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The EXOSAT Database and Archive

A. P. Reynolds and A. N. Parmar (ESA/ESTEC)

The EXOSAT database provides on-line access to the results and data products (spectra, images and lightcurves) from the EXOSAT mission as well as access to data and logs from a number of other missions (such as EINSTEIN, COS-B, ROSAT and IRAS). In addition, a number of familiar optical, infrared, and X-ray catalogues, including the HST guide star catalogue are available. The complete database is located at the EXOSAT observatory at ESTEC in the Netherlands and is accessible remotely via a captive account.

The database management system has been specifically developed to efficiently access the database and to allow the user to perform statistical studies on large samples of astronomical objects as well as to retrieve scientific and bibliographic information on single sources. The system was designed to be mission independent and includes timing, image processing and spectral analysis packages as well as software to allow the easy transfer of analysis results and products to the user's own institute.

The archive at ESTEC comprises a subset of the EXOSAT observations, stored on magnetic tape. Observations of particular interest have beeen copied in compressed format to an optical jukebox, allowing users to retrieve and analyse selected raw data entirely from their terminals. Such analysis may be necessary if the user's needs are not accomodated by the products contained in the database (in terms of time resolution, spectral range and the finesse of the background subtraction, for instance). Long-term archiving of the full final observation data is taking place at ESRIN in Italy as part of the ESIS program, again using optical media, and ESRIN have now assumed responsibility for distributing the data to the community. Tests have shown that raw observational data (typically several tens of megabytes for a single target) can be transferred via the existing networks in reasonable time.