

**Working Group on Astronomical Software**  
**Annual Report**  
**Submitted by R. J. Hanisch, Chair**  
**May 1991**  
**Revised, 18 June 1991**

This report covers the period from June 1990 (after the Albuquerque AAS Meeting) through June 1990 (including the Seattle meeting).

**FITS.** Work on the FITS data format standard continues to be a primary activity of the WGAS. A number of new initiatives are under discussion, including an agreement for FITS files on media other than 9-track magnetic tape (e.g., DAT, Exabyte, magnetic disk, and over networks) and a new proposal for a binary tables format. No formal votes have yet been taken, although we expect to have e-mail voting on several of these issues later in the year.

The WGAS has been involved in a NASA committee whose objective it is to recast the existing FITS papers into a form suitable for adoption as a NASA standard. It is hoped that once this standard is completed that the European, North American, and IAU FITS Committees will endorse it as superseding the existing FITS papers as the official form of the standard.

The NASA FITS Support Office is now playing a major role in the support of the FITS standard. A first edition of a FITS User's Guide is now available from them, and a revised version is expected later this year. The FITS Support Office also has plans to develop a FITS conformance testing program that would be used to certify that FITS files are fully compatible with the standard.

**Electronic Mail Exploder.** The WGAS now has an electronic mail exploder to which interested parties may subscribe. The mail exploder is maintained at NASA-GSFC by Lee Brotzman. To subscribe to the WGAS-L mailing list, send electronic mail to: `LISTSERV@SCFVM` (BITNET), `listserv@scfvm.gsfc.nasa.gov` (Internet), or `AMES::"listserv@scfvm.gsfc.nasa.gov"` (NSI/DECNet). In the body of the mail message, include the following line only:

SUBSCRIBE WGAS-L Your Name

LISTSERV will determine your E-mail address by examining the mail header, so you do not have to provide a network address, only your name.

To sign-off the list, send mail to LISTSERV saying, "UNSUBSCRIBE WGAS-L", and LISTSERV will sign you off immediately. Further information about LISTSERV commands and a list of available documentation will be sent to you if you include the commands "HELP" and "INFO ?", each on separate lines, with your subscription request.

The mailing address of the list is `wgas-l@scfvm.gsfc.nasa.gov` (Internet), `WGAS-L@SCFVM` (BITNET), and `AMES::"wgas-l@scfvm.gsfc.nasa.gov"` (NSI/DECNet). Note that since the LISTSERV program handles all list maintenance, there is no man-tended "wgas-l-request" account. If you have any questions about using LISTSERV, contact Lee Brotzman at `zmleb@scfvm.gsfc.nasa.gov`.

The WGAS may also extend its discussions to the Usenet with the creation of new newsgroups such as `sci.astro.wgas` and/or `sci.astro.fits`. Lee Brotzman is leading this effort.

**BAAS.** The summer edition of the *BAAS* is the third issue in which status reports and technical reports concerning astronomical software will be published. Eight papers appear, which is down from last year but still indicates that there is strong interest in having this means of communicating information about astronomical software developments.

**Electronic Publishing.** The WGAS continues its involvements in exploring the feasibility of more automated means of publishing astronomical papers. R. Hanisch and C. Biemesderfer have been coordinating the development of the AAST<sub>E</sub>X macro package with the American Physical Society, which has developed a similar package called REVT<sub>E</sub>X. The AAST<sub>E</sub>X macros are now available for use via anonymous ftp to node tucana.tuc.noao.edu (directory tex) or node stsci.edu (directory Software/TeX).

WGAS members also participated in a NASA sponsored workshop on electronic publishing in astronomy, where both the technology and economics of an on-line journal were discussed. Hanisch continues to serve on the AIP Subcommittee on Information Technology, and in this position is keeping AIP apprised of developments within the astronomical community.

**Other WGAS Business.** Other topics of interest to the WGAS were discussed at the Seattle meeting.

- John Good (IPAC) gave a brief status report on the Astrophysics Data System. ADS is now on-line and in a beta-test stage, and is expected to be more widely distributed to the astronomical community later this year.
- Fortran 90 is now being finalized as an ANSI standard, having already been accepted as an ISO standard.
- A general discussion was held concerning the need for and utility of an on-line directory of astronomical data analysis software, and how such a directory might be incorporated into a system such as ADS. An astronomical software catalog was constructed several years ago at SAO, but would need major updates to be useful. Chris Benn (RGO) is currently soliciting inputs to a similar catalog, but it is clear that the utility of such catalogs depends heavily on the ability to keep them current and complete.