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# FITS BoF Session

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**Abstract.** We summarize the discussions that took place during the FITS Birds of a Feather (BoF) session, which was held Monday, September 23, 1996 at 16:00. For completeness we also include a summary of the 1995 FITS BoF, which was never published.

## 1. Introduction

This year marked the second FITS BoF at the ADASS. In previous years the WGAS meetings at the AAS Summer meetings provided a regular discussion ground, but with the introduction of the BoF sessions at the ADASS and a much more targeted audience, it was decided to hold these meetings at the annual ADASS. Most FITS-related communications take place on the newsgroup `sci.astro.fits` (and the associated "`fitsbits`"[1] e-mail exploder).

## 2. FITS BoF session at ADASS VI

As always, a number of oral and poster presentations specifically discussed FITS-related items. Oral papers by Clarke, Allen, Mink, Mandel, and Wells were presented in a special FITS afternoon session, and posters were presented by Pence, Farris, Tripicco, and Stobie; see the papers by these authors elsewhere in this volume.

The NOST/FITS Support Office is responsible for two major documents. First, the NOST standard is intended to define FITS in more precise terms. The technical panel met on September 11 and its chairman (Bob Hanisch) reported on some of the major changes which were decided. The new version of the standard is expected to be out for comments early in 1997. Second, the User's Guide provides background information, especially examples, to aid in producing and interpreting legal FITS datasets. Version 4 is now being prepared (also available early in 1997); the IMAGE, BINTABLE and blocking agreements are now part of the regular text. It now also includes discussion of the World Coordinates draft (Greisen & Calabretta 1995).

[1] To subscribe, send an E-mail message to "`majordomo@majordomo.cv.nrao.edu`" containing the command "`subscribe fitsbits`" in the body of the message.

The FITS Support Office also maintains a Web site,[2] which is one of the major information clearinghouses for FITS. It includes the registered FITS extension types. The home page is accessed about ten times a day, and the NOST standard and User's Guide are retrieved about once a day.

Grosbøl reported on a recent `sci.astro.fits/fitsbits` discussion of the "year-2000" problem, which resulted in a proposal by the European FITS committee which will be discussed by other regional FITS committees and the IAU-FWG. One possible starting date for a new format for the DATE-OBS (and related) FITS keywords will be January 1, 1998.

Wells discussed the proposed MIME codes for FITS files. Efforts are still in progress to register several FITS data types with the Internet Assigned Numbers Authority [IANA].

This past year has also seen some major and minor improvements in existing software, and the introduction of some new and interesting tools:

- FITSIO, FTOOLS, fv (Pence et al.)
- CFITSIO (Pence)
- MRDFITS in the IDL astronomy library updated (McGlynn)
- WCSLIB updated (Calabretta)
- FITSview (Cotton)
- JAVA browser (Lu, NCSA) and FITSWCS Java Package (NCSA)

A new version of the World Coordinate System draft is available, and all FITS users are urged to study it. Hanisch and Tody discussed some of their concerns with the current WCS proposal during the BoF session. It became clear that some issues, particularly with respect to large scale astrometric projections and mosaicking, will need to be looked at in more detail.

## 3. FITS BoF Session at ADASS V (Tucson)

[A report on the 1995 BoF was not included in the ADASS V volume.] From the FITS Support office, Schlesinger reported on the status of the NOST Standard and the Users Guide. Version 1.1 of the NOST Standard has now been approved by the Accreditation Panel (after some units revisions). The Technical Panel will start to work on Version 2, which will now include BINTABLE, IMAGE, and blocking. The FITS User's Guide is at version 3.1 with Version 4.1 under way. Schlesinger also presented an overview of the new Web site as a primary source of information for FITS and registration of FITS extension types.

### 3.1. News items

- NOST standard approved by NASA, FITS committees to consider it for formal approval, superseding the four A&A papers.
- BINTABLE paper just came out! (Cotton & Tody 1995)

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[2] http://www.gsfc.nasa.gov/astro/fits/basics_info.html

- IDL: MRDFITS (Tom McGlynn, Goddard/CSC), FX* (Bill Thompson, Goddard/ARC), READFITS and WRITEFITS
- FITSIO (V4.08 October 1995) has been updated, and FTOOLS is running at version 3.3
- The WCS paper has been revised again, and now has an Appendix-A. Wide-field survey people in particular should review this.
- Pence introduced a (HEASARC based) proposal to adopt the celestial coordinate keywords as defined in Greisen & Calabretta (1995) WCS paper.
- Wells discussed the planned application to IANA for FITS MIME code(s), probably to be `image/fits`, `application/fits-table` and `application/fits-image`.

### 3.2. Individual Contributions

Short contributions were presented by the following authors:

- **Don Jennings**
  - FITS hierarchical grouping proposal.
  - FITS and HDF communications (w/ Bill Pence - see also their poster)
- **Immanuel Freedman** FITS Data Compression: developments in Generic Data Compression, These developments relate to work performed on the COBE project. (10 minutes)
  - Field-level compression extensions.
  - ROW or COLUMN pixel order.
- **Rob Seaman** Checksum proposal.

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## References

Greisen, E. W., & Calabretta, M. 1996, Representations of celestial coordinates in FITS[3]

Cotton, W. D., Tody, D., & Pence, W. D. 1995, A&AS, 113, 159

Wells, D. 1997, this volume, 257

[3]http://fits.cv.nrao.edu/documents/wcs/wcs.all.ps