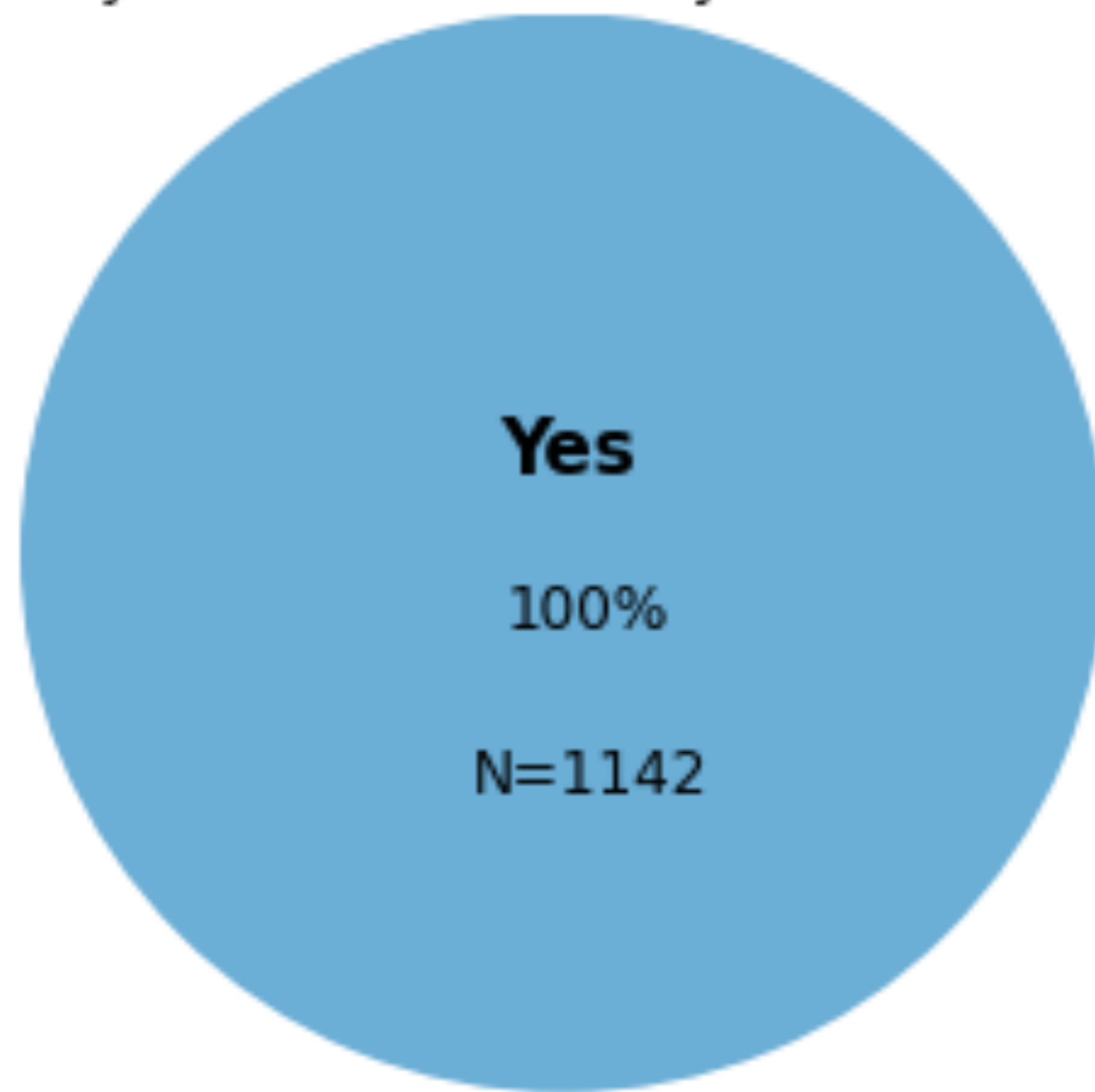


How Important is Software to Astronomy?

Software is the most used instrument in astronomy

All astronomers use software ¹

Do you use software in your research?



Momcheva & Tollerud, 2015

Robust research requires reproducibility and transparency

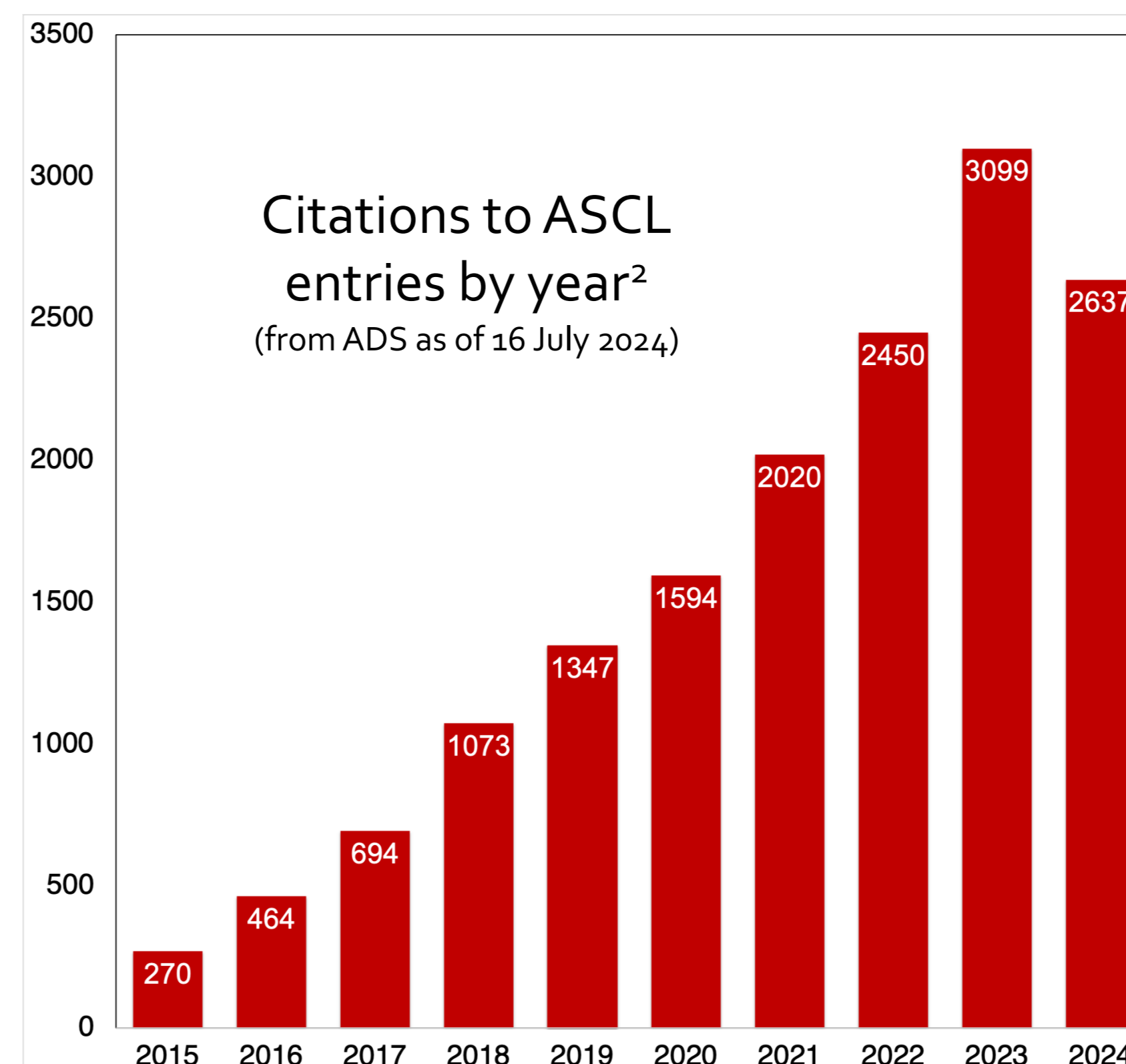
Computational methods are *methods*, and should be easily discoverable and open to examination

Releasing source code demonstrates confidence in your results and improves efficiency in the discipline

Astrophysics Source Code Library (ASCL, ascl.net)

- Is a free curated online registry and repository for astro research source codes
- Has over 3400 entries
- Is indexed by ADS and Web of Science
- Includes all major codes that have enabled astro research
- Makes it easy to find this software
- Advocates for open source and FAIR practices
- Is citable and citations to its entries are tracked by major indexers
- Adds new and old codes monthly

ASCL entries have been cited nearly 16,000 times in over 240 journals



How to use the ASCL

Register your code with the ASCL to make it easier for others to find and to get an ASCL ID to use for citing the software

Search for useful downloadable software

Find preferred citation information for software you've used in research

Introduce students to variety of methods available for solving common astronomical problems

Benefits to the community

Provides a curated resource for software methods

Links research articles with the software that enables that research; links are passed to ADS, so also appear in that resource

Allows for citation to software *on its own merits* without the need to write a separate article for it

References

- [1] Momcheva, I. & Tollerud, E., 2015. *Software Use in Astronomy: an Informal Survey*, doi:10.48550/arXiv.1507.03989
- [2] ASCL dashboard, <https://ascl.net/dashboard>, retrieved 16 July 2024