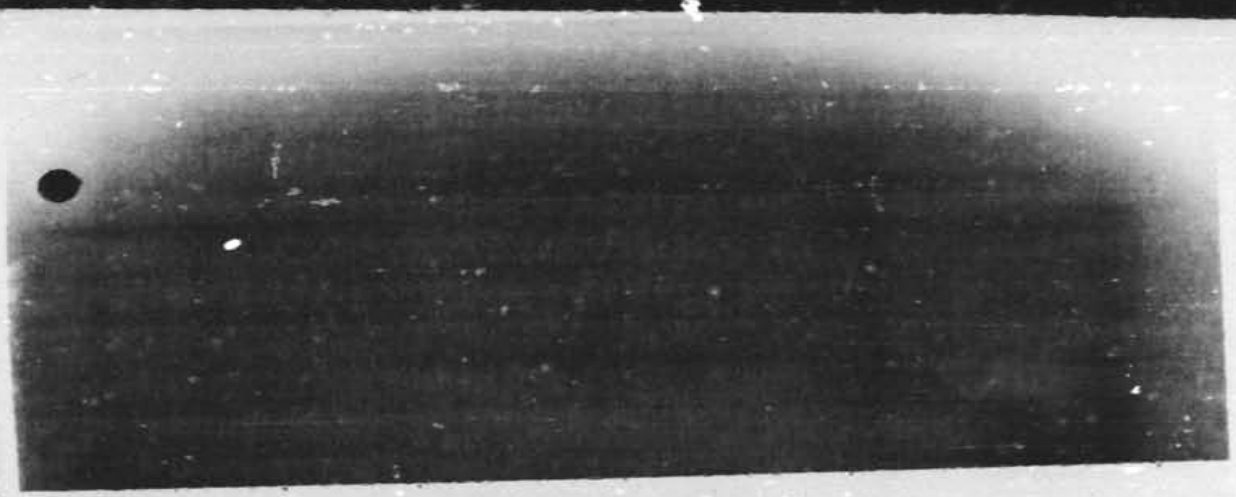
DATA SET CATALOG #99

OGO-IV
Solar X-Ray HR Avg. 'B' 1 tape

OGO-IV
Solar X-Ray HR Avg. 'C' Microfilm



OGO-IV

SOLAR X-RAY HR AVG 'B'

67-073A-21B

556 BPI, BCD 7-track, 2 file, IBM 7094

D-04697 C-04607 7/29/67-7/15/68

OGO-IV

SOLAR X-RAY HR AVG 'C'

MICROFILM: WHICH WAS PRODUCED FROM
DATA 67-073A-21B

67-073A-21B
OGO-4
Hourly Averaged Solar X-Ray Flux
OUTPUT

FORMAT-1

FORMAT-2

FORMAT-1 - Is used to print the first line of data after the headers.

FORMAT-2 - Is used to print all remaining data.

NOTE: This tape is a 556BPI, BCD, 7 Track. 7094 Tape. There are 2 files and the tape can be listed on the 360/30 using program control.

File 1 consists of 1 hour filter series H.

File 2 consists of 1 day filter series D.

Comments

1. Two methods were used to calculate the hourly averages (distinguished by a H or D in the first column of each data card). Both methods were designed to eliminate data contaminated by trapped particle interference with the detectors.

   Method H: The data for each detector were considered in hourly blocks, and average values and standard deviations (continued)

for the hour were calculated. Any data points in the hourly block which differed from the calculated hourly average by more than + 2.5 sigma or - 2.0 sigma were discarded, and hourly averages and standard deviations were calculated a second time. Any data points which differed from these hourly averages by more than + 2.0 or - 2.5 sigma were discarded. Hourly averages and standard deviations were calculated a third time and data points differing by more than + 1.5 or - 2.0 sigma were discarded. A fourth calculation was then made, and data points differing by more than + 1.0 or - 1.5 sigma were discarded. These data points which survived the quadruple filtering process were then used to calculate the hourly averages and standard deviations which appear on the data cards. This method eliminated data for small flares and data contamination from trapped particles in the Van Allen belts but did not eliminate data for large flares or contamination caused by trapped particles in the South Atlantic Anomaly.

Method D. The data for each detector were considered in daily blocks and a daily average and standard deviation were calculated. The quadruple filtering process described above was then applied to the daily average data. The data points which survived the filtering were then considered in hourly blocks to obtain the hourly averages and standard deviations which appear on the data cards. This method eliminated almost all data from flares and data contaminated by trapped particles in the Van Allen Belts and South Atlantic Anomaly, and tended to produce an average background level of the solar output in the various X-ray bands.

2. In designating the hour the digit (s) designate the starting hour of the data sample averaged. An hourly indicator of 12 signifies that data collected between 1200 and 1300 UT were used to form the averages. An hourly indicator of 25 indicates that the data on the card are daily averages based on all data points which survived the filtering process.

3. All detector currents were converted to X-ray energy flux values based upon a grey-body solar emission spectrum. For the 0.5 to 3 A band, a 10^7 K color temperature was used; for the 1 to 8 A and 8 to 20 A bands, a 2×10^7 K color temperature was used; and for the 44 to 60 A band, a 0.5×10^7 K color temperature was used.