

New Software Packages – November 2001

- New FAST SDT/IDL software distribution (Verneti, Bromund, Teitler).
 - A new software distribution (SDT v. 3.6) will be available next week.
 - SDT v. 3.6 has already shipped with the most recent versions of the Polar and Cluster software distributions (Summer 2001).
 - Lots of bug fixes and changes to DataMgr (relative to last, buggy version of 1999-2000).
 - Latest changes to DataMgr have been tested in a Co-I environment (GSFC).
 - See pages 3-7 for a more detailed accounting of updates, changes, and sources of information about Datamgr.
- New Fields codes (Ergun).
 - Despin codes for Survey, 4k and 16k Burst, and HSBM (2d and 3d).
 - DSP, SFA, and PWT data acquisition codes.
 - Various other utilities (filter pole shifting for HG data, etc.).
 - Available in the new FAST SDT/IDL software distribution.
- PHI package (Eriksson).
 - Large-scale integrated potential estimation.
 - Spin-period time resolution; this will be increased soon to support a request from LANL.
 - Includes FDF attitude acquisition and **ExB** subtraction.
 - Available at the FASTsupport ftp site:
`ftp://apollo.ssl.berkeley.edu/pub/jbonnell/FASTsupport`, PHI subdirectory.

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- GBS package (Rauchleiba, Peria, Bonnell)
 - New version of the Generalized Batch System (1.3). Allows one to run batch SDT/IDL jobs on a given set of orbits.
 - Includes more documentation and control variables, as well as support for both ORBIT and (ORBIT, INTERVAL) selection of data.
 - Does not eat up its input files (a beloved “feature” of version 1.0).
 - Still only runs at UCBSSL, although a variant using remote jukebox access once ran at LANL. Some effort will be spent to get a remote version working if interest exists amongst the Co-I institutions (strong positive response to this).
 - Available via the FASTsupport ftp site (see above, GBS subdirectory).
- DSP_AUTOCAL package (Bonnell)
 - Automated comparison between spectra derived from DSP and 16k Burst data.
 - Available via the FASTsupport ftp site (see above, DSP_AUTOCAL subdirectory).

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Further details on Datamgr and the updated version in the new software delivery (abstracted by Ken Bromund from his ‘putback’ notice, and then abstracted by John Bonnell from an e-mail of 7 Nov 2001):

- A repository of documentation on datamgr, the database, and the HIRES cdp website in the form of a FAQ sheet may be found at the following location:
<http://sprg.ssl.berkeley.edu/~kenb>.
- The `cdromCopyTool` has been fixed.
- The `filelistToDB` program has been fixed.
- The `datamgr`, `update_filelist` and `trimFileList` man pages have been updated.
- When accessing Berkeley’s data from remote sites, `datamgr` will not try to copy files in data directories at Berkeley which are not really accessible.

Details: every directory in the filelist database has a flag, which is true only if the directory is accessible from juneau, which is the entry point for outside users. Datamgr checks this flag before it shows a file as online in a remote data directory.

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Further details on Datamgr (con't):

- There is a new utility: `update_filelist`, which gives the functionality of ‘Update Filelist’ in the original `datamgr`.
 - `update_filelist` loops through every directory recorded in the filelist database, and synchronizes the contents of the filelist with the actual lzp files on line.
 - `update_filelist` can be used at Berkeley or any remote site where the SDT/`datamgr` is installed, to update the filelist database for that site.
 - `update_filelist` can be run from the command line or a cron job to update `datamgr`'s record of what is online, after files have been deleted with `rm`.
 - `update_filelist` can be run to update only your own data directory, or a subset of the total data directories, so you can update the filelist for your own data directories without waiting forever.
 - `update_filelist` can be used to find and remove any bad files (full of zeroes) from the disks and the filelist.
 - `update_filelist` should be run nightly as a cron job to keep the filelist synchronized in case any data directories go offline or files get deleted.

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Further details on Datamgr (con't):

- There is another new utility: `dmls`. `Dmls` lists the contents of the filelist database for your site, in a format similar to the obsolete `datamgr_listing` file.
 - `dmls` can be directed to only give a listing of a single data directory.
 - `dmls` can be used to make a backup of the filelist database entries for your entire internet domain, which can be restored using the `filelistToDB` utility.
- At John Bonnell's suggestion, `datamgr` now checks that the files it finds online are actually online before it displays them in the 'Query Results: File List' window. Formerly, it wouldn't actually check until you pressed 'Return To SDT', thinking all your files are online, only to find you have to go back and make another iteration of 'get files'.
- In addition to checking that the files are actually online, `datamgr` also checks that the files are good – ie. that they are not full of zeroes – and deletes them if they are bad, so that you can try to use `datamgr` to get good copies. Note: the jukeboxes may still give you bad files full of zeroes, but `datamgr` will now delete them for you before you can use them to crash SDT.

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Further details on Datamgr (con't):

- Datamgr's 'Update Filelist' command now once again has some useful functionality. It will not do a full update of all data directories – which could tie up your `datamgr` for a long time, and can easily be done from the command line. However, 'Update Filelist' will run `update_filelist` for you on the subset of the data directories which contain data in the 'Query Results: File List' window. Even if you are running from a CoI site, and those files are in directories at Berkeley, choosing 'Update Filelist' will update the Berkeley filelist so you will not see the false entries again.
- There is an alternative system for keeping a listing of all jukebox volumes and the online CDROM volumes in the pseudoraid system, so they can be distinguished from the user data directories. This is a new feature, which I have made available, but it has not been through any real-world testing. This new functionality is disabled unless certain new variables are set in the `Datamgr.conf` or `/.datamgr.conf` files. If/when we get rid of the jukeboxes, we may want to think seriously about transistioning to this new system, since it uses 100 times less space in the filelist database.

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Further details on Datamgr (con't):

- Except for the last item, all the changes are fixes to problems with the `datamgr` first released in late 1999, and have gone out with the latest Cluster release (Summer 2001).
- This latest `datamgr` version, dubbed 'datamgr 2001 beta' has been patched into the version which Rob Pfaff's FAST team uses every day. So it is being tested out in a CoI environment.
- Decent man pages for `dmls` and `filelistToDB` as well as other, more arcane utilities are in the works, as well as a `datamgr.conf` man page.
- All users are encouraged to break, I mean test the new version of `datamgr`, and report the results to Ken Bromund (kenb@falak.gsfc.nasa.gov).