Software Release Notes for GRB Simulator

11/13/14:

Field Update 5 contains the following APID configuration updates:

- For SEISS_SGPS (APID 1073), corrected spelling of the T3P11_IntegralProtronFluxUncertanties variable to be T3P11_IntegralProtronFluxUncertainties
- For EXIS_EUVS (APID 897), quality flag variable array sizes are as follows:
    - For xrsQualityFlags, the max_num_XRS_obs_spectrum_interval dimension size is 30
    - For euvsaQualityFlags, the max_num_EUVS_A_obs_spectrum_interval dimension size is 30
    - For euvsbQualityFlags, the max_num_EUVS_B_obs_spectrum_interval dimension size is 30
    - For euvscQualityFlags, the max_num_EUVS_C_obs_spectrum_interval dimension size is 15
- Non-ABI Proxy Data Samples for SEISS_SGPS and EXIS_EUVS were updated to be compliant with the APID configuration changes

May 1, 2014

The following changes have been made in GRB Simulator **Field Update 4**:

- Output format of Fixed Length Vectors (FLV) into GRB stream has been changed.
    - Previously, an 8 byte field was output into the GRB stream at the beginning of the FLV, similar to the 8 byte field populated for each dimension of a Multi-Dimensional Array (MDA). This field has been removed from the GRB Simulator Output stream.
    - Output format for FLVs will now match GRB Data Service output.
    - The only affected instrument is MAG: the "Instrument_ID" variable is sent as an FLV.
- An issue where sending certain large unsigned data values for GLM Proxy data resulting in an invalid data type error has been corrected. This would occur for data values greater than $2^n - 1$, where n is the number of bits in the unsigned integer data type. Values in these ranges are now sent correctly.
- GRB Packet Secondary Header field sizes have been changed.
    - Packets now have a 2 bit Assembly ID field and a 5 bit GRB Version Field.
        - Packets are generated with the new Secondary Header field sizes and reflect FPS updates to GRB Data Service GRB Packet output.
        - The replacement command now expects the new field sizes.
    - The absolute size of a GRB Packet Secondary Header remains unchanged.

        - Total GRB Secondary Header size remains 8 octets.
        - Two bits were removed from the Assembly ID field and two bits were added to the GRB Version Field.
- A new GRB Configuration file is provided that incorporates all GRB Simulator related product baseline updates since Field Update 3.
    - The following APID values have been corrected or updated:
        - Solar Imagery Data APIDs now consist of six APIDs in the range of 1158 – 1163 (0x486 – 0x48B).
        - Values for EXIS_SFXR_Meta and EXIS_XRS have been reconfigured to 898 and 899, respectively (0x382 and 0x383).
        - Updated APID values do not change scenario scripts, but do generate output reflecting the new APID values.
    - Any updates to the product baseline involving product data variable names or dimensions for L1b are updated in the GRB Simulator configuration.
        - These updates are limited to non-imaging products and do not impact imagery products.
        - GRB Simulator now uses non-image proxy data matching the new APID configurations.
- Mode 3 and Mode 4 test scenarios have been updated.
    - Scenarios for Mode 3 and Mode 4 now send test product data for two additional SUVI imagery products using the APIDs defined in the configuration update.
    - Scenario for Mode 4 now sends test data for GRB Info.