

GOES-16 EXIS Level 1b (L1b) Data Release
Beta Data Quality
30 March 2017
Read-Me for Data Users

The GOES-R Peer Stakeholder Product Validation Review (PS-PVR) for EXIS L1b Beta Maturity was held on 8 March 2017. As a result of this review and a subsequent addendum, the PS-PVR panel recommended that the EXIS L1b data be included in GRB. This was accomplished at 14:00 UT on 23 March 2017.

The L1b data products derived from EXIS include:

- X-Ray fluxes: (derived from X-Ray Sensor (XRS) observations)
- Extreme ultraviolet (EUV) line irradiances, Magnesium II indices, and EUV proxy spectra (derived from Extreme Ultraviolet Sensor (EUVS) observations)

The GOES-16 EXIS Level 1b (L1b) Beta level data products are preliminary, non-operational data. These data are currently undergoing testing and initial calibration and validation. The user should be aware that these products are only at a Beta level of maturity. This means that the products are made available to users for them to gain familiarity with data formats and parameters in accordance with the GOES-R Product User Guide (PUG). Beta products have been minimally validated and may still contain significant errors. They are not optimized for operational or research. Users bear all responsibility for inspecting the data prior to use and for the manner in which the data are utilized.

Persons desiring to use the GOES-16 EXIS Beta-maturity L1b products for any reason, including but not limited to scientific and technical investigations, should involve the responsible NOAA scientists before proceeding.

Some known L1b issues under work for resolution:

1. EUV irradiance spectra have negative values.
2. Time stamp is incorrect in EUV L1b data.
3. Timestamps in files do not match data in files.
4. SUVI roll angle is missing from file.
5. Time stamps have slight offsets.
6. Time stamps should be defined as being 'center time'.
7. Some variable incorrectly have fill values.
8. Unsigned variables are set to be 2's complement.
9. 'Averages_SPS_cross-dispersion_angle' should not have hyphen in name.
10. Au_factor not correct.
11. EUVS au_factor long name incorrect.
12. EUVS daily averages are all NaNs.
13. Value of the 121.6 nm bin in EUV spectrum is incorrect.
14. EUVS files have no UNLIMITED time dimension.
15. Flag missing to define active C channel.
16. Flight software version missing.
17. Fit for Mg II core lines needs revision.
18. There are spikes in data, especially XRS A1 and B1.

19. A1 and B1 dark counts need to be updated.
20. Correction needed for electron contamination of XRS A1 and B1.
21. Eclipse flag missing states and set incorrectly.

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