**B1: Bring out your codes! Bring out your codes!**

**birds of a feather: increasing software visibility and re-use**

**(Increasing Software Visibility and Re-use)**

**What we’re here to do**

To discuss and solicit actionable answers to the following questions:

* How do we ensure code release is recognized as an essential part of assuring reproducibility of research?
* How can the community change the culture so developers will release their programs?
* What can we do to ensure code authors receive credit for writing and releasing their software, and encourage them to release it even if it's "messy" code?
* How do we reduce expectations of support when a developer does not wish to (or cannot) take on that role after program release?
* What role might journal publishers and funding agencies have in furthering code release, and how can the community influence them to take on that role?
* How can universities be convinced to change policies which prohibit software publication?
* Can funding agencies and publishers encourage documentation of programs, and if so, how?

**Why we need to talk about this (again!)**

Because code authors don’t release software (from literature and personal experience of panelists) for, among other reasons, the following:

* code “messiness” -- number 1 reason for not releasing code according to (non-scientific) polls and conversations with authors
* university policies which prohibit distribution of intellectual property
* lack of documentation and examples
* perceived lack of suitability for sharing, as the code may have a narrow focus and/or seem too trivial to share
* protection of proprietary processes useful for future funding of author
* code release has not been firmly established as a standard practice
* lack of incentive; there is little or no perceived upside to releasing code

**Factors that make this the time for change**

Disparate efforts are having an impact on the development, visibility, and preservation of codes; these include:

* blogs such as Astronomy Computing Today and AstroBetter, devoted in part or wholly to software topics and doing things better
* projects to improve scientists’ coding skills such as Software Carpentry and SciCoder
* increasing efforts to recognize the role of the astronomical software professional in advancing the field through the development of astroinformatics conferences, coursework, and code citation
* expansion of the Astrophysics Source Code Library (ASCL)
* indexing of ASCL entries by ADS, and ADS’s exploration of linking papers to code entries and code entries to papers,
* collaborative coding efforts such as AstroPyrics
* social software bringing astronomers together in previously unprecedented ways (Astronomers Facebook group, for example; are there others?)
* a new journal, Astronomy and Computing, devoted to the development and use of software methods in astronomy

**Change is already starting**

We’ve noticed that:

* papers are starting to cite codes explicitly and independent of a code paper
* ASCL entries are showing up on CVs under "Publications"
* ADS is testing linking codes to the research papers which use them, and papers to the codes used in the research described