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****      J A D E C O M P U T E R   N O T E 42      ****
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****      THE SUBROUTINES REDONE AND REDTVA      ****
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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 SUPER-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 REDONE:

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:

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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

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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 REDTVA:

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:

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

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

