

THE EUROPEAN X-RAY ASTRONOMY SATELLITE

EXOSAT OBSERVERS GUIDE

PART III: THE FINAL OBSERVATION TAPE HANDBOOK

Space Science Department of the
European Space Agency

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in the handbook. The analysis can, of course, also be done for observers who do receive FOT's. In many cases the output from this software will be sufficient for observers' needs, moreover the process of debugging and refining the software will be more advanced at ESOC than for software developed in other institutes. Copies of listings of the HP automatic analysis programs can be provided on request to anybody, but the observatory team can give no assistance in converting the software for use on other installations. The software for reading/writing telemetry files is so specific to the HP environment and the observatory requirements that it would not be useful to other institutes.

From approximately December 1984 onwards it will also be possible for observers to analyse data on an interactive system at ESOC. Details will be given in the EXOSAT Express.

Some parameter processing uses files created and maintained by ESOC; these files cannot be distributed outside ESOC, but the necessary information from them is included in the FOT handbook. This refers mainly to calibration curves for HK parameters. (See section 3.4.4).

The authors of the handbook and their areas of responsibility are listed below.

R. Blissett	(LE Automatic Analysis, no longer at ESOC).	
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Please note that Issue 1 and revision 1 of the FOT Handbook have been completely superseded and should be thrown away. In the future the document will be kept up-to-date in a controlled manner with loose-leaf updates.

- CG - CMA Hot spots: contains the box enclosing the two hot spots which are known to exist at $x = 155$, $y = 71$ (LE1) and $x = -11$, $y = -20$ (LE2) with an extent of ± 8 pixels in either direction (linearised coordinates). These are the values used by the automatic analysis.
- CH - Miscellaneous: unused.
- D1 - PSD Components: These data should be regarded as preliminary. The thicknesses as a function of position for PPL, Carbon coating, Lexan are set to 100%. The thicknesses of Argon and Methane versus position are not constant, however they are scaled to 10,000 at the centre (not 100).
- D2 - PSD Support grid: The coefficients for the off-axis modulation are dummy (all set to 0).
- D3-DA - PSD PSF/LSF: These numbers are based on the electronic settings used during ground calibration and in-flight prior to the breakdown of the PSDs. Only the values within 31' from the centre are given (ie. the outermost 23 points of the position grid are set to -1).
- DB-DE - PSD PSF/LSF: See the note for data types D3-DA. The outermost values of each PSF/LSF curve are often set to -1.
- DF - PSD PSF/LSF: Only the data for gas gain #3 are provided.
- DG - PSD PSF/LSF: See the note for data types D3-DA.
- DH - PSD PSF/LSF: See the notes for data types D3-DA. Only 4 positions out of 5 are supplied.
- DI-DJ - Energy pulse height: See the note for data types D3-DA. The coefficients are set to identical values for all electronic gains. Values for AGC #1 (0.33) are a copy of the ones for AGC #2 (0.5).
- DK - Energy resolution: It is assumed equal for all positions in the position grid.
- DL-DM - Rise time: All values are identically set to 1.
- DN - Window charge-up areas: unused.
- DO - Miscellaneous: unused.
- E1 - Grating dispersion. Final values for both experiments.
- E2-3 - Grating. Final values for LE2. Rough estimate for LE1 (large deviations expected for wavelength in excess of 25Å).
- E4 - Final values for both experiments.
- F1-F3 - These data types have been removed.