

Solar Wind Around Pluto

SWAP

PRINCIPAL INVESTIGATOR
Dave McComas, Princeton University

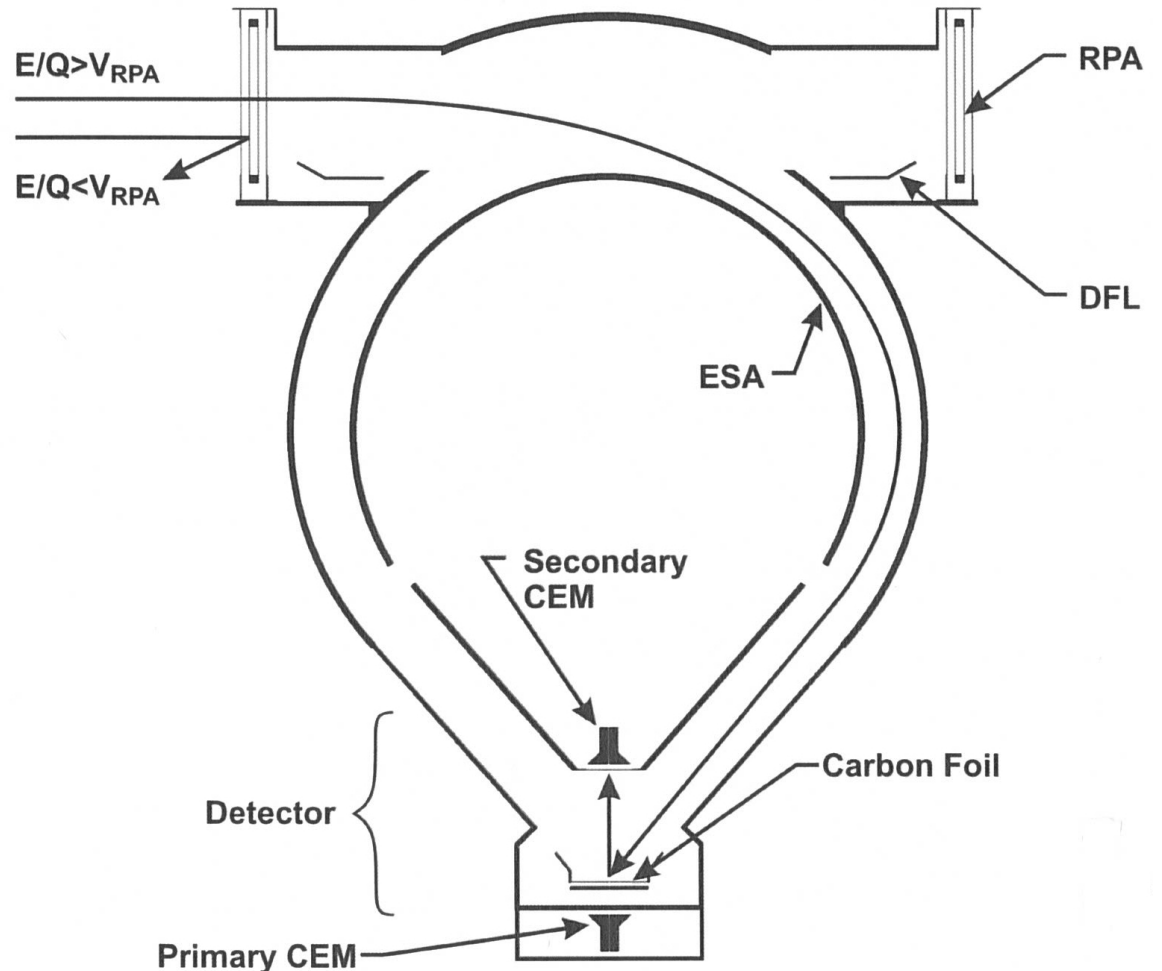
DESCRIPTION
Low Energy Plasma Instrument

ENERGY RANGE
30 eV - 7.7 keV

FIELD OF VIEW
270 deg x 10 deg
(deflection angles up to +15 deg)

ENERGY RESOLUTION
1 eV (< 2 keV); 9% (> 2 keV)

SPECIES
All Ions



New Horizons SWAP L5 Data Sets

L5 Data Sets:
swapL5_REVIEW

New Horizons SWAP Data Set Evaluation Tools

Staging and Evaluation -

Machine: Dell Precision T3400

Operating System: Fedora 18 linux

Data Processing -

Machine: Sun Ultra-350

Operating System: Sun Solaris OS 5.9

Minor Diagnostics -

Machine: IBM lenovo T60p ThinkPad

Operating System: Fedora 25 linux

Document Evaluation

aareadme.txt in the main directory

Update Personnel:

Replace “Joe Peterson” with “Tiffany Finley”.

error_notes.txt in the document directory

Extra reference to Weaver *et al.* Found at the end of the file. Either update the text with a citation or remove this reference.

nh.cat in the catalog directory

Multiple errors, too numerous and unnecessary to list. This is an old version of nh.cat. Just replace this version of nh.cat with the version found in /SWAPdelta/nh-p-swap-3-pluto-v2.0/catalog and be done with it!!

nhsc.cat in the catalog directory

Multiple errors, too numerous and unnecessary to list. This is an old version of nhsc.cat. Just replace this version of nhsc.cat with the version found in /SWAPdelta/nh-p-swap-3-pluto-v2.0/catalog and be done with it!!

ref.cat in the catalog directory

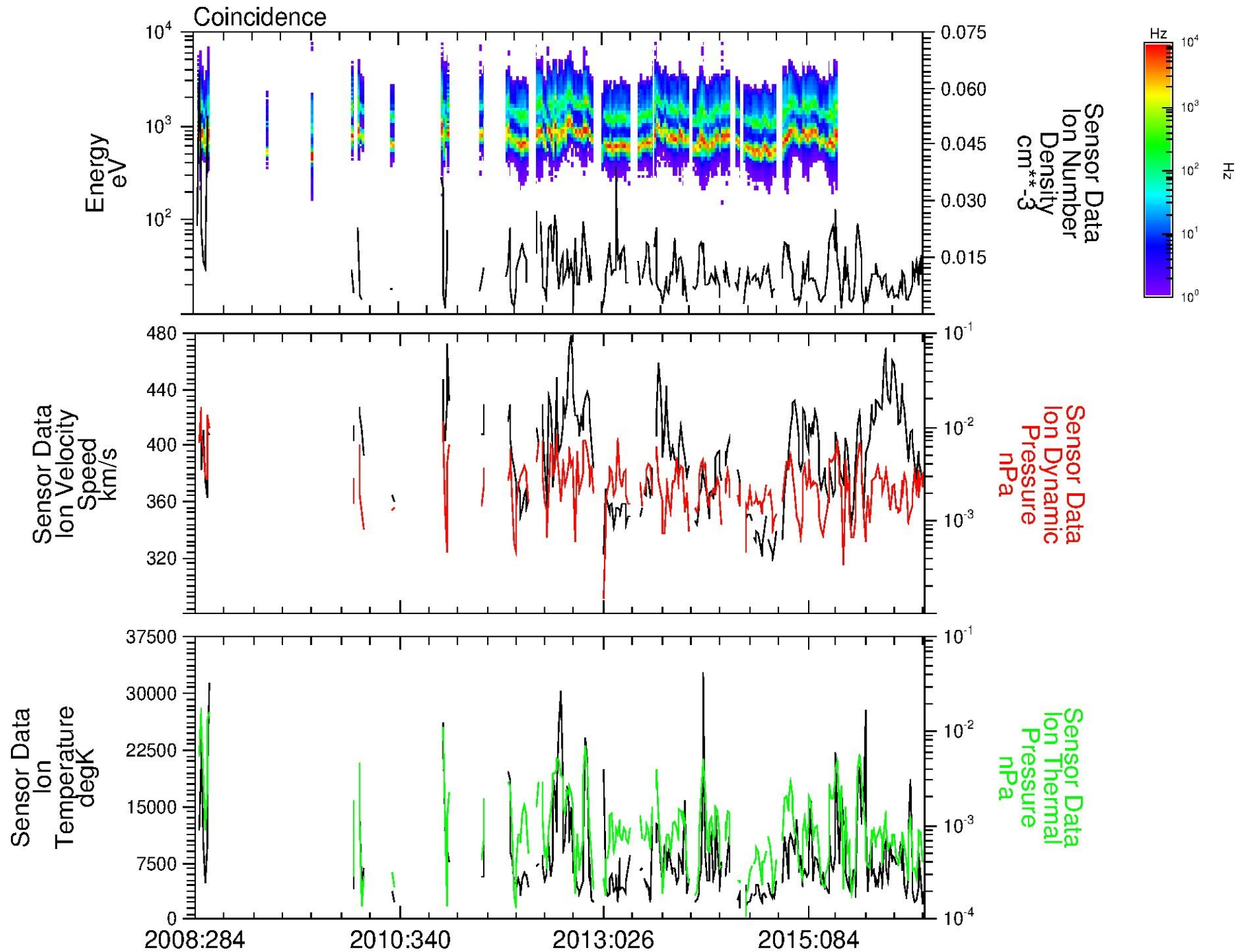
According to the SwRI Legal Department, revealing the existence of an ITAR controlled document is in itself a violation of ITAR. There are ITAR documents in this ref.cat, so I would suggest removing those references. These are REFERENCE_KEY_ID = "DSN821-104" and REFERENCE_KEY_ID = "DSN821-110". Note that REFERENCE_KEY_ID = "DSN810-5" has been reclassified and is no longer an ITAR controlled document.

Science Data Evaluation

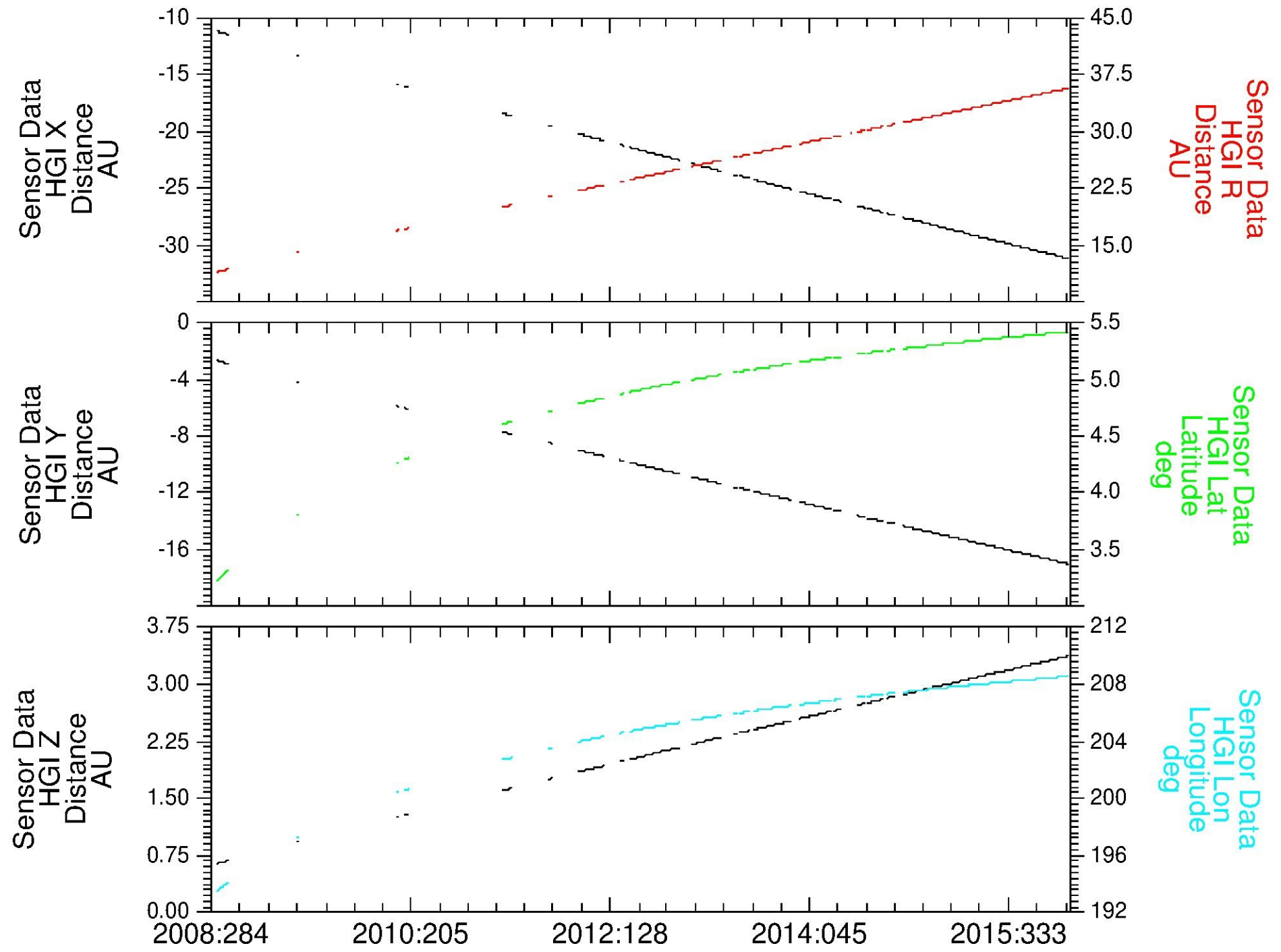
nh_sw_20081010_20160622.csv
in the data directory

The data in this file were plotted along with the data from the SWAP Delta review. These are shown on the next slide.

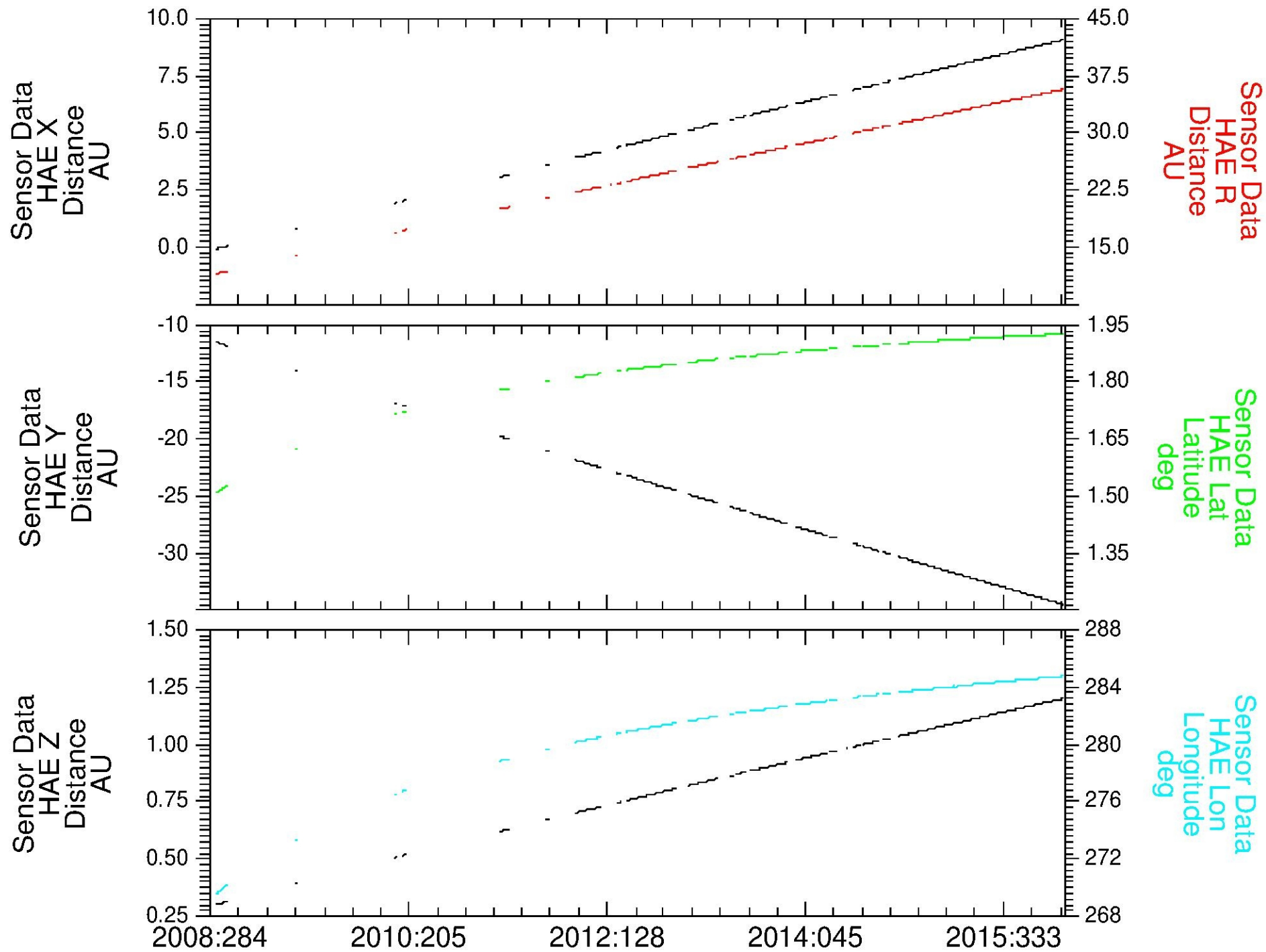
SWAP New Summary Science Data – Pluto Cruise and Pluto Phases



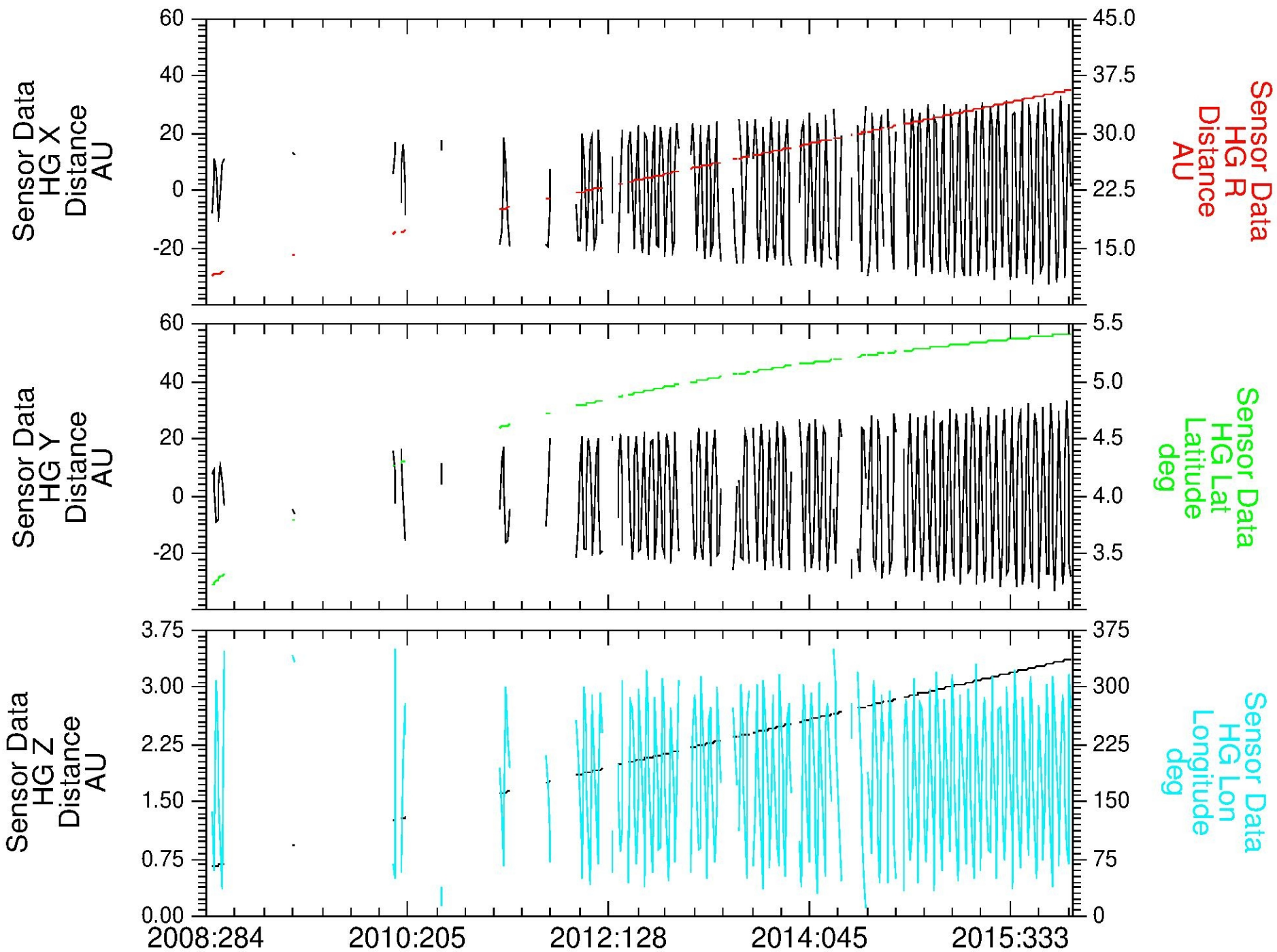
SWAP New Summary Orbit Data – HGI Coordinates



SWAP New Summary Orbit Data – HAE Coordinates



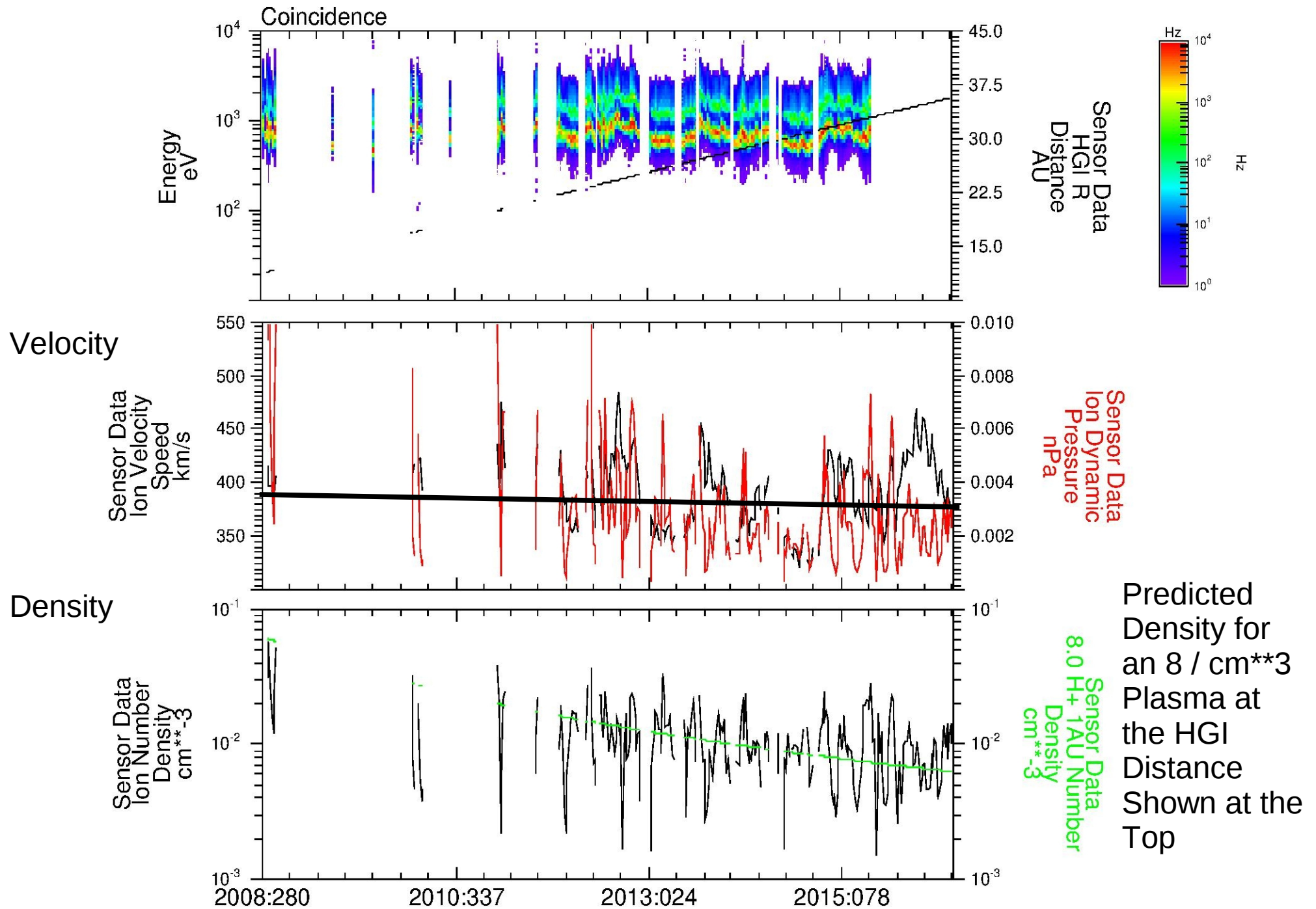
SWAP New Summary Orbit Data – HG Coordinates



Summary Data Presentations

These all look good!! Let's check to see if this makes sense. We know that the velocity is roughly constant with radial distance and the density drops as $1/R^{**2}$...

Check of the Solar Wind Plasma Parameter Behavior with Distance from the Sun



Conclusion

Looks Great!! Recommend Certification after documentation items fixed!!

BACK-UP SLIDES

voldesc.cat in the main directory

GOOD

indxinfo.txt in the index directory

GOOD

checksum.tbl & checksum.tab
in the index directory

GOOD

index.lbl & index.tab
in the index directory

GOOD

docinfo.txt in the document directory

GOOD

catinfo.txt in the catalog directory

GOOD

dataset.cat in the catalog directory

GOOD

swap.cat in the catalog directory

GOOD

nh_sw_20081010_20160622.tbl
in the data directory

GOOD