12. Appendices

The Appendices to the *FIRAS* Explanatory Supplement are as follows:

A. Full text of Fixsen, D.J., *et al.* 1996, "The Cosmic Microwave Background Spectrum from the Full *COBE FIRAS* Data Set", ApJ 473, 576.

B. Full text of Mather, J.C., D.J. Fixsen, and R.A. Shafer 1993, "Design for the *COBE* Far Infrared Absolute Spectrophotometer (*FIRAS*)", in *Proc. SPIE*, vol. 2019, pp. 168-179, Conf. on Infrared Spaceborne Remote Sensing, in San Diego, CA, 11-16 July 1993 (SPIE: Bellingham, WA).

C. Full text of Fixsen, D.J., *et al.* 1994b, "Calibration of the *COBE FIRAS* Instrument", ApJ 420, 457.

D. Full text of Bennett, C.L., *et al.* 1994, "Morphology of the Interstellar Cooling Lines Detected by *COBE*", ApJ 434, 587.

E. Full text of Read, S.M., *et al.* 1992, "The *COBE FIRAS* Project Pipeline Software System", in *Proc. Astronomical Data Analysis Software and Systems (ADASS) I*, Astron. Soc. Pacific Conference Series 25, ed. D.M. Worrall, C. Biemesderfer, and J. Barnes (ASP, San Francisco), p. 524.

F. Full text of Isaacman, R.B., S.M. Read, and W.J. Barnes 1992, "Pattern Matching in *COBE* Spectral Analysis", in *Proc. Astronomical Data Analysis Software and Systems (ADASS) I*, Astron. Soc. Pacific Conference Series 25, ed. D.M. Worrall, C. Biemesderfer, and J. Barnes (ASP, San Francisco), p. 403.

G. Concatenated primary and extension headers for *FIRAS* FITS format files:

Coadded Calibration Interferograms

Coadded Sky Interferograms

Calibrated Calibration Spectra

Calibrated Sky Spectra

Differential Calibration Spectra

Differential Sky Spectra

Destriped Sky Spectra

Coadd-Based Zodiacal Light Model

Pixel-Based Zodiacal Light Model

DIRBE Gradient Kernel

Physical Stripes

Orthogonal Stripes

C Vector

A Vector

Covariance Matrix

Chi-Squared

Calibration Model Solution

Calibration Errors

Combined Calibration Errors

Model Selection Errors

Low Frequency Line Profiles

High Frequency Line Profiles

Low Frequency Line Map

High Frequency Line Map

Dust Spectrum Map

CMBR Temperature Map

H. Record Definition Language Files for *FIRAS* Native VAX Binary Format Files:

Sky and Calibration Data Index Records

Time-Ordered Interferogram Records

Engineering Data Records

Housekeeping and Ancillary Data Records

Engineering Mode Timing Records

Reference Datasets

I. *FIRAS* ASCII Format Reference Datasets:

FEX_GLTCHCOR.TXT: Glitch rate correction parameters

FEX_VIBCORRL.TXT: Vibration correction frequency offset indices

FEX_CMDGAIN.TXT: Actual values of commanded instrument gains

FEX_SAMPRATE.TXT: Mirror transport mechanism sampling rate

FEX_MTMSWEEP.TXT: Mirror transport mechanism scan times

FEX_CTH.TXT: Coaddition consistency check thresholds

FEX_MINCOADD.TXT: Minimum number of IFGs

FEX_GRTCOAWT.TXT: GRT weights for coadded IFGs

FEX_GRTRAWWT.TXT: GRT weights for raw IFGs

FEX_GRTTRANS.TXT: GRT low/high current transition temperatures

J. Listings for the *FIRAS* FITS and Native VAX Binary Format File Reading Programs:

DATAIN: Header for the *UIDL* program

FIRASMOD: Header for the *UIDL* program

FIRAS_READ: Listing of the FORTRAN program

READ_FSS: Listings of the FORTRAN and C programs