



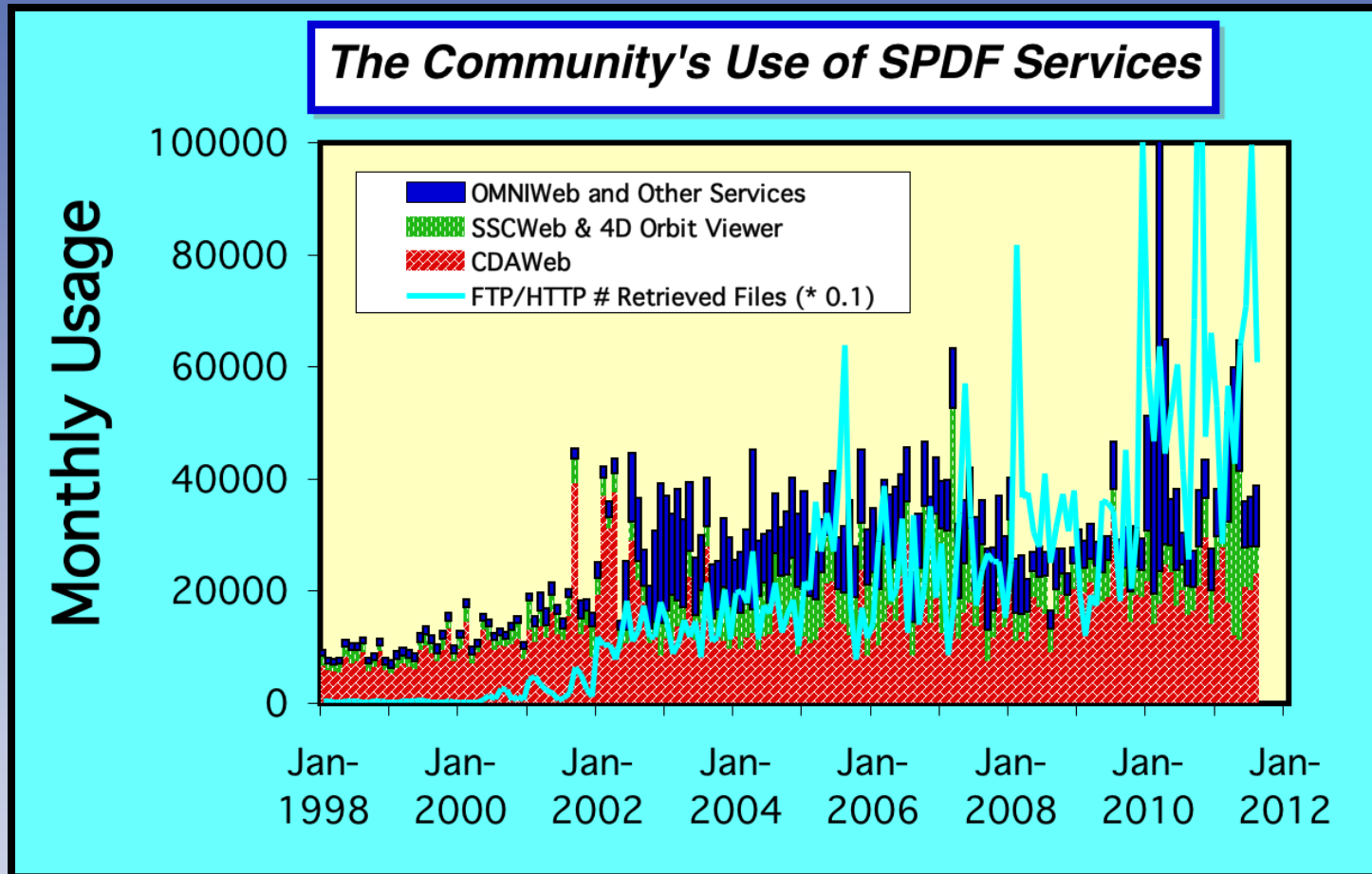
SPDF Updates for RBSP

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Use and Acknowledgements of SPDF



- In 2010 as in 2009, ~20% of space physics papers in AGU journals acknowledged SPDF services and/or data



SPDF and RBSP

- **SPDF (as a Heliophysics Final Archive) will work closely with RBSP teams and the relevant VxO (ViRBO) to capture an ongoing understanding of planned and actual RBSP data products**
- **SPDF will support RBSP in making and using CDF format**
 - CDF Version 3.3.2.2 (alpha release) now available
 - Leap seconds: `cdf_time TT2000` datatype with C/Fortran/Java/C#/Matlab/Perl APIs
 - “Beta” version of SKTEditor tool supports `cdf_timeTT2000` and RBSP file naming
 - SPDF training, consultation, custom support as project and/or teams request
 - *Note: ViRBO team will then produce required RBSP product SPASE descriptions working with SPDF, the RBSP CDF metadata and the RBSP science teams*
- **SPDF plans to load appropriate RBSP planned and definitive ephemeris into SSCWeb’s database**
 - Will load forecast RBSP orbits based on nominal launch date as soon as possible
- **SPDF prepared to support distribution of public RBSP data through CDAWeb (or other SPDF services) and SPDF’s webservice APIs**
 - SPDF can support a variety of methods for ingesting RBSP data
 - E.g. RBSP push to SPDF staging disks, SPDF pull from FTP or HTTP
 - CDAWeb does significant validation and checking for all ingests
 - SPDF is continuing to add features to CDAWeb and SSCweb services



A Reminder: Steps to Put Data into CDF

- 1. Define and create the CDF structure to receive the data**
 - Create skeleton CDF (e.g. using the SKTEditor tool)

- 2. Use one of multiple options to load data**
 - In IDL, use IDLmakeCDF procedures
 - Use read_master_cdf to read skeleton and create a structure within IDL,
 - Load that structure using standard IDL calls as necessary,
 - Use write_data_to_cdf to create a CDF with data
 - Use makeCDF tool
 - skeleton CDF + input file + file format description
 - Direct writes to CDF using CDF library
 - Directly in programs or calls inside IDL
 - If data is in another standard self-describing format, use e.g SPDF's Data Translation Web Service and other tools
 - E.g. netCDF, HDF, FITS or CDFML

N.B. SPDF staff will be here after the SWT today (or by e-mail or telecon) for anyone with questions, concerns, or needing direct assistance



Backups and Added Details



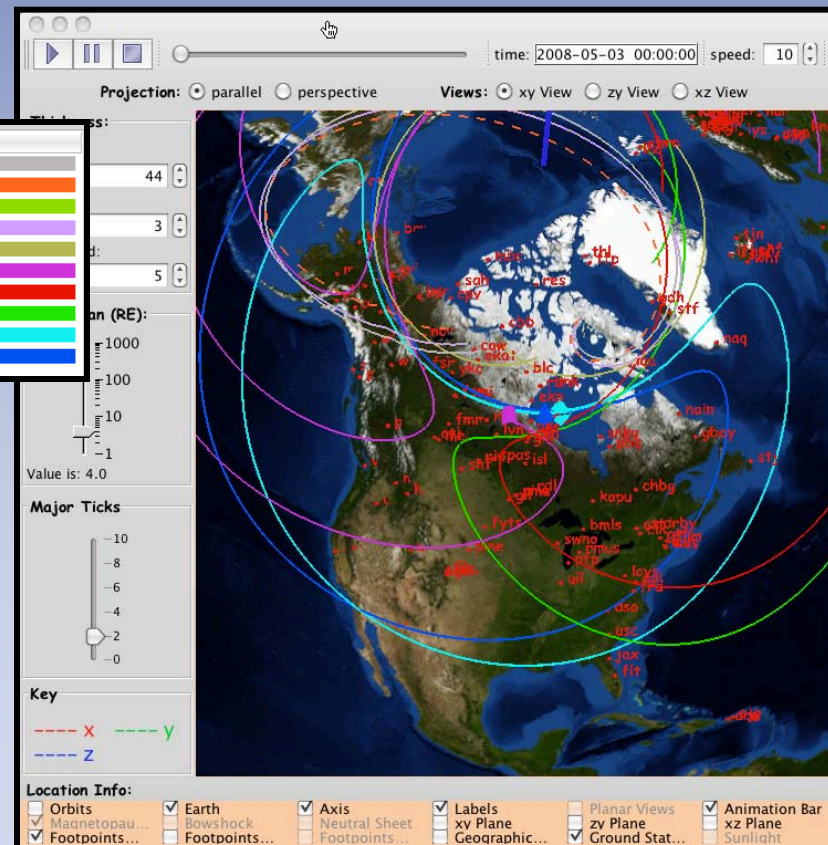
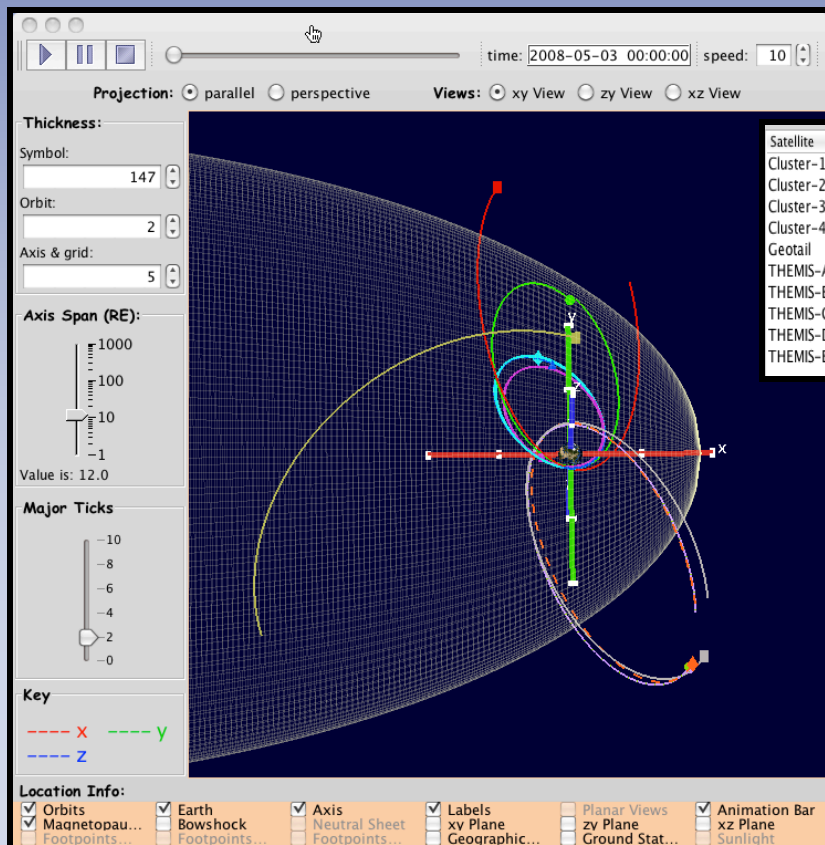
A Short CDF Status Update

- **Current version: 3.3.1.1**
 - Multiple bug and security fixes, extended o/s and platform support, extensive pre-release (beta) test period
- **Version 3.3.2.3 [-> 3.3.3 when more completely tested]**
 - Includes support for leap seconds via `cdf_timeTT2000` datatype
 - Version of SKTEditor also now exists that supports `cdf_timeTT2000`
- **Version 3.4**
 - 3.3.3 plus re-implementation of several data compression functions
 - ZLib library license to match NASA open source license (vs GNU license)
 - Full and fully tested release in Winter 2012



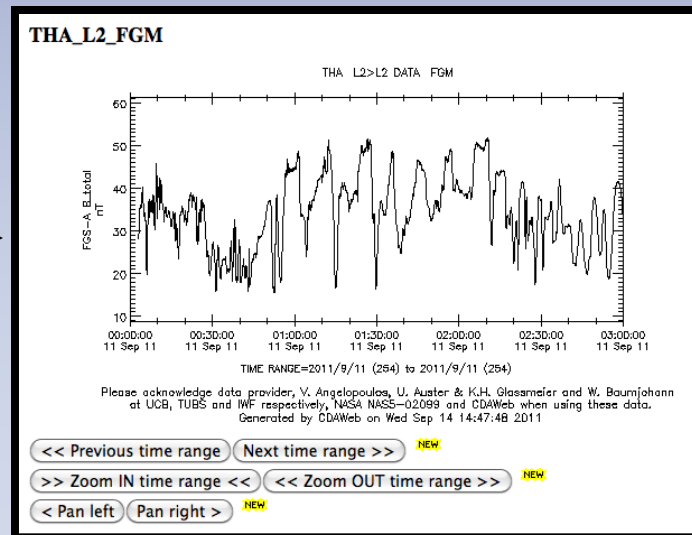
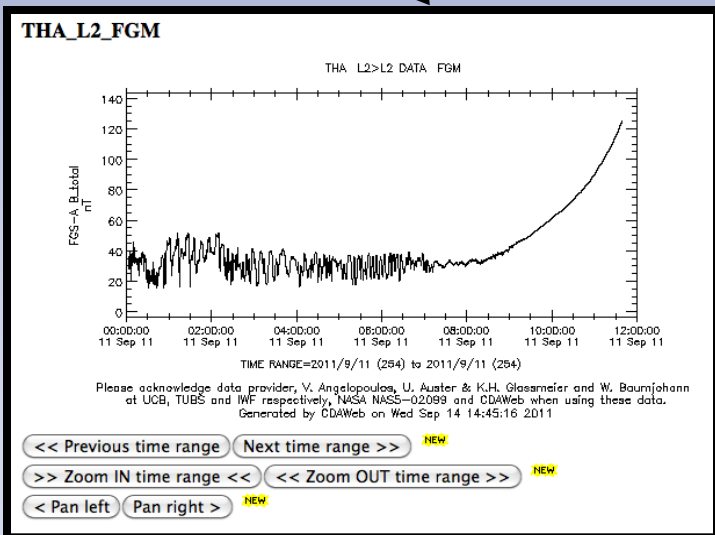
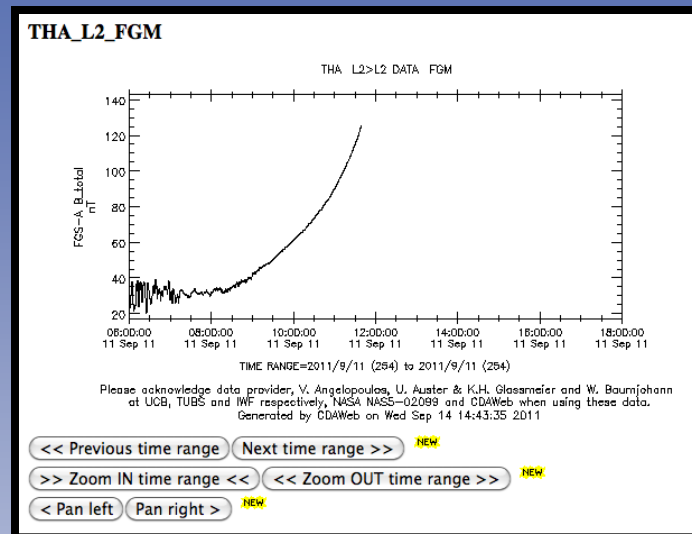
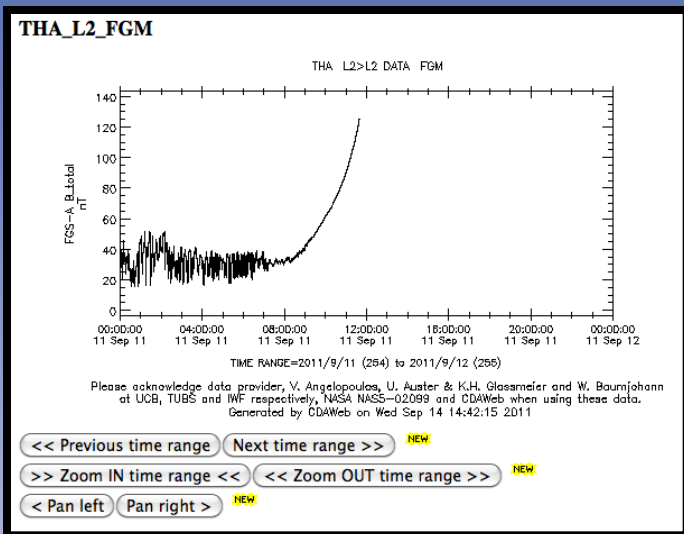
Examples/Demos of 4-D Orbit Viewer

- **Orbit (GSE) view**
 - 3D Zoom, pan, animations, s/c –centered view, region overlays
- **Footpoint (GEO) view**
 - Animated footpoint traces with ground station overlays





Simple CDAWeb Zoom and Pan





New CDAWeb Chooser

- **Working inside IDL**
 - At IDL command line
- **GUI: Load/display CDAWeb data**
 - @compile_cdaweb
 - spdfcdawebchooser
 - Select mission/instrument
 - Find Datasets
 - Select variables
 - “Get Data”
 - Retrieves “created” CDF
 - Loads IDL structure
 - “IDL” or “Plot”

