect. The data were correct (other columns in the table); however, we found a typo in our spreadsheet formula that calculated a percentage from two of the columns. This has been corrected. The table has been fixed and we have updated the text to reflect the correct values. Reviewer Parsons pointed out that a direct comparison of AGU Sections is difficult given that they have different sizes. To address this, we have added a column to Table 2 listing the size of each section and we have ordered the table from largest section to smallest section. We believe this helps reinforce our point that the aforementioned percentage values are roughly equivalent regardless of sections size. We have also added the full AGU section name to the table rather than just the abbreviation, as was suggested by Goldstein.
- Figure 4 has been changed from a histogram to a shaded matrix at the request of reviewer Goldstein. Per the Parson's comment about regarding section size, we have normalized the data in this new figure. The previous Figure 4 showed the number of authors who have presented in more than one AGU section. The new figure shows the number of authors presenting in more than one AGU section divided by the size of those sections. Thus, rather than show raw counts, we are now representing this as a fraction of those who could have presented in more than one AGU section. We agree with Parsons and think this new figures allows for better comparison between AGU sections.

- Reviewer Parsons suggested removing figure legends and instead labeling each line within the graph. We have heeded this suggestion and all figures, including the appendix, have been updated accordingly
- Our dataset does not contain data on when each section was formed. We reached out to AGU, but were unable to obtain the requested information. As such, we are unable to address Parsons' comments on the impacts of new vs. older sections and the evolution of keywords over time.
- In-text clarifications
 - Review Corlew pointed out that despite best intentions, offering more open data and tools may increase bias towards female and minority presenters. We had not considered this unintended consequence. As a result, section 4.2 Steps Toward Gender Equality has been updated. We, and Corlew, believe this is a discussion worth having; yet, we are hesitant to propose that our tools be used given the potential unintended consequences. As such, we have highlighted the issue, but removed specific mentions of how our work could be used in this area.
 - Reviewer Goldstein asked if, for figure 5, we could identify if this was a sign of emerging collaborations or specific session soliciting abstracts. We could, and we have updated Section 3.2 with the results of this additional analysis.
 - Review Parsons indicated that he is on the AGU Program Committee and asked about specific recommendations the committee might take from our work. We summarized our findings in the Conclusion as a bulleted list in the hopes of providing such recommendations.