Channels 3-11 are directly measured differential energy channels [$(cm^2\ sec\ sr\ keV)^{-1}$] and channels 12-19

1067. The '.min' extension designates the database type. The files are binary and were created as direct access files using a FORTRAN 77 compiler on a non-DEC

IB. HEEF pitch angle dependent L-shell data files (*.pad)

Input for this data set is the 1-minute average database described in section IA which has been sorted into 5^o local pitch angle bins. For every 1-minute interval (with average UT and local spatial coordinates), the 19 pitch angles are assigned a McIlwain L from a previously generated look-up table. The L's in the look-up table were computed using a combined IGRF85 and Olson-Pfitzer quiet static magnetic field model [1]. The local pitch angle distribution is then mapped to the equator, assuming the conservation of the first adiabatic invariant, into 0.05 wide L bins. Data determined to be in the loss-cone are excluded. This procedure is applied to both leg one (first half of orbit) and leg two (second half of the orbit).

There is one file per orbit, with the naming convention: 'd04xxxx.pad'. The 'd04' refers to 'data(d) from the

II. Proton Telescope (PROTEL)

The Proton Telescope (PROTEL) was designed to make well calibrated, high resolution measurements of

For further clarification, the following FORTRAN code is provided to create a listing of flux for each data record for a given channel. This should be a useful starting point for reading the files.

```
C  PROTEL - One minute average sorted by local pitch angle
C Input file = 'd08xxxx.min' ; Output file = 'd08xxxx.lis"
C
      PROGRAM READ_MIN
      REAL*4 EPHEMA(8),EPHEMB(8),FLUX(24,19),ENERGY(24)
      INTEGER*2 NOBF(24,19)
      INTEGER*4 IORBIT,IYEAR,IDAY,IBSEC,IESEC,IBR,IER
      CHARACTER*11 INFILE,OUTFILE
      DATA inFILE/'d08xxxx.min'/

      PRINT*,'ENTER ORBIT NUMBER:'
```

For further clarification, the following FORTRAN code is provided to create a listing of flux for each data record for a given channel. This should be a useful starting point for reading the files.

References

[1] Olson, W.P., and K. A. Pfitzer, A quantitative model of the magnetospheric magnetic field, *Journal of Geophysical Research*, (79), 3739, 1974.

[2] Dichter, B.K., Hanser, F.A., Sellers, B., Hun749.2708d,