

Tutorial: Check FPI Quality Flags with SPEDAS

Overview

The SPEDAS software suite has a variety of methods to display the FPI Quality Flags.

The quality flags are contained in the [FPI DES/DIS Moment and Distribution files](#) as a 32-bit unsigned integer with each bit acting as an on/off flag of the [data-quality indicators](#) as of the epoch start time. The procedure MMS_LOAD_FPI.pro automatically parses the errorflags variable in the CDF file into a tplot variable that can be displayed fairly easily.

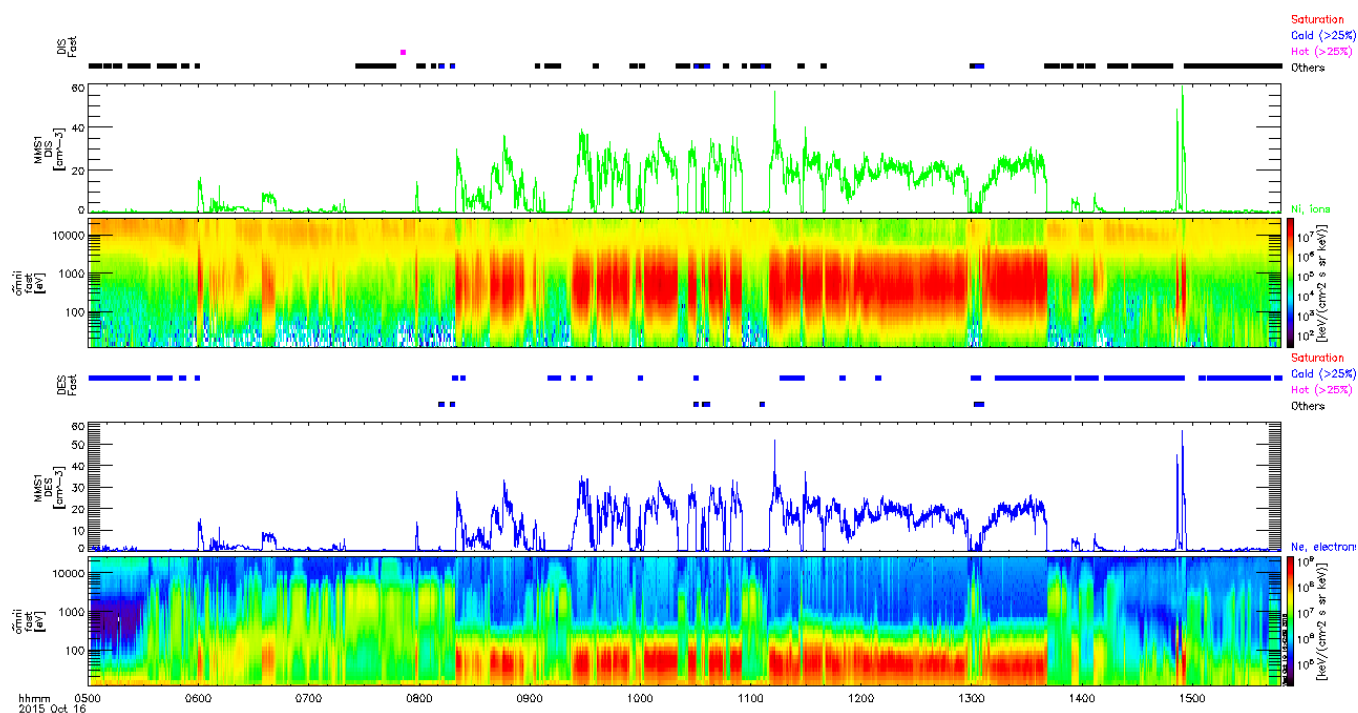
The CDF variable errorflags become TPLLOT variables of the form:

'mms'+this_probe+'_dis_errorflags_'+data_rate+suffix+'_moms'	;ion moments
'mms'+this_probe+'_des_errorflags_'+data_rate+suffix+'_moms'	;electron moments
'mms'+this_probe+'_dis_errorflags_'+data_rate+suffix+'_dist'	;ion distributions
'mms'+this_probe+'_des_errorflags_'+data_rate+suffix+'_dist'	;electron distributions

Quality Flag Queries

SPEDAS example of use: see crib sheet `/projects/mms/examples/basic/mms_load_fpi_crib.pro`

tplot, prefix+'_dis_errorflags_fast_moms_flagbars', /add



tplot, prefix+'_dis_errorflags_fast_moms_flagbars_full', /add

