

DAILY I.U.E. PEAK RADIATION LEVELS
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Each day during its elliptical geosynchronous orbit, the I.U.E. spacecraft traverses in and out of the Van Allen radiation belts. By design, the satellite's orbital environment is exposed to the majority of this interference during the second NASA observing session (US-2). Recorded by a Field Particle Monitor's (FPM) voltage, the radiation translates into a background of approximately 10^{voltage} -DN per hour, on the most sensitive portions of the cameras.

The following charts reflect the FPM's peak values, for each day data are available. The FPM is recorded on strip charts for 24-hour periods, in the Operations Control Center (OCC). Occasionally, the equipment is down for maintenance, in which case the approximate level for the day (taken from the observing scripts) will be indicated here by an open circle.

In comparing these peak levels, a few general observations can be kept in mind:

- a). The high voltage readings for a day are usually during the US-2 shift, within its last four hours. There have been rare occasions, however, where the VILSPA or US-1 time periods have experienced the greatest background noise.
- b). The US-2 shift radiation levels for a day are usually double peaked. That is, sometimes the radiation reaches a relatively steady intensity, drops off a bit for a short while, and then climbs to an even higher level before going away.
- c). Solar activity tends to distort the Van Allen belts. During these periods, the US-2 shift may show unusually low levels for the FPM.
- d). The peak values recorded here are NOT intended to be averages over the day or shift. Though they sometimes reflect the approximate particle flux for a four to six hour time period, many instances have proved to be significantly shorter or longer.

We plan to keep up periodic reports of this type, for future Newsletters. This is an extension of the report originally appearing in the I.U.E. NEWS-LETTER #10 by R. Ehlers and F.H. Schiffer III, June 1980.

I.U.E. PEAK RADIATION VALUES

(01 January 1981 through 19 June 1982)

