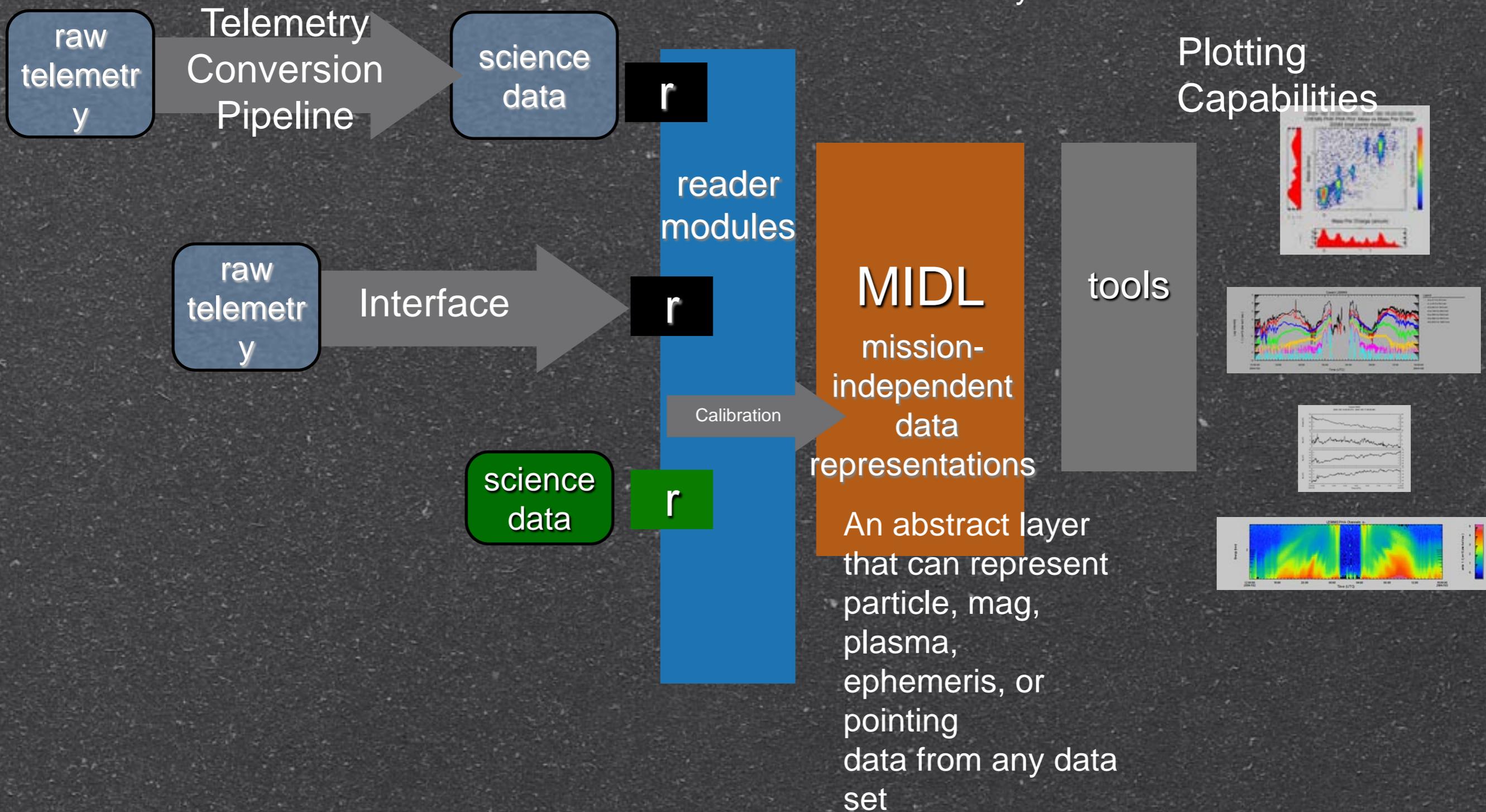


What is MIDL?

MIDL is focused on simple, basic analysis.

Software is layered to make it modular.



Supported Missions

Cassini - MIMI, CAPS, MAG

Geotail - EPIC, MAG

ACE - EPAM, SWEPAM, MAG

Voyager 1 and 2 - LECP

Galileo - EPD

New Horizons - PEPSSI

MESSENGER - EPS, MAG

ISEE 1 and 2

AMPTE/MEPA

JUNO - JEDI

RBSP - RBSPICE

MMS -

Types of Data

energetic particle rates (spectra spectrograms)

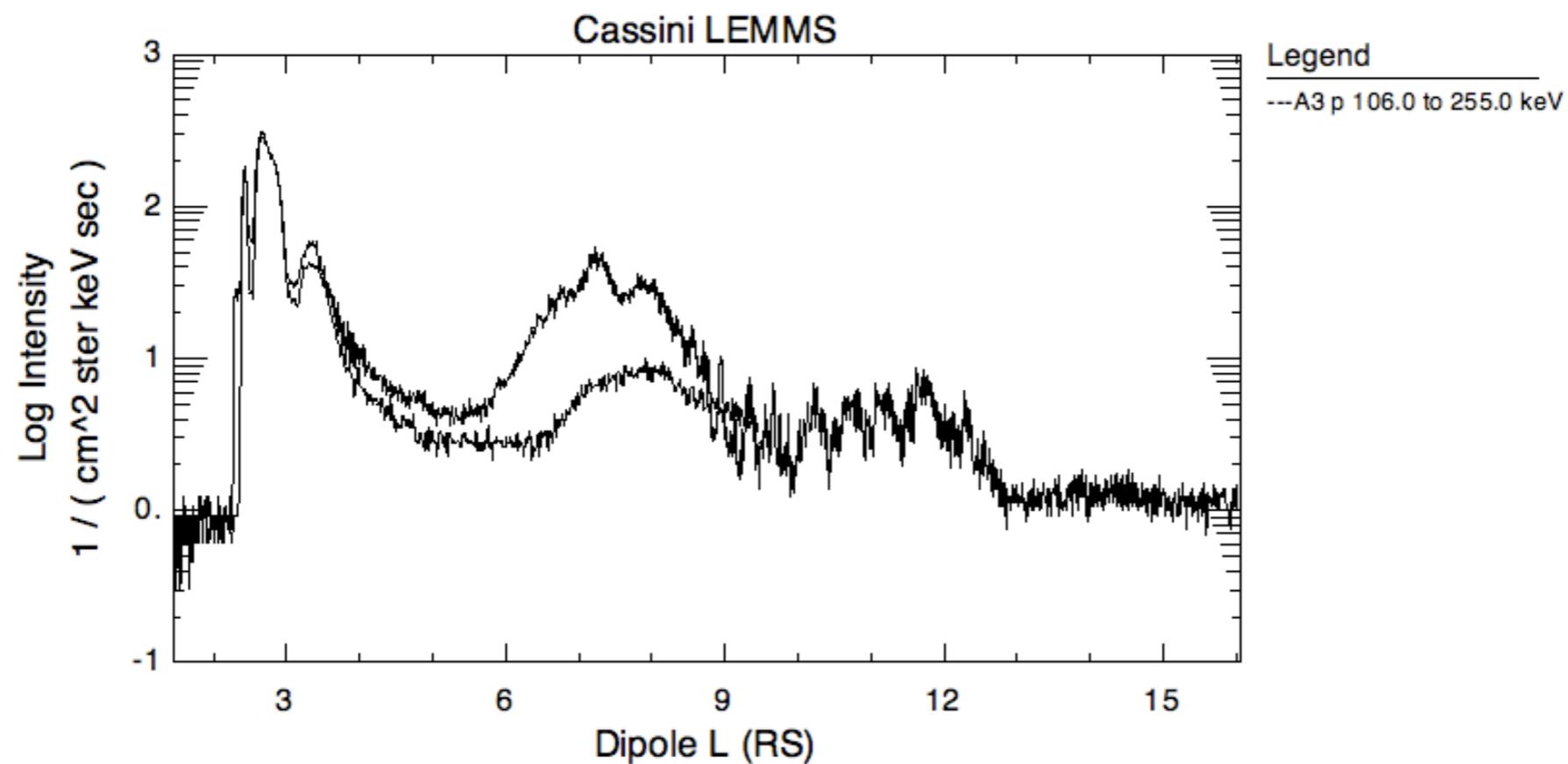
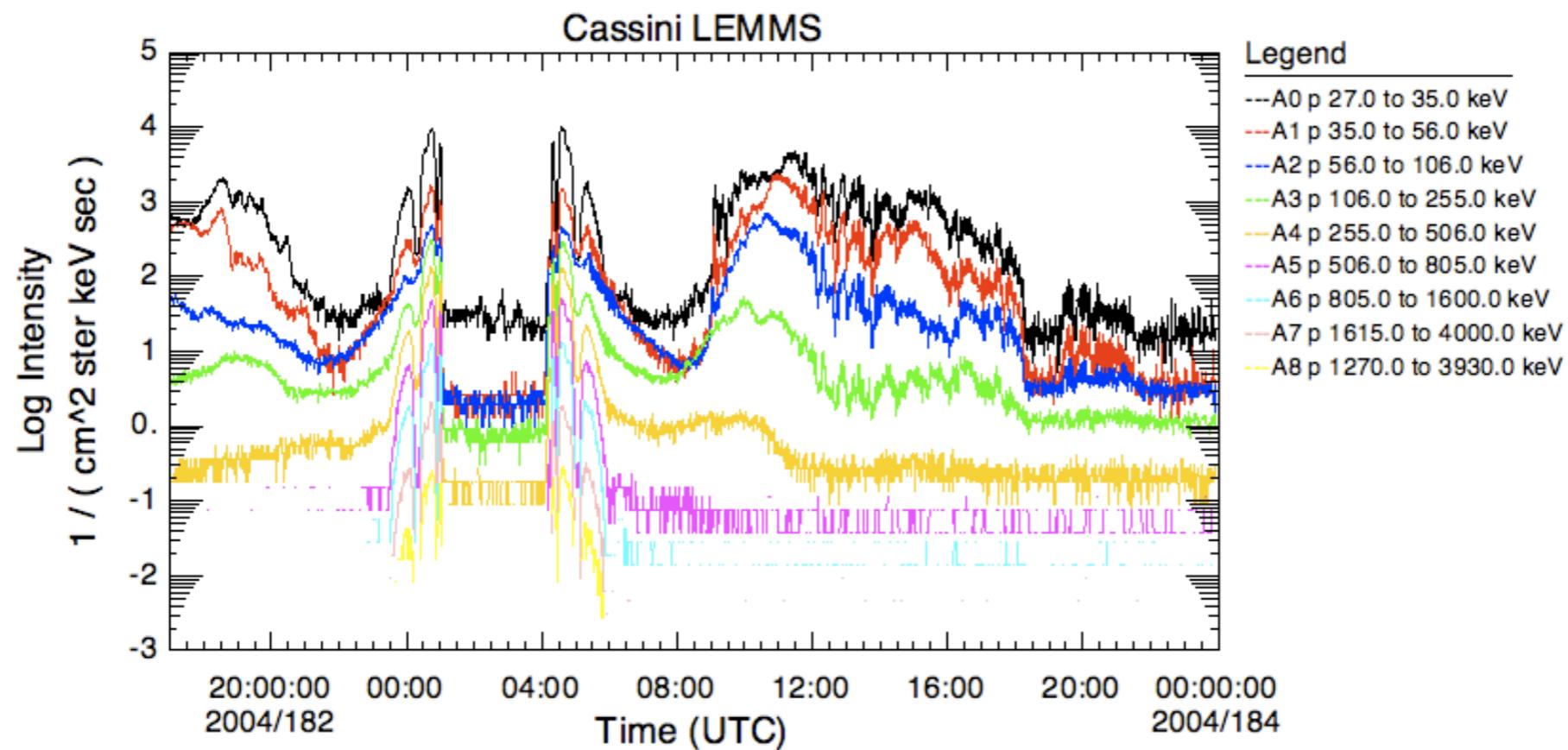
energetic particle PHA data

mag data

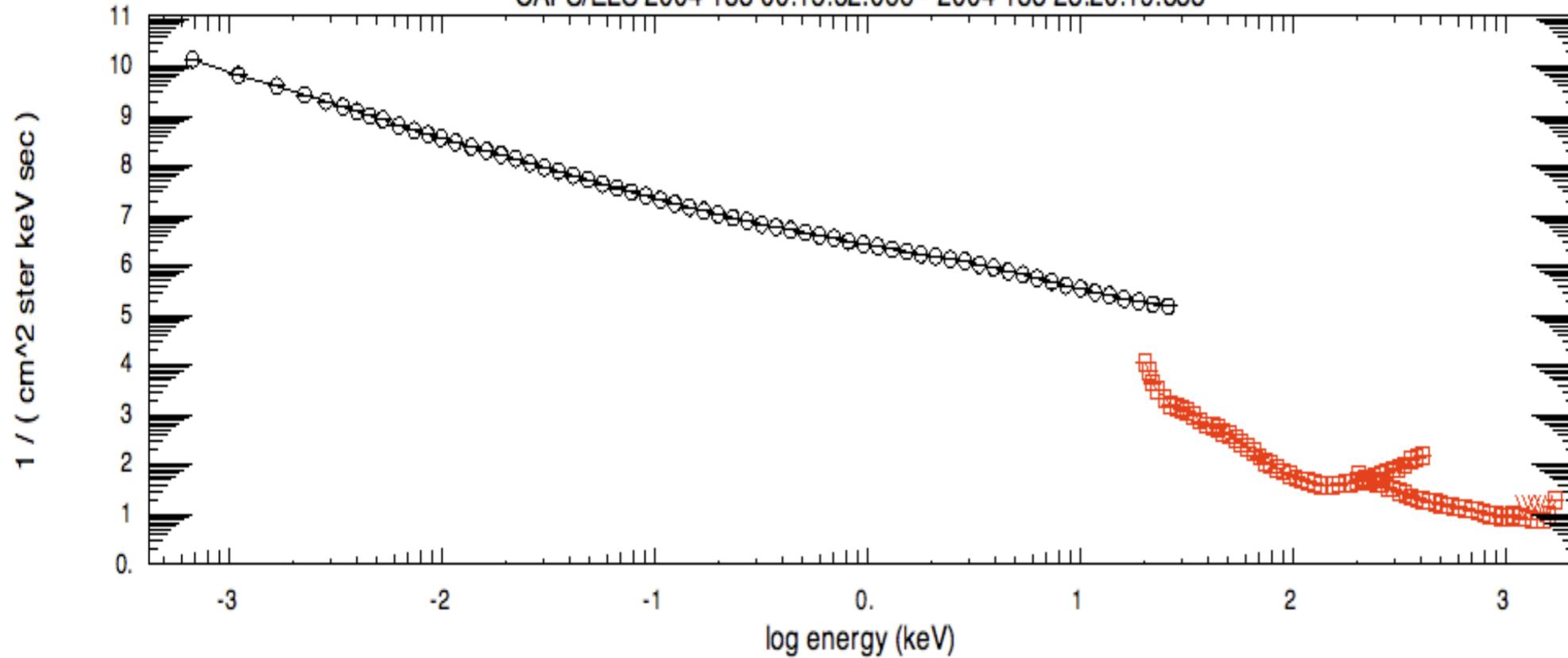
plasma data (density, temp., velocity)

ephemeris and pointing (some SPICE-like capabilities)

MIDL is a data exploration tool. Simple views, easy export to in depth analysis environments.

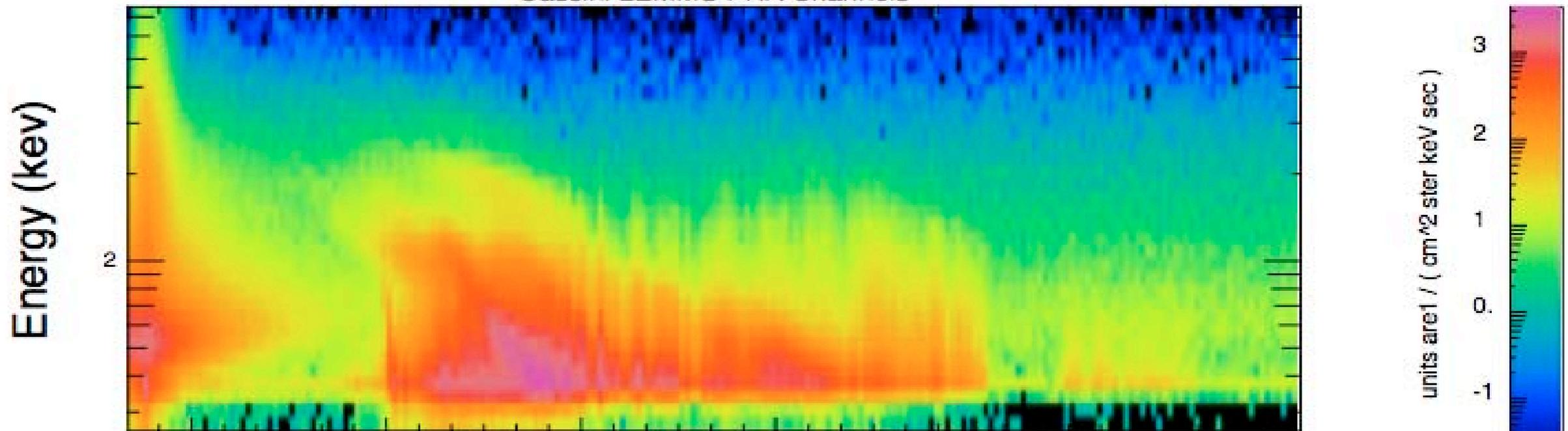


LEMMS PHA Channels 2004 183 00:15:52.066 - 2004 183 23:20:19.833
 CAPS/ELS 2004 183 00:15:52.066 - 2004 183 23:20:19.833



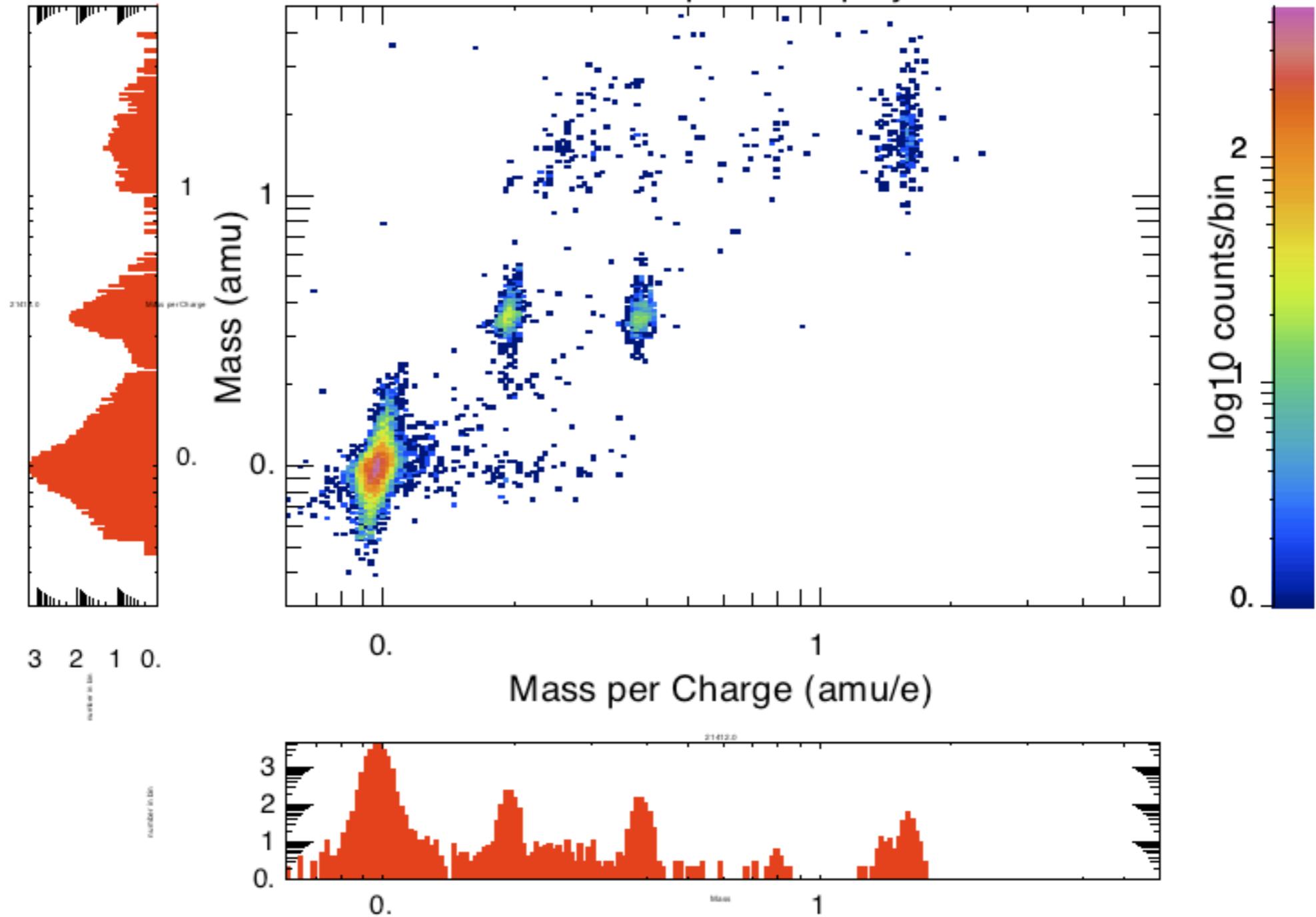
Legend
 ○ --- CAPS/ELS: Anode 2 Spectrum (.58 ev
 □ --- LEMMS PHA Channels: all reasonable

Cassini LEMMS PHA Channels

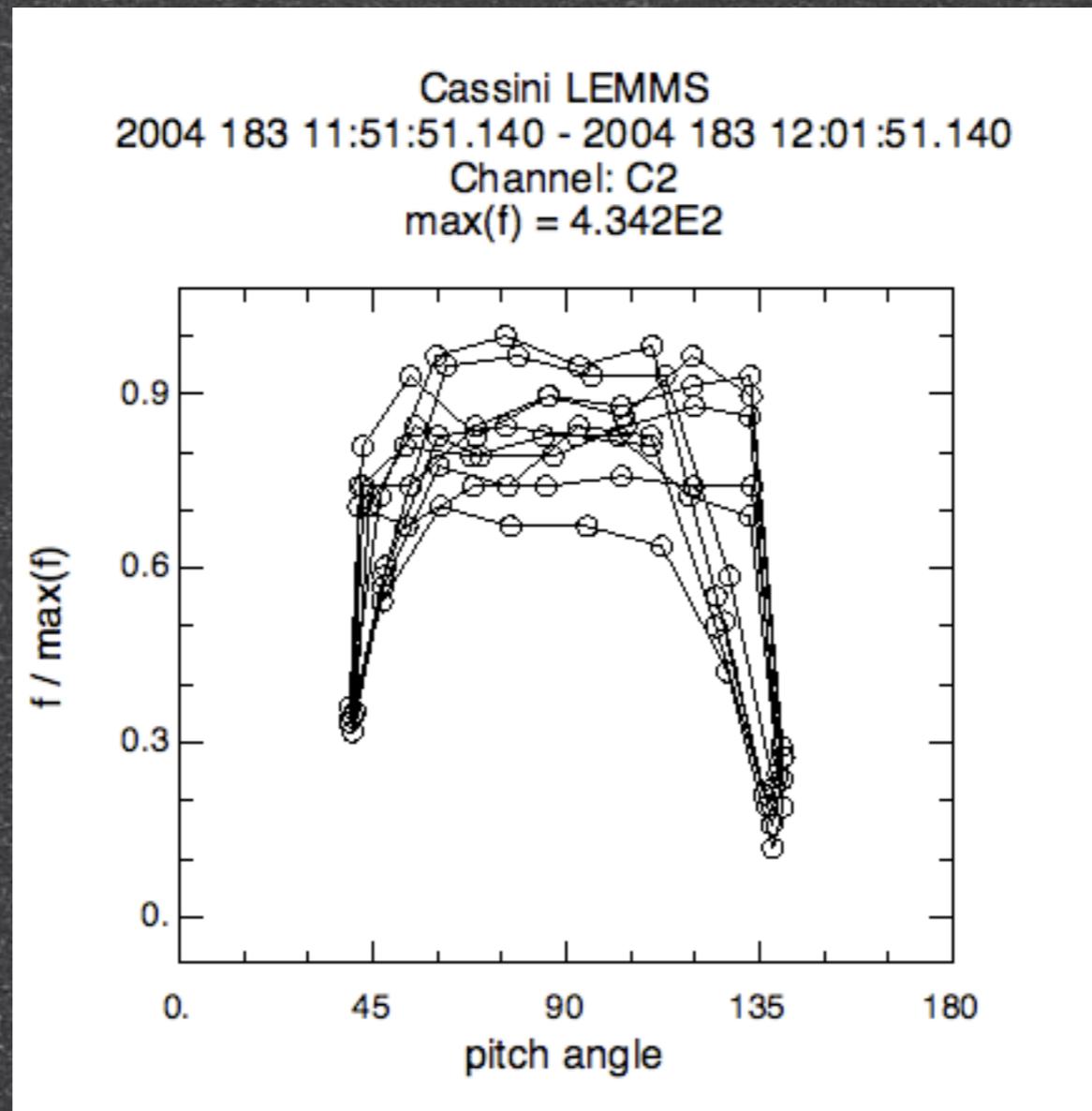


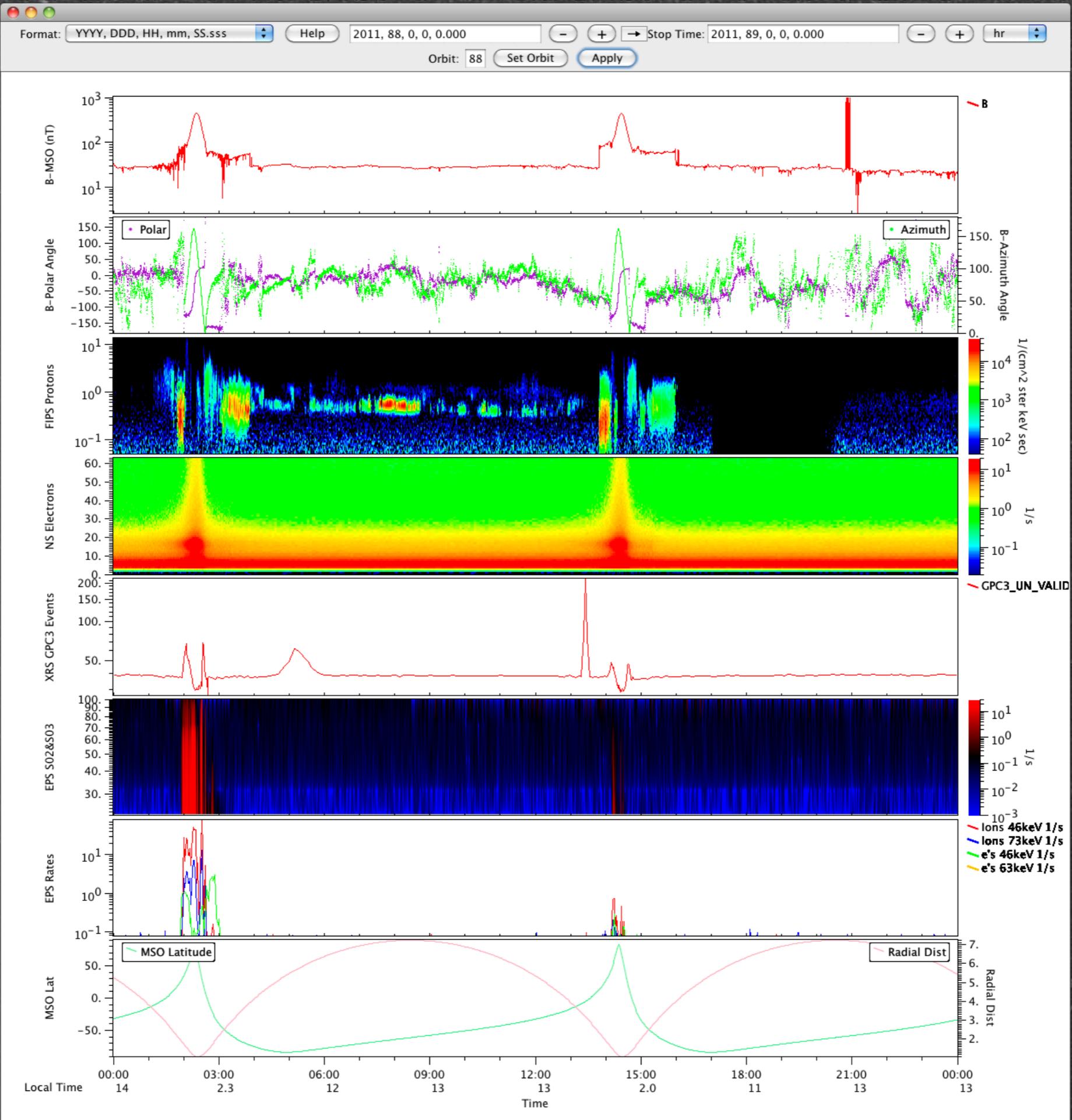
Time (UTC)	08:00:00	09:00	12:00	15:00	18:00	21:00	23:04:28
2004/183	2004/183						2004/183
Dipole L (RS)	3.94	6.47	8.71	10.75	12.63	14.39	15.54
SZS Latitude (deg)	-5.67	-10.14	-11.98	-13.0	-13.66	-14.13	-14.38

1984 247 01:19:32.092 - 1984 247 03:25:06.976
CHEM PHA PHA Plot: Mass vs Mass per Charge
21412 total points displayed



Pitch Angle





Custom and New Plotting Capabilities

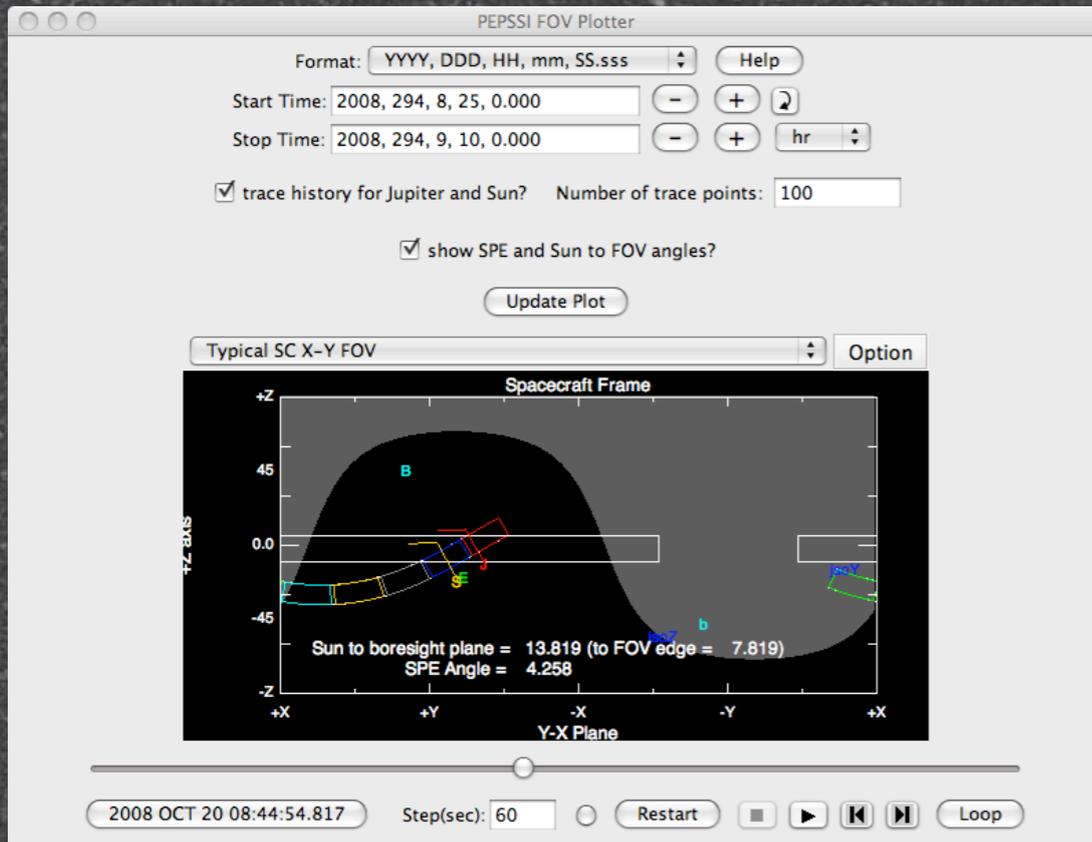
For each team, we inevitably develop new visualization tools capability.

Sometimes, the new tools are specific to the data from one instrument, but most of the time, the new tools can be used by any other team as well.

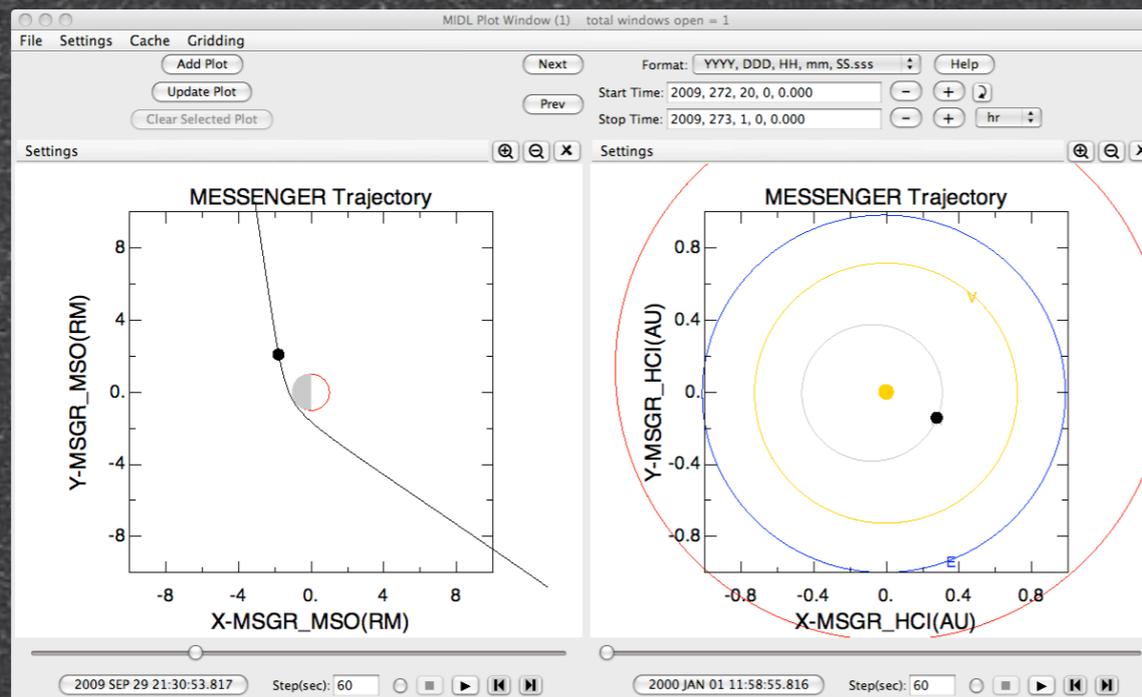
Playing with others

- Multi-instrument quick look plots. Interactive and generated “daily”
- Export selected/calibrated/filtered data to CSV, potentially CDF with TDAS info as well
- Should be “easy” to ingest any CDFs with regulation TDAS meta-data (since we have to do it for RB-Spice anyway)
- Differs from Autoplot in that we start from “raw” data and apply latest calibration on ingest, but...
- Uses same rendering engine as Autoplot
- Could be “wrapped” as an Autoplot input source

Integration With SciBox



PEPSSI FOV



MESSENGER Trajectory