

# **A Proposal for Partial Support of the Annual Conference on Astronomical Data Analysis Software and Systems**

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18 September 2002

## **Summary**

We request \$5,000 in partial support of the annual conference on Astronomical Data Analysis Software and Systems (ADASS). The ADASS Conference Series is the leading conference for the exchange of information about astronomical software. All astronomical institutions rely on ADASS as a forum to exchange information with other institutions and missions and with the astronomical community. This is a vital mechanism to foster reuse and process improvement. In recognition of the importance of ADASS to astronomy, the NSF has provided sponsorship of this conference in the past. This proposal requests the NSF's continued support, specifically for publishing the proceedings.

## **Impact of the ADASS Conferences on the NSF and Astronomy**

Founded in 1991, the ADASS Conference Series quickly became the premier meeting for developers and users of astronomical software worldwide. The ADASS conferences have proven very successful in drawing both scientists and programmers together to discuss issues of common interest. In fact, ADASS is now the sole conference devoted to astronomical software and techniques: owing to the success of ADASS, ESO discontinued its Data Analysis Workshops, and the Working Group on Astronomical Software (WGAS) of the American Astronomical Society (AAS) no longer holds oral paper sessions at AAS meetings; ADASS now provides the

only forum for face-to-face meetings between the worldwide groups involved in the development and implementation of the standards of the Flexible Image Transportation System (FITS).

Many of the software developments highlighted at ADASS were made at NSF-funded centers or with NSF research grants. ADASS provides the most important venue to share information within the NSF-funded community, to transfer this information to the wider astronomical community, and to benefit from lessons learned by workers in other fields and disciplines in astronomy.

A key recommendation of the Science Information Services (SIS) Study Team (part of the NASA SOMO/CSOC effort) reads as follows (emphasis added):

Availability of software for reuse is best promoted through proceedings of conferences on science processing and analysis software. The *Astronomical Data Analysis Software and Systems Conferences* represents an excellent resource of available software for the general astronomical community.

## **ADASS Conference History**

The Astronomical Data Analysis Software and Systems (ADASS) Conference Series was initiated in 1991 under the sponsorship of the National Optical Astronomy Observatory (NOAO), the Space Telescope Science Institute (STScI), and the Smithsonian Astrophysical Observatory (SAO). Since that time, the conference has been held annually. A different host institution is selected each year to encourage broad participation by the community. Hosting institutions have included NOAO, SAO, CADC, STScI, NRAO/University of Virginia, ST-ECF, NCSA/University of Illinois, and CFHT.

Conference attendance varies between 225-325 (dependent on conference location), with approximately 120 papers published in each proceedings volume. Demonstrations are an important feature of the conference as well. In addition to invited talks, contributed talks and poster papers, ADASS hosts informal workshops known as “BOFs” (Birds-of-a-Feather sessions) which cover a wide range of topics, including workshops on emerging technologies. ADASS has also hosted a number of tutorials, including tutorials by NASA Goddard's Software Engineering Laboratory.

Popular topics have included algorithms for data analysis, astronomical software systems, graphical user interfaces for these systems, object-oriented programming, and utilization of network information services such as the World Wide Web (WWW). A more complete history of the ADASS conference series and its impact on astronomy was published by Shaw, Stobie & Barg (2000, in ASP Conf. Ser. Vol. 238, ADASS X, eds. F.R. Harnden, F.A. Primini & H.E. Payne [San Francisco: ASP], 349).

## ADASS Conference Organization

The ADASS Program Organizing Committee (POC) is responsible for the definition of the program content, for establishing policies for presentation and publication of contributions, and for administering limited financial aid to students and participants from disadvantaged nations, etc. The current POC membership is:

Todd Boroson	NOAO
Richard Crutcher	UIUC/NCSA
Daniel Durand	CADC
Daniel Egret	CDS
Brian Glendenning	NRAO
Tom Handley	IPAC/Caltech/JPL
Richard Hook	ST-ECF
Gareth Hunt	NRAO
Glenn Miller	STScI
Koh-Ichiro Morita	NAOJ
Jan Noordam	NFRA
Michele Peron	ESO
Arnold Rots	SAO
Richard Shaw, Chair	NOAO
Elizabeth Stobie	U Arizona
Christian Veillet	CFHT
Patrick Wallace	Rutherford Appleton Laboratory

The Program Organizing Committee has selected the following key topics for this year's conference:

- \* Science and Analysis
- \* Technologies for the Virtual Observatory
- \* Calibration and Data Management
- \* Surveys
- \* Next Generation Telescopes and Control systems
- \* Enabling Technologies

The program includes 17 invited speakers who are recognized experts in their fields. The program will be supplemented with a tutorial entitled “XML and Web Services for Astronomy” which will be given by two of the most widely recognized experts in technology development for the National Virtual Observatory. All these topics are of interest and benefit to all current and future NSF astronomy facilities as they involve development and operations phases, including archiving, data analysis, and observing strategies to maximize science return.

The Space Telescope Science Institute is hosting the 2002 ADASS Conference; the meeting will be held at the Baltimore Marriot Waterfront Hotel. See the conference web site at <http://adass2002.stsci.edu/> for complete details and registration information. The Local Organizing Committee (LOC), ably chaired this year by Perry Greenfield (STScI), handles the logistics of the annual meeting. The LOC works hand in hand with the POC for a successful conference.

## Conference Budget

The budget for this year's conference is approximately \$125,000, which covers a variety of costs, including facilities, computer equipment and connections, financial services, and publications costs for the proceedings. Although most of the funding will be derived from conference registration and fees, up to \$23,000 will be provided by the sponsoring organizations (CADC, CDS, CfA/SAO, CFHT, ESO, IPAC, NCSA, NOAO, NRAO, STScI). We are soliciting additional support from the major astronomy funding agencies: \$5,000 each from NASA and NSF. NASA has agreed to provide this support.

This proposal asks for \$5,000 from the NSF. The funds, if awarded, will be directed toward the cost of publication of the conference proceedings. The total cost of publication for the proceedings is approximately \$16,000 (\$51.30 per volume, plus shipping). The difference will be made up from contributions from other conference sponsors. The proceedings of the last eleven ADASS conferences were published by the Astronomical Society of the Pacific (ASP) as part of their Conference Series. We plan to continue our relationship with the ASP; they have granted ADASS permission to publish the conference proceedings on-line through the ADASS conference web site at <http://www.adass.org/adass/proceedings/>, provided that hardcopies are purchased for all registrants. The electronic abstracts are also listed in NASA's Astrophysics Data System, which is maintained at SAO. We believe this is a good investment, in that the published legacy of ADASS (more than 1300 papers) is of great value to the entire astronomical community, judging by the citation rates.

The NSF's role as a conference sponsor will be acknowledged, as in the past, on web pages, advertisements, on posters at the conference, and in the proceedings.