

DEFAULT ANALYSIS OF LIST-MODE DATA

SATAN provides a default analysis program that allows reading list-mode data in ASCII format and accumulating one- and two-dimensional analyzers. Using this option does not require a PL/I compiler.

Listing of the default analysis program

```
%PROCESS MACRO LIMITS(EXTNAME(31)) LONGLVL(SAA2) MARGINS(1,100);
%PROCESS RULES(NOLAXDCL);
%INCLUDE 'FRSTOOLS\TRI\SATAN$MACROS.PLI';
LISTPROC;
```

```
/* This is a basic analysis program with the definition of list-mode
   data with 256 parameters in ASCII format, but without pre-defined
   analyzers.
   SATAN linked with this program allows reading list-mode data with
   up to 256 parameters. The data can be read and sorted into an analyzer
   by the command ANAL. This command defines the analyzer and specifies
   the parameter of the event list to be analyzed.
   Dynamical analyzers with 1 or 2 dimensions can be defined.
   Read first parameter of event into analyzer A1:
       ANAL A1 E(P(1))
       LINPUT dataset
   Read first 2 parameters of event into (2-dimensional) analyzer A12:
       ANAL A12 E(P(1)) E(P(2))
       LINPUT dataset
   For more details see the commands ELIST, ANAL, AGEN and AMOD. */
```

```
DECLARE I_RC BIN FIXED(15);    /* Return code */
ANTRY;
EVENT(P(256)) FORMAT(ASCII); /* Define list-mode data up to 256 dimensions */
DYNANAL;
ENDEVT;
ENDANL;
```

Structure of the input file

The input file provides the list-mode data in the following format:

```
3.537  1.75E-5  573
2.173  2.13E-5  910
1.70   5.E-4    20
....
```

One event is defined by an optional number (up to 256) of numerical values, divided by blanks. A new line defines a new event.