
ASCL.net
Astrophysics Source Code Library
Making Codes Discoverable
for 20 Years

Astrophysics Source Code Library

Repository scope: (lower case) open source software used in astro research

Software is submitted by authors or entered by editors and is assigned a unique ID

Started in 1999

Rationale for existence

To improve the transparency, reproducibility, and falsifiability of research

Exposed metadata

ASCL ID

Software name

Author(s)

Description

Download site

Time/date edited*

Described in

Used in

Bibcode

Preferred citation

Keyword

Number of views

Unexposed metadata

Published
Time/date added
Record creator
Time/date edited*
Record editor

Aliases
Author's email
Notes
See also

Metadata

Deliberately kept light

Previous ASCL-like efforts failed, many in part or in full because the metadata were not maintained

Result: ASCL is more easily maintained and has been reliably available for 20 years

Repository

ASCL initially required code deposit

Most software authors were reluctant to deposit code

Result: ASCL didn't grow, and research was not becoming any more transparent

Repo + Registry

ASCL dropped requirement to deposit code, though still accepts code deposits

Pointing to software download location is easily done and removes barrier to growth

Result: ASCL has grown from initial ~40 entries to over 2000 today, making more research more transparent

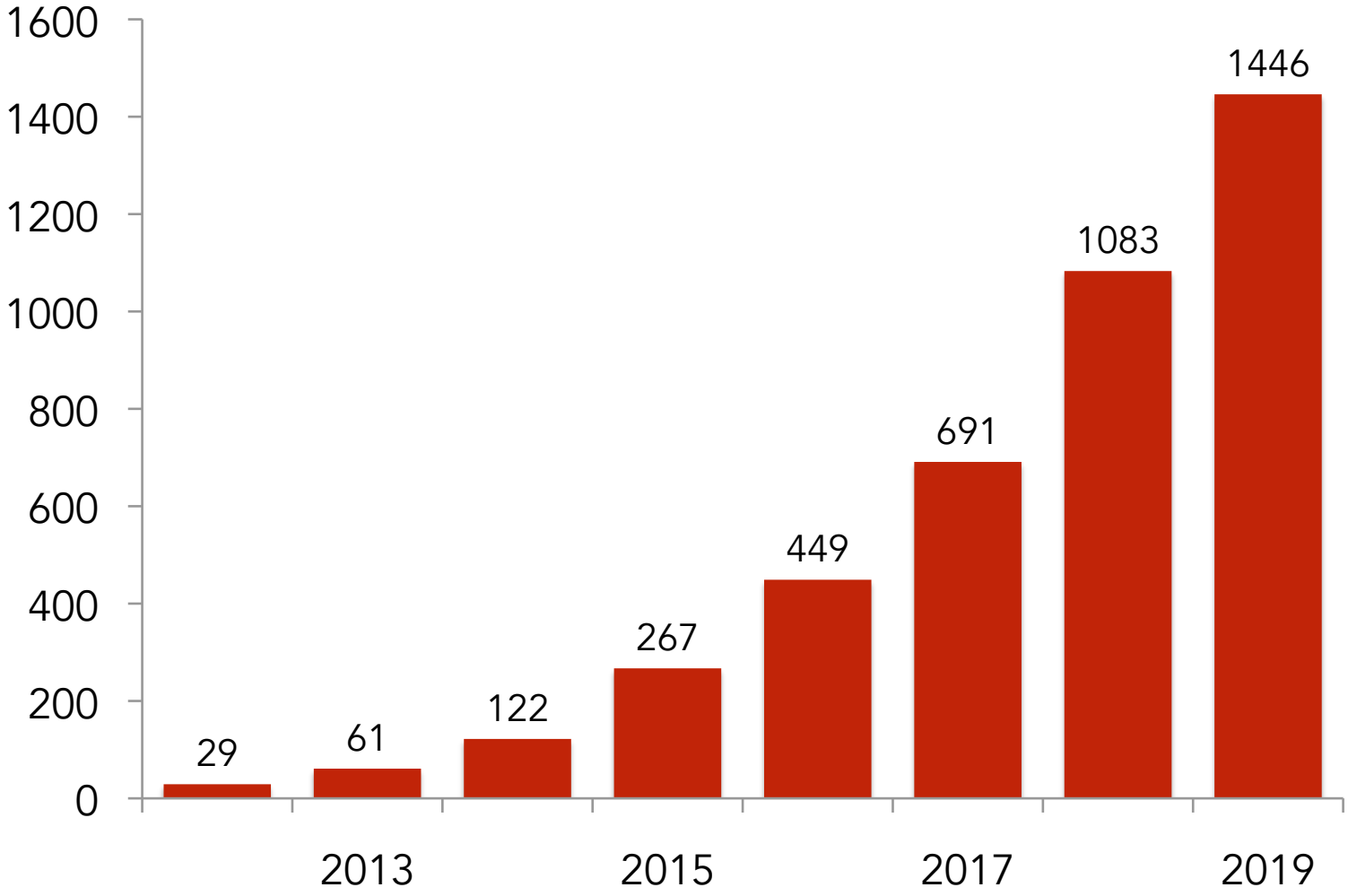
ASCL IDs

ASCL assigns unique identifier to entries

Identifier formula is *ascl:yymm.xxx*, where *yy* is year/*mm* is month of addition to ASCL, and *xxx* is incremental number

Result: Software can easily be cited by ascl ID, and discipline indexer and others can easily track citations

Citations per year, 2012-2019



Citation data from ADS

Site link curation

Links checked with two link checkers, one twice weekly, the other continuously

When links are consistently down for period of time, editor seeks new link

Result: Links are consistently healthy; link health is reported twice weekly on public dashboard

Live demo here

(I hope…)