

# Annual Report, 2012

## Astrophysics Source Code Library

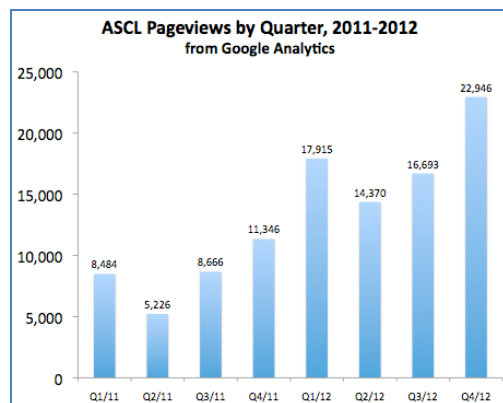
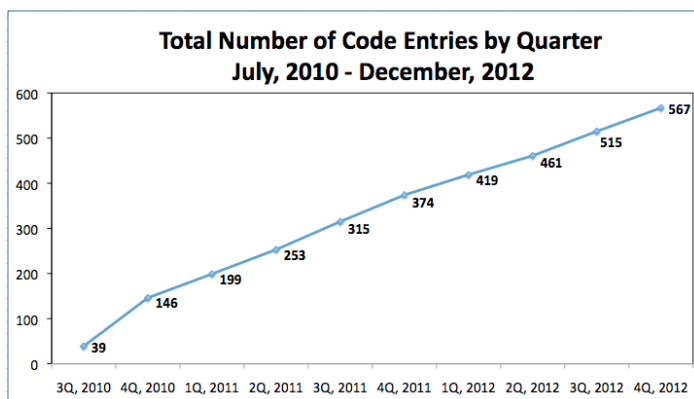
### March 10, 2013

#### Background

The Astrophysics Source Code Library (ASCL) was founded in 1999 by Robert Nemiroff (Michigan Technological University) and John Wallin (Middle Tennessee State University), and is a free on-line registry for source codes of interest to astronomers and astrophysicists. All ASCL source codes have been used to generate results published in or submitted to a refereed journal. Code entries are housed on the discussion forum for Astronomy Picture of the Day (APOD); the home page (<http://ascl.net>) now points to a website which offers information about the resource and access to the code entries.

#### 2012 Growth

The number of codes indexed in ASCL grew an average of 16 per month, which is in line with previous years' growth. Use of the site in 2012 more than doubled over 2011; the site was viewed 33,722 times in 2011 and 71,924 times in 2012, an increase of 113%.



In 2012, the Advisory Committee added two additional members; the membership of the committee, with new members indicated in bold, is:

Peter Teuben, University of Maryland, Chair  
Bruce Berriman, Infrared Processing and Analysis Center/Caltech  
Robert Hanisch, Space Telescope Science Institute/Virtual Astronomical Observatory  
Jessica Mink, Center for Astrophysics  
Robert Nemiroff, Michigan Technological University  
Lior Shamir, Lawrence Technological University  
**Keith Shortridge, Australian Astronomical Observatory**  
**Mark Taylor, University of Bristol, UK**  
John Wallin, Middle Tennessee State University

Alice Allen (Calverton, MD) and Kim DuPrie (Tokyo, Japan) serve as Editor and Associate Editor, respectively.

#### 2012 Highlights

January: The SAO/NASA Astrophysics Data System (ADS) indexes ASCL entries

Poster on the ASCL is presented at AAS in Austin  
 Facebook site for ASCL established  
 AAS approves funding of \$5,000 to ASCL for promotion of the resource

February: Pre-prints of Peter Teuben’s oral presentation and Alice Allen’s poster presentation at ADASS XXI appear on arXiv  
 Alice Allen writes a [guest post](#) for AstroBetter on the ADS indexing of ASCL  
 ASCL mentioned in an [Astrobites post](#)

March: Google Plus site for ASCL established

April: WordPress site moved into production, providing a cleaner web site and blog for the ASCL

June: Peter Teuben presents a poster on the ASCL at the [Great Andromeda Galaxy Workshop](#) at Princeton

August: Dialogue started with Norman Gray, editor of the new refereed publication *Astronomy & Computing*  
 Discussion initiated by Lior Shamir and John Wallin at LSST All-Hands meeting with Kirk Borne, member of scientific advisory board for *Astronomy & Computing*  
 Redirects created so most code entries can be brought up by name; i.e., ascl.net/NEMO brings up the entry for the NEMO code  
 Last of old codes ported over to new site; ASCL reaches 500 codes

September: Robert Hanisch presents a poster on the ASCL at [AstroInformatics 2012](#)  
 Alice Allen writes a [guest post](#) for Astrobites about the ASCL

November: The ASCL coordinates a successful Birds of a Feather (BoF) session at ADASS XXII called “Increasing Software Visibility and Re-use”; the ASCL also has a display table at the conference  
 Keith Shortridge and Mark Taylor join the ASCL Advisory Committee  
 Request for splinter meeting at the January 2013 AAS meeting accepted

December: Pre-prints of the ASCL entries for the ADASS XXII proceedings appear on arXiv; one is for the [display table](#), and the other is for the [Birds of a Feather session](#)

### **Impact on the community**

Authors of research papers are starting to cite codes explicitly and independent of a code paper using ASCL entries; in addition, scientists are listing ASCL entries on their CVs, in publications lists, and in documentation. ADS is testing linking codes to the research papers which use them, and papers to the codes used in the research described, to better make codes discoverable.

### **2012 Funding from the AAS**

In January 2012 the WGAS approached Kevin Marvel, AAS Executive Officer, with a request for seed funding to help strengthen the ASCL initiative and improve awareness of ASCL in the astronomical research community. A three-tier development plan was described:

- Near-term: Our near-term goal is to provide immediate outreach and publicity to increase the code base and raise awareness with both code developers and users. The ASCL has reached a point in its growth that makes it a useful tool for developers and users, and increasing awareness and maintaining forward progress are essential.
- Mid-term: Our mid-term goals are to identify potential sources of funding, including a higher level of support from AAS as well as programs at NSF (AST, CISE, OCI) and

NASA, develop proposals to present to these funding organizations, and to establish connections with publishers (ApJ and AJ, in particular) to encourage authors to deposit code associated with journal articles in the ASCL and to assure cross-linking of codes and journal articles.

- Long-term: With an annual funding of \$40-60K, the ASCL would be a sustainable resource for the astrophysics community; these funds would cover systems administration support, development and documentation of curation procedures, ongoing curation efforts, routine collaboration with journals, and annual conference and advisory board travel to create and maintain contacts with the research community and help assure the growth and completeness of the library.

Kevin approved seed funding of \$5,000 to support the near-term goal of increasing awareness and increasing the code base. These funds were used to provide an ASCL presence at two key events, the November 2012 Astronomical Data Analysis Software and Systems (ADASS) conference in Urbana, IL, and the January 2013 AAS meeting in Long Beach, CA.

Funding partially supported the ASCL Editor, Alice Allen, Advisory Committee Chair Peter Teuben, and Associate Editor Kimberly DuPrie. Other members of the ASCL Advisory Committee participated in these conferences using alternate sources of funds. In addition, ASCL AC members promoted ASCL at scientific meetings and workshops throughout the year, but at no expense to the AAS. The planning budget and actual expenditures are shown below.

	<b>Planning budget</b>	<b>Actual expenditures</b>
Poster production and shipping (2 @ \$65)	\$130	\$41
Brochure printing and shipping (500 @ \$0.34)	\$170	--
ADASS registration (individual, demonstration table)	\$1,200	\$1,346
AAS registration	\$450	\$486
Air transportation, DC/Urbana	\$450	--
Gas, DC/Urbana	--	\$148
Air transportation, DC/Long Beach	\$800	\$398
Accommodation and per diem, Urbana	\$800	\$814
Accommodation and per diem, Long Beach	\$1,000	\$1,098
Splinter group meeting, AAS	--	\$670
	<b>\$5,000</b>	<b>\$5,000</b>

### **2013 Plans**

Migrate to using the WordPress site as the home page of the ASCL

Submit position paper in *Astronomy & Computing*

Continue discussions with publishers and ADS

Present at the 2013 International Workshop on Software Engineering for Computational Science and Engineering in May

Participate in The Library of Congress's Preserving.exe software preservation summit in May

Present at ADASS, assuming partial support can be found

Continue adding codes at about the current rate

Add two or three people to the Advisory Committee to get input from outside the Anglosphere; suggested additions include a contact in Tokyo, the Netherlands, Germany, Italy, or France, and possibly a South American country.

Find ways to discover and track impact the ASCL has on the astrophysics community

**Press and bibliography**

[Practices in Code Discoverability](#), arXiv pre-print, February 6, 2012

[Practices in Code Discoverability: Astrophysics Source Code Library](#), arXiv pre-print, February 6, 2012

[Code in the Astrophysics Source Code Library is now citable](#), AstroBetter, February 8, 2012

[Publish your code! The Astrophysics Source Code Library](#), Astrobites, September 20, 2012

[Bring out your codes! Bring out your codes! \(Increasing Software Visibility and Re-use\)](#), arXiv pre-print, December 9, 2012

[Astrophysics Source Code Library](#), arXiv pre-print, December 9, 2012