fidlr3.0 and xflash3

Flash Tutorial
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Dr. Lynn B. Reid
xflash3 Outline

- IDL Based
- How to use fidlr3.0/xflash3?
- Built-in features
  - 2d plotting
  - 1d plotting
- Going further
  - programming
  - use ViSit
xflash3 is IDL based

- **Written in IDL data analysis language**
  - Commercial product – so expensive they won't tell you how much on the website
  - Does have a reasonable user community

- **IDL features**
  - Very similar to pvwave, similar to matlab, easy syntax, flexible
  - Can be command-line driven or by sophisticated scripts
  - Has lots of built-in file readers e.g. HDF5, netCDF

- **IDL disadvantages**
  - Graphical User Interface widget capabilities are dire
Getting started

- Found in tools/fidlr3.0 directory
  - Beware of name changes!
  - Flash2.5 had various names fidlr2, fidlr3, xflash
- Prepare shell environment
  - `setenv IDL_DIR "/usr/local/rsi/idl_6.3/"`
  - `setenv XFLASH3_DIR "/data/lynnreid/FLASH3/tools/fidlr3.0"
  - `setenv IDL_PATH "/data/lynnreid/bin/idl/:${XFLASH3_DIR}:${IDL_DIR}:${IDL_DIR}lib"
- Start up IDL and xflash3
  - Prompt> idl start_linux
  - IDL>xflash3
Using xflash3: opening files

- Filters help limit the number of confusing files
- hdf5/netcdf
- plt/chk
Main Window

- Multiple plots per page
- File ranges
- Generate hardcopy
- Select variable
- Useful for 3d
  - ViSit is recommended!
- Zoom box very helpful
- Extract 1D data
- Add features poorly
- This makes it go!
Using xflash3: plots

- Default plot

Use Zoom Box and resize
Using xflash3: 1D & query

- Can extract 1d slices from 2d
- In theory can also do 2d from 3d
- Query function is useful for seeing all data at once
IDL Hints

- Other routines found in fidlr3.0 directory
  - Not supported
  - May not be compatible with new FLASH3 file format

- Sources of help
  - `idlman` or `idlhelp`: hard to find and navigate but comprehensive
  - `idldemo` might show you new tricks
  - Google groups comp.lang.idl-pvwave
  - Helpful websites: [http://www.dfanning.com](http://www.dfanning.com)

- Serious programming: development environments
  - `idlde` – vaguely useful
  - IDL Workbench
    - Integrated with popular Eclipse DE

- Use ViSit!
  - See next presentation