JADE-Computer-Note 38

M. Goddard
J. Olsson
P. Steffen

9.5.80

Cuts of first Data Reduction (used from 1.3.80 on)

STAGE 1 (after reading the event):

- reject pulser event (first 13 events)
- reject events that fail the 'TRIGGER CHECK' (see below):
  two different triggers are considered further on:
  energy trigger (T1 accept) and track trigger (T2, T3 accept)
- reject energy trigger events with low lead glass energy:
  LGCUT,TAGFLG
- reject track trigger events with no hits in the jet chamber

Stage 2 (after calibration of jet chamber data and calculation of the z-vertex):

- accept all remaining energy trigger events
- reject track trigger events for which no vertex has been found
- reject track trigger events for which the found vertex is more than 350 mm from the origin

Stage 3 (after pattern recognition (fast version) has been performed)
Only track trigger events are considered, which passed stage 2 cuts.

- reject events without PATR-bank
- reject events with no tracks
  tagging events: - accept events with $\geq$ 1 track of $\geq$ 200 MeV and of
  $>$ 12 hits originating from $|z| < 300$ mm
  - reject all other tagging events
  events with only tracks of $\leq$ 12 hits in the r-z-projection:
  - accept events with tracks of $>$ 20 hits in the r-ϕ-projection
  - reject all other events

TAGFLG:

Check lead glass energy for tagging events with T1 accept.

- Events with double tag are accepted if the lead glass energy of cylinder and endcaps is > 0.3 GeV
- Events with a single tag are accepted if the lead glass energy of cylinder and opposite end cap are > 0.1 GeV, and if the total lead glass energy is > 0.3 GeV.

JADE- Computer-Note No. 39
June 2nd, 1980
W. Bartel

Convention about the use of computer time.

1) Every authorized user of the IBM computer using priority time from the contingent no. 10622622 is allowed to use

   10 Min. of medium priority time per day
   45 sec of high " " " "

   In case more time is needed, the coordinator must be asked.

   In case there is priority time left in the evening (after $\sim 20^{00}$) the available time may be shared between the users who are still active.

2) Data reduction jobs do not fall under these restrictions.

3) In order to save priority time, the time parameter option in the job card should be used as shown in the following examples:

   // ... JOB CLASS = K, TIME = 2
   or
   // ... JOB CLASS = E, TIME = (, 10)

   A time parameter card on the EXEC card only limits the step time however it does not limit the time by which the JADE contingent is reduced.

More details about the priority scheme and the use of computer time will be issued in the computer note 39a.

```
  **********************************************************
  ****                                                  ****
  ****    J A D E   C O M P U T E R   N O T E   3 9 A   ****
  ****                                                  ****
  ****       THE CPU-TIME CONTINGENT AND ITS USAGE      ****
  ****                                                  ****
  ****                                                  ****
  ****         IMPORTANT   IMPORTANT   IMPORTANT        ****
  ****         ---------   ---------   ---------        ****
  ****                                                  ****
  ****       TO BE READ BY EVERY JADE COMPUTER USER     ****
  ****       ------------------------------------       ****
  ****                                                  ****
  **********************************************************
```

W.BARTEL, J.OLSSON, P.STEFFEN, A.WAGNER

03.06.8000004200

THE CPU-TIME AT THE DESY COMPUTER CENTRUM IS ADMINISTERED IN A CONTINGENT SYSTEM: A CERTAIN FRACTION OF THE AVAILABLE CAPACITY IS TREATED AS PRIORITY TIME AND THIS FRACTION IS DIVIDED UP AMONG THE VARIOUS GROUPS. THUS EACH GROUP HAS A CERTAIN AMOUNT OF PRIORITY TIME AVAILABLE AND IT IS THE PURPOSE OF THIS NOTE TO CLARIFY THE RULES, PARTICULARLY TO NEWCOMERS TO JADE, TO INSURE EFFICIENT USAGE OF THE ALLOTED TIME.

--- PRIORITY CLASSES ---------->>>>

THERE ARE 3 CLASSES OF PRIORITY:

LOW
MEDIUM
HIGH

ONLY THE MEDIUM AND HIGH PRIORITY IS SUBJECT TO CONTINGENTING. THE ACTUAL AMOUNT AVAILABLE TO JADE AT ANY TIME CAN BE OBTAINED VIA THE TSO/NEWLIB COMMAND:

--- KONT COMMAND ---------->>>>

KONT

AS AN EXAMPLE, THIS COMMAND WILL RETURN THE INFORMATION:

ACCOUNT NO XXXXXXX HAS 212 MIN. CPU, INCL. 23 MIN. HIGH.

THIS MEANS THAT 212 MINUTES MEDIUM PRIORITY IS LEFT, OF WHICH 23 MAY BE USED AS HIGH PRIORITY. THE CONTINGENT IS UPDATED SHORTLY AFTER MIDNIGHT, ON A 24 HOUR BASIS.

--- SUBMIT TIME ---------->>>>

THE CONTINGENT SYSTEM IS BASED ON THE "SUBMIT TIME", I.E. THE TIME WHICH IS ESTIMATED FOR THE JOB AT THE TIME OF SUBMIT. THUS A LONG RUNNER THAT FAILS IMMEDIATELY AT EXECUTION WILL STILL HAVE ALL ITS SPECIFIED TIME SUBTRACTED.

JOBS SUBMITTED WITH LOW PRIORITY DO NOT AFFECT THE CONTINGENT. JOBS THAT FAIL BY JCL-ERROR IMMEDIATELY AFTER SUBMISSION, IN THE INTERPRETER STEP, ALSO DO NOT AFFECT THE CONTINGENT. JOBS THAT HAVE BEEN ACCEPTED BY THE INTERPRETER AND HAVE ENTERED THE JOB QUEUE, DO AFFECT THE CONTINGENT, EVEN IF THEY ARE CANCELLED AFTERWARDS.
TSO SESSIONS DO NOT SUBTRACT FROM THE ACCOUNT.
EXAMPLES:
SUBMITTING A 4 MINUTE JOB WITH MEDIUM PRIORITY CHANGES THE ACCOUNT
FROM 212 MEDIUM, 14 HIGH TO 208 MEDIUM, 14 HIGH
OR FROM 17 MEDIUM, 17 HIGH TO 13 MEDIUM, 13 HIGH

SUBMITTING A 4 MINUTE JOB WITH HIGH PRIORITY CHANGES THE ACCOUNT
FROM 212 MEDIUM, 14 HIGH TO 208 MEDIUM, 10 HIGH
OR FROM 17 MEDIUM, 17 HIGH TO 13 MEDIUM, 13 HIGH

---------->>>>

BEFORE SUBMITTING JOBS, THE KONT COMMAND SHOULD ALWAYS BE CONSULTED.

IF ONLY LITTLE TIME (< 100 MINUTES, SAY) REMAINS, ASK OTHER MEMBERS OF JADE IF THEY NEED IT BEFORE USING IT UP. IF IT IS STILL EARLY IN THE DAY (I.E. BEFORE 2000 HOURS) THE TIME MUST NORMALLY STILL BE SAVED FOR THE EVENING WORKERS.

--- JOB CLASSES ---------->>>>

JOBS CAN BE SUBMITTED INTO DIFFERENT CLASSES, WITH DIFFERENT DEFAULT PRIORITIES AND DIFFERENT DEFAULT TIMES. IF PRIORITY AND TIME ARE NOT EXPLICITLY DECLARED, THE DEFAULTS ARE USED. THUS A USER WHO SUBMITS JOBS WITHOUT PROPERLY DECLARING PRIORITY AND TIME, CAN DRAIN THE ACCOUNT SEVERELY. THE VARIOUS CLASSES AND THEIR DEFAULTS ARE LISTED IN THE FOLLOWING TABLE:

CLASS	DEFAULT PRIORITY	DEFAULT TIME
E	MEDIUM	30 SECONDS
A	MEDIUM	2 MINUTES
K	MEDIUM	6 MINUTES
L	LOW	16 MINUTES
D	LOW	32 MINUTES

--- TIME PARAMETER ---------->>>>

THERE IS ONLY ONE WAY TO SPECIFY A NON-DEFAULT TIME, NAMELY ON THE JOBCARD. EXAMPLES:

```
//JADEPR   JOB CLASS=K,MSGLEVEL=(0,0),TIME=(3,30)

//JADEPR   JOB CLASS=K,MSGLEVEL=(0,0),TIME=3
```

JOBS HEADED BY THESE CARDS WOULD SUBTRACT 3 MINUTES, 30 SECS AND 3 MINUTES FROM THE ACCOUNT, RESPECTIVELY. THE SECONDS ARE NOT SEEN IN THE KONT COMMAND, BUT ARE PROPERLY ACCOUNTED FOR (GENERAL BELIEF).
OBS: TIME SPECIFICATIONS IN THE GO-STEP ARE NOT CONSIDERED IN THE CONTINGENT SYSTEM. THUS A MEDIUM PRIORITY L-JOB WITH NO TIME PARAMETER IN THE JOBCARD BUT WITH GOTIME LIMITED TO 30 SECONDS WILL STILL SUBTRACT 16 MINUTES FROM THE ACCOUNT.

--- PRIORITY PARAMETER ---------->>>>

THERE IS ONLY ONE WAY TO SPECIFY A NON-DEFAULT PRIORITY, NAMELY IN THE *MAIN CARD. THIS FOLLOWS IMMEDIATELY AFTER THE JOB-CARD. EXAMPLES:

```
//*MAIN RELPRI=LOW
//*MAIN RELPRI=MED,ORG=EXT
//*MAIN ORG=EXT,LINES=(2),RELPRI=HIG
```

--- RESERVED TIME ---------->>>>

THE PRIORITY TIME AVAILABLE IS CLEARLY NOT ENOUGH FOR ALL PURPOSES. OF THE 450-500 MINUTES DAILY SUBMIT TIME, WHICH CONSTITUTES THE JADE FRACTION OF THE PRIORITY TIME, SOME 50 % HAS TO BE RESERVED FOR URGENT DATA PROCESSING AND ANALYSIS. THIS IS ALSO TRUE FOR THE 45 - 50 MINUTES OF HIGH PRIORITY.

URGENT DATA PROCESSING AND ANALYSIS ARE MAINLY THE FOLLOWING :

REDUC1
REDUC2 (MULTIHADRON ANALYSIS)
LUMINOSITY
CALIBRATION

USERS INVOLVED IN THESE STANDARD TASKS ARE

JADEPR,F11GOD,F11LHO,F11PST,F11OLS
F22ORI,F22MIN,F22HOW,F11NOZ,F11WAG

BEFORE USING UP LARGE REMAINING PARTS OF MEDIUM AND HIGH PRIORITY, IT IS GOOD PRACTISE TO ASK THESE USERS IF THEY NEED MORE TIME FOR THE MENTIONED PURPOSES.

--- PRIORITY TIME PER USER ---------->>>>

WITH AN ESTIMATED NR OF 40 ACTIVE PROGRAMMERS IN THE JADE COLLABORATION, THE AVERAGE AMOUNT OF MEDIUM PRIORITY FALLING ON EACH USER CAN BE CALCULATED TO BE

	5 - 8 MINUTES,	
INCLUDING	30-45 SECONDS OF HIGH PRIORITY	

THIS IS NORMALLY ENOUGH FOR PROGRAM DEVELOPMENT.

--- THE COORDINATOR ---------->>>>

FOR DATA PROCESSING, CONDENSATION ETC., CAREFUL PLANNING HAS TO BE DONE. FOR THIS PURPOSE, THE COORDINATION OF THE CPUTIME USAGE WITHIN THE JADE COLLABORATION IS HANDLED BY

THE COORDINATOR (ALSO KNOWN AS THE OFFICER)

THE COORDINATOR IS CHOSEN FROM THE AUTHORIZED JADE COMPUTER USERS. THE WORK AS COORDINATOR IS PERFORMED ON A MONTHLY BASIS.

ANYBODY WHO PLANS LARGER USAGE OF PRIORITY TIME
MUST CONSULT THE COORDINATOR

--- CPULIST COMMAND ---------->>>>

THE ACTUAL USAGE OF SUBMIT TIME AS WELL AS EXECUTION TIME CAN BE OBTAINED BY THE NEWLIB COMMAND

((CPULIST))

THIS COMMAND WILL GIVE A LIST OF THE TIME USAGE OF EVERY USER FOR THE PREVIOUS DAY OR THE PREVIOUS MONTH. THUS MISUSE WILL SOONER OR LATER BE DETECTED.

--- COOPERATION ---------->>>>

THE TIME BEFORE IMPORTANT CONFERENCES IS NORMALLY CHARACTERIZED BY DIFFICULT CONDITIONS AT THE DESY COMPUTER, WITH LITTLE OR NO CHANCE TO GET LOW PRIORITY JOBS THROUGH, ESPECIALLY IF THEY USE A TAPEDRIVE. MOREOVER, CERTAIN PROJECTS WILL HAVE TO BE GIVEN HIGHER WEIGHT THAN OTHERS, IN ORDER THAT IMPORTANT RESULTS WILL BE READY IN TIME.
SPECIAL REGULATIONS WILL BE ISSUED AS REQUIRED AND AFTER DISCUSSION, E.G. IN THE JADE MEETING.

IN SUCH SITUATIONS THE JADE COLLABORATION WOULD BE SEVERELY HAMPERED BY A "WILD" USAGE OF THE PRIORITY TIME, ON A "FIRST COME, FIRST SERVED" BASIS. SIMILARLY, A SQUANDERING OF THE CONTINGENT TIME BY IGNORANCE CAN NOT BE TOLERATED.
TO ACHIEVE A SMOOTH COMPUTING WITHIN THE JADE COLLABORATION, WITHOUT SEVERE RESTRICTIONS FOR THE INDIVIDUAL, THE COOPERATION OF EVERYBODY IS NEEDED.
ON THE OTHER HAND, IF LARGE AMOUNTS OF SUBMIT TIME STILL REMAINS LATE IN THE EVENING AND NOBODY ELSE IS AROUND TO USE IT, ONE SHOULD FEEL FREE TO MAKE SENSIBLE USE OF IT.

JADE - Computer Note 40

W. Bartel

12.6.1980

Monte Carlo tracking through lead glass

The new lead glass tracking routine has the following features:

1. Better simulation of nuclear interactions in lead glass. π's and k's are treated the same.

2. Threshold of 300 MeV/c for Cerenkov light emission. 30% of the π's below 300 MeV/c deposit energy in the lead glass blocks.

3. No leakage for electromagnetic showers through the back faces of the lead glass blocks.

4. There is no smearing of γ ray energies. Smearing with $6\%/\sqrt{E}$ may be introduced by setting LFLAG(1) =.TRUE. in

```
LOGICAL * 1 LFLAG
COMMON/CFLAG/LFLAG(10)
```

5. There is no shower energy loss in the tank or in the coil.

The shower energy loss may be switched on by setting

```
L FLAG(2) = . TRUE.
```

JADE COMPUTER NOTE 41

DOCUMENT PREPARATION USING THE NORD 10/S

H.E. Mills

25 June 1980

INTRODUCTION

Facilities exist to prepare documents using the RUNOFF programs on the Nord 10. The advantages of this method of document preparation are that the document is neatly formatted and is easy to correct and update. This note has been prepared via the EMBL RUNOFF program.

Two text formatting programs called RUNOFF are available. One comes from NORSK-DATA and the other from Mr. Herzog of EMBL at Heidelberg. It is recommended that the EMBL version is used and the descriptions in this note refer to it.

A program called RLISTER has been written to take the RUNOFF output file and to display it in a way suitable for several different types of terminal.

The input file required to produce this note is attached as appendix A and an example of commands used to drive RUNOFF and RLISTER is attached as appendix B.

PRODUCTION MECHANISM

Document preparation consists of first entering the text and any layout instructions into a NORD file from a normal terminal. RUNOFF is then used to process the file and produce an output file containing the formatted text. This can be read by the RLISTER program which will write it on your terminal in a way suitable for that device. Normally you will do this on a VDU or Tektronix terminal until you are satisfied with the layout and have removed all spelling mistakes. Finally you may log onto the high quality Diablo printer for a neat copy of your text - both continuous paper and separate sheets may be used. The Diablo should only be used in the final stages in order to preserve its daisy wheel and ribbon.

LAYOUT CONTROL

The user is referred to the EMBL documents called RUNOFF and RUNOFF Beginner's Manual. Basically commands for blank lines, new pages, centred text and so on are introduced by a full-stop (".") at the beginning of a line. A new paragraph is obtained by putting a space at the beginning of a line. The "group" facility is often useful to prevent RUNOFF splitting an item of text containing spaces such as in a formula. RUNOFF will not split complete words up. If you are entering your text in upper case only you will required several commands to swop between upper and lower case.

```
.C64 ON
^U^IJADE COMPUTER NOTE 41
.SP 1
^IDOCUMENT PREPARATION USING THE NORD 10^/S
.SP 1
H.E. M^LILLS
.SP 1
25 /JUNE 1980
.SP 1
^C^IINTRODUCTION
 /FACILITIES EXIST TO PREPARE DOCUMENTS USING THE ^CRUNOFF
PROGRAMS ON THE /NORD 10.  /THE ADVANTAGES OF
THIS METHOD OF DOCUMENT PREPARATION ARE THAT THE DOCUMENT IS NEATLY
FORMATTED AND IS EASY TO CORRECT AND UPDATE.  /THIS NOTE HAS BEEN
PREPARED VIA THE ^CEMBL ^CRUNOFF PROGRAM.
 /TWO TEXT FORMATTING PROGRAMS
CALLED ^CRUNOFF ARE AVAILABLE.  /ONE COMES FROM ^C^GNORSK-DATA^E AND
THE OTHER FROM /MR. /HERZOG OF ^CEMBL AT /HEIDELBERG.  /IT IS RECOMMENDED
THAT THE ^CEMBL VERSION IS USED AND THE DESCRIPTIONS IN
THIS NOTE REFER TO IT.
 /A PROGRAM CALLED ^CRLISTER HAS BEEN WRITTEN TO TAKE THE ^CRUNOFF
OUTPUT FILE AND TO DISPLAY IT IN A WAY SUITABLE FOR SEVERAL DIFFERENT
TYPES OF TERMINAL.
 /THE INPUT FILE REQUIRED TO PRODUCE THIS NOTE IS ATTACHED AS APPENDIX /A
AND AN EXAMPLE OF COMMANDS USED TO DRIVE ^CRUNOFF AND ^CRLISTER
IS ATTACHED AS APPENDIX /B.
.C64 OFF
.SP 2
^IPRODUCTION MECHANISM
 Document preparation consists of first entering the text and any layout
instructions into a NORD file from a normal terminal.  RUNOFF is then
used to process the file and produce an output file containing the
formatted text.  This can be read by the RLISTER program which will
write it on your terminal in a way suitable for that device.
Normally you will do this on a VDU or Tektronix terminal until you
*
```

Using upper Case on l-

upper A lower case

are satisfied with the layout and have removed all spelling mistakes. Finally you may log onto the high quality Diablo printer for a neat copy of your text - both continuous paper and separate sheets may be used. The Diablo should only be used in the final stages in order to preserve its daisy wheel and ribbon.
.SP 2
^ILAYOUT CONTROL
The user is referred to the EMBL documents called RUNOFF and RUNOFF Beginner's Manual. Basically commands for blank lines, new pages, centred text and so on are introduced by a full-stop ^G(".")^E at the beginning of a line. A new paragraph is obtained by putting a space at the beginning of a line. The "group" facility is often useful to prevent RUNOFF splitting an item of text containing spaces such as in a formula. RUNOFF will not split complete words up. If you are entering your text in upper case only you will required several commands to swop between upper and lower case.
This document was produced using both methods and you are recommended to look at the attached input file as an example.
Please note that the Diablo and Tektronix devices can deal with the neat underline and so ^^_ and ^^I should be used instead of .UL.
.SP 2
^INOTES
.SP 1
.EM 5
.UN 5
1) EMBL recommend that the input text is stored in a file of type ^G:RUNF.^E This type of file will not be backed up by the backup system and can be a little awkward to handle when editing with QED which expects type ^G:SYMB^E by default. Therefore I suggest that the input text is stored in a ^G:SYMB^E file and you only have to add ^G:S^E to your file specification to RUNOFF.
.SP 1
*

```
@(J)RUNOFF

RUNOFF V6MOD2 79.02.06 WELCOMES YOU
TEXT FILE:JCNOTE41:S
DEFAULT IMBED FILE: DIABLO

OUTPUT FILE:OP
RUNOFF HAS PROCESSED 94 INPUT LINES
AND DEFINED 0 INDEX ENTRIES
STORAGE WORDS USED 0 OUT OF 20000
CPU USED TIME:       7.26 seconds
ELAPSED  TIME:       8.48 seconds
 RUNOFF EXITS
@

@(J)RLISTER

RUNOFF LISTER VERSION 25-JUN-80
*******************************

PLEASE GIVE INPUT FILENAME ..... :OP

PLEASE ENTER TERMINAL TYPE
1=CONSOLE; 2=4014; 3=VDU; 4=DIABLO ..... :2


TONE SIGNIFIES END OF PAGE - RETURN TO CONTINUE
```

Text formatting

output to device
(Tektronix in this case)

```
  ********************************************************
****                                                    ****
****        J A D E  C O M P U T E R  N O T E  42       ****
****                                                    ****
****                                                    ****
****     THE SUBROUTINES  R E D O N E  AND  R E D T V A ****
****                                                    ****
  ********************************************************
```

J.OLSSON 25.08 1980

THESE SUBROUTINES HAVE BEEN CREATED IN ORDER TO SIMPLIFY THE PERFORMANCE OF THE CUTS NORMALLY APPLIED IN THE JADE REDUC1 AND REDUC2 STEPS (SEE JADE COMPUTER NOTES 27 AND 43). THESE REDUCTION STEPS ARE STANDARDLY PERFORMED IN SEPARATE PROGRAMS AND USE THE FULL JADE SUPERVISOR STRUCTURE. TO SIMULATE THESE STEPS IN THE SELECTION OF EVENTS FROM E.G. A MONTE CARLO SAMPLE REQUIRES SEPARATE TAPE-WRITING JOBS AS THEY STAND. PRESENTLY, THESE CUTS ARE OFTEN IMPOSED IN A LOOSE WAY,E.G. BY REQUIRING A MINIMUM TRANSVERSE MOMENTUM, MINIMUM LEAD GLASS ENERGY, ETC.
THE SUBROUTINES REDONE AND REDTVA ARE MODIFIED VERSIONS OF THE USER SUBROUTINES USREDUC1 AND USREDUC2 AND CAN BE USED OUTSIDE THE SUPERVISOR STRUCTURE, AS A STEP IN AN EVENT SELECTING PROGRAM. THIS IS NOT ONLY USEFUL WHEN SELECTING EVENTS FROM A MONTE CARLO SAMPLE, BUT ALSO IF ONE WISHES TO APPLY THE NEW REDUC1 CUTS TO OLDER AND MORE LOOSELY SELECTED REDUC1 SAMPLES. SECONDLY, THE USAGE OF THESE ROUTINES ASSURES THE EXACT SIMULATION OF THE REDUC1 AND REDUC2 CUTS.

CALLING SEQUENCE FOR R E D O N E:

```
      CALL REDONE(INDRJ,LBWRT,IWRT)
```

THE ARGUMENTS:
- INDRJ — REJECTION INDEX
- LBWRT — ACCEPT INDEX
- IWRT — REDUC1 WRITE FLAG

INDRJ = 0 IF EVENT IS ACCEPTED, NONZERO FOR REJECT
LBWRT = 0 IF EVENT IS REJECTED, NONZERO FOR ACCEPT
THE VARIOUS REJECT AND ACCEPT CONDITIONS ARE RETURNED IN THE VALUES OF THESE TWO PARAMETERS. IWRT IS THE STANDARD WRITE FLAG IN REDUC1, BEING SET FOR TAGGED EVENTS, HIGH ENERGY EVENTS AND OVERFLOW EVENTS.

OBS.. THE SUBROUTINE REDONE CAN ONLY BE CALLED WHEN PATTERN RECOGNITION HAS BEEN PERFORMED.

REDONE IS A SHELTRAN SUBROUTINE, LIKE THE SUBROUTINE USREDUC1. IT HAS A BLOCK DATA ATTACHED:

```
  BLOCK DATA
  COMMON /CREDON/LIMHIT,LIMHT1,CRVTAG,CRVNTG
  COMMON /CIPRI/IPRI
  DATA IPRI /0/
  DATA LIMHIT/12/, LIMHT1/20/
  DATA CRVTAG/.00150/, CRVNTG/.00025/
  END
```

THE VARIABLE IPRI IS A PRINT VARIABLE. IF IPRI > 0, A PRINTED LINE IS PRODUCED FOR EACH CALL, TELLING THE REASON FOR THE REJECT OR ACCEPT.

CALLING SEQUENCE FOR R E D T V A:

```
      CALL REDTVA(LBWRT,INDRJ,IWRT,IFTG,IAC,IFLW,IPRO)
```

THE ARGUMENTS:
- INDRJ — REJECTION INDEX
- LBWRT — ACCEPT INDEX
- IWRT — REDUC2 WRITE FLAG

- IFTG, IAC, IFLW ARE FLAGS FOR SETTING IWRT, SEE JADE COMPUTER NOTE 43.
- IPRO — PRINT VARIABLE

INDRJ = 0 IF EVENT IS ACCEPTED, NONZERO FOR REJECT
LBWRT = 0 IF EVENT IS REJECTED, NONZERO FOR ACCEPT
THE VARIOUS REJECT AND ACCEPT CONDITIONS ARE RETURNED IN THE VALUES OF THESE TWO PARAMETERS.
IF IPRO > 0, PRINT IS PRODUCED FOR EACH CALL, TELLING THE REASON FOR REJECT OR ACCEPT.

OBS.. THE SUBROUTINE REDTVA CAN ONLY BE CALLED WHEN PATTERN RECOGNITION AND CLUSTER ANALYSIS HAVE BEEN PERFORMED (CORRESPONDING TO LEVEL 6 IN THE SUPERVISOR).

REDTVA IS A FORTRAN SUBROUTINE, LIKE THE SUBROUTINE USREDUC2. IT HAS A BLOCK DATA ATTACHED:

```
  BLOCK DATA
  COMMON /CREDTV/ CRVLIM,LMHITS,RPLIM,RPLIM1,RATLIM,COSCUT,ZVTXLM,
 $ ZVXLM1,ZVXLM2,ETOTLM,ETOTKP,ETCYKP,ETE1KP,ETE2KP,ZMLIM,FIDEL,
 $ XLM,YLM,ZLM,ERGL,ETAGLM,ETOTCT,TSUMC1,TSUMC2
  DATA ERGL /.200/
  DATA ETAGLM /100./
  DATA ETOTCT /100./
  DATA CRVLIM/.00135/, LMHITS/16/
  DATA RPLIM /30./
  DATA RPLIM1/10./
  DATA RATLIM /.20/
  DATA ZMLIM /350./
  DATA FIDEL /.200/
  DATA ZLM /500./
  DATA XLM /350./
  DATA YLM /350./
  DATA COSCUT /5.5/
  DATA ZVTXLM /350./
  DATA ZVXLM1 /500./
  DATA ZVXLM2 /200./
  DATA  ETOTLM /5000./
  DATA  ETOTKP /7000./
  DATA  ETCYKP /3500./
  DATA  ETE1KP /4000./
  DATA  ETE2KP /500./
  DATA  TSUMC1 /30./
  DATA  TSUMC2 /-20./
  END
```

THE SUBROUTINES REDONE AND REDTVA AND THEIR ASSOCIATED HELPROUTINES ARE FOUND ON THE GENERAL LIBRARIES: F11LHO.JADEGS AND F11LHO.JADEGL