JADE - Computer Note No. 23

9.3.1979

W. Bartel

I B M - Data - Banks

This note contains a description of the raw data banks and the result bank on IBM - tapes as of March 13, 1979.

The format and the content of the data banks TRIG, SCAL and ATST have not yet been decided.

The relevant JADE computer notes, describing the various result banks are attached to this note. By the time this note was issued, the JADE computer notes No. 16 and No. 22 were still in preparation.

A JADE computer note describing the banks TPEV, TPVX, TPTR will be issued later by S. Yamada.

Header bank (JADE Note 24 and 32)

I*4 word	I*2 word	Type	Assignment	
1		I*4	HEAD	
2		I*4	bank No. (=1 for MtC)	
3		I*4	pointer to next bank	
4		I*4	No of I*4 data words = 100	
	1	I*2	identifier	descriptor
	2	I*2	0	
	3		second	time
	4		minute	
	5		hour	
	6		day	
	7		month	
	8		year	
	9		experiment number = 0 for MtC	
	10		run number	
	11		record number (counted from beginning of = event no.	
	12		record type see below	
	13		readout pattern	
	14		0	
	15		0	reserved for detector status
	16		0	
	17		0	
	18		0	
	19		0	
	20		0	
	21		trigger source	
	22		trigger action bits	

I*4 word	I*2 word	Type	Assignment
	23	I*2	0
	24		0
	25		MIPROC-16 action bits
	26		N50 action bits
	27		IBM action bits
	28		0
	29		beam energy (MeV)
	30		magnetic field
	31 - 100		free

Fixed pointer table

55	Pointer to bank	TRIG	three trigger banks, 1,2,3
56	" " "	SCAL	scaler bank
57	" " "	LATC	latch bank
58	" " "	ATST	Test ADC's
59	" " "	ATOF	TOF-counters ADC/TDC
60	" " "	ALGL	Lead glass ADC
61	" " "	JETC	Jet chamber data
62	" " "	CONC	conversion chamber - empty -
63	" " "	MUEV	Mu chamber data
64	" " "	ATBP	Beam pipe counters ADC/TDC
65	" " "	ATAG	Tagging ADC
66	" " "	TAGC	Tagging chambers
67		free	-
68	" " "	N50S	Nord 50 summary
69	" " "	JHTL	Hit label bank
70	" " "	PATR	Patrec results
71	" " "	ZVTX	Z-vertex
72	" " "	LGCL	Lead glass clusters

I*4 word	Assignment		
73	Pointer to bank	MUR1	Mu results 1
74	" " "	MUR2	Mu results 2
75	" " "	+ALGN	lead glass ADC
76	" " "	+TAGG	Tagging results
77	" " "	+ACLS	Tagging ADC's
78	" " "	+TOFR	TOF-results
91	" " "	TPEV	general event information
92	" " "	TPVX	vertex information
93	" " "	TPTR	TP-track information

LATC (Jade Note 32 - Latches)

I*4 word	I*2 word	Type	Assignment	
1		I*4	'LATC'	
2		I*4	bank No. (= 3 for MtC)	
3		I*4	pointer to next bank	
4		I*4	No. of I*4 data words	
5	1 (I*2)		bank descriptor	
	2 (I*2)			
	3	I*2	bits 0 - 7	beam pipe counters 1 - 8
	4		" 0 - 7	beam pipe counters 9 - 16
	5		" 0 - 7	beam pipe counters 17 - 24
	6		" 0 - 6	TOF counters 1 - 7
	7		" 0 - 6	TOF counters 8 - 14
	:			
	11		" 0 - 6	TOF counters 36 - 42

I*4 word	I*2 word	Type	bits	Assignment	
	12	I*2	0 - 6	lead glass row 1 - 7	along the barrel
	13		0 - 6	lead glass row 8 - 14	
	.				
	.				
	.				
	17		0 - 6	lead glass row 36 - 42	
	18		0 - 7	lead glass end cap quadrants 1 - 8	
	19		0,1	tagging trigger latches	
	20		0 - 15	luminosity scintillators and	
	21		0 - 15	lead glass blocks (see JADE computer note 16)	
	22		0 - 3	lead glass energy sum (3: highest)	

Note : The lead glass energy sum is the last word of the bank. That is different from the assignment in JADE Note No. 32.

see updat in JN 32 b

above is wrong!

ATOF

Pointer : IDATA(59)
TOF-counter data
(JADE Note No. 32)

In contrast to what has been said in JADE note 32 the banks ATOF and ATBP will not be reformated, at least for the start of the experiment.

ATOF is a fixed length bank of 94 I*4 data words,
i.e. 188 I*2 data words.

I*2
1. bank descriptor
2. 0
3-15 ADC : 1^- 1^+ 2^- 2^+ 3^- 3^+ 4^- 4^+ 5^- 5^+ 6^- 6^+ 0
. . . . .
81-93 ADC : 37^- 37^+ 38^- 38^+ 39^- 39^+ 40^- 40^+ 41^- 41^+ 42^- 42^+ 0
94-102 TDC : 1^- 1^+ 2^- 2^+ 3^- 3^+ 4^- 4^+ 0
. . . . .
175-183 TDC : 37^- 37^+ 38^- 38^+ 39^- 39^+ 40^- 40^+ 0
184-188 TDC : 41^- 41^+ 42^- 42^+ 0

ATBP

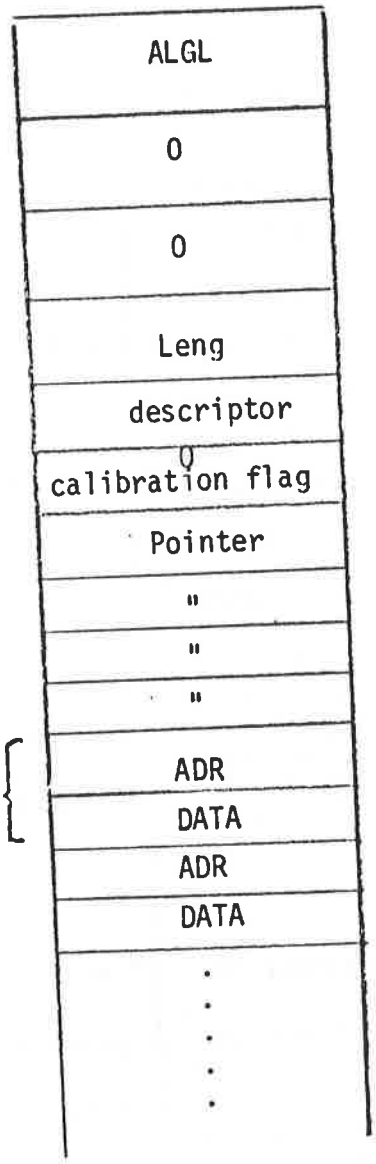
Pointer : IDATA(64)
Beam pipe counter data
(JADE Note No. 32)

ATBP is a fixed length bank of 40 I*4 data words,
i.e. 80 I*2 data words.

I*2
1 bank descriptor
2 0
3-15 ADC : 1^- 1^+ 2^- 2^+ 3^- 3^+ 4^- 4^+ 5^- 5^+ 6^- 6^+ 0
. . . . .
42-54 ADC : 19^- 19^+ 20^- 20^+ 21^- 21^+ 22^- 22^+ 23^- 23^+ 24^- 24^+ 0
55-63 TDC : 1 2 3 4 5 6 7 8 0
64-72 TDC : 9 10 11 12 12 14 15 16 0
73-80 TDC : 17 18 19 20 21 22 23 24

ALGL

Pointer : IDATA(60)
Lead glass data
(JADE computer Note 14a)



JETC

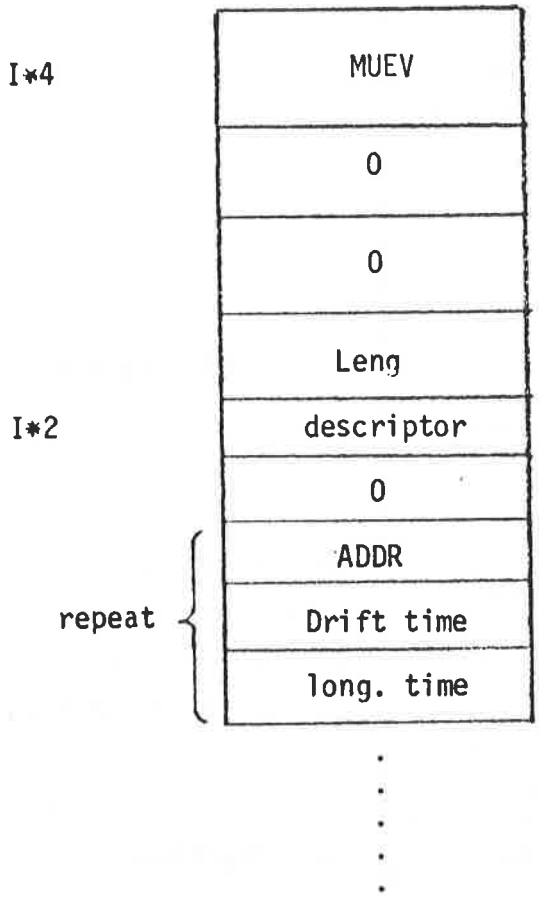
Pointer : IDATA(61)
Jet Chamber data
(JADE computer note No. 5)

I*4	JETC	
	0	8 in MtC
	0	
	Leng	No. of I*4 data words
I*2	descriptor	
	0	
	Pointer 1	pointer to cell 1
	Pointer 2	pointer to cell 2
	. . .	
	Pointer 97	* New:
	Pointer 98	pointer to first free location
repeat	ADDR	last 3 bits = hit no.
	Ampl.-	
	Ampl.+	
	Drift time	
	. . . .	

* New: Pointer to list of I x 2 words for cases where there are more than 8 hits: wire no, number of hits, wire no, number of hits etc

MUEV

Pointer : IDATA(63)
Mu chamber data
(JADE computer note 22)



ATAG

Pointer : IDATA(65)
Tagging System ADC data
(JADE computer note 16)

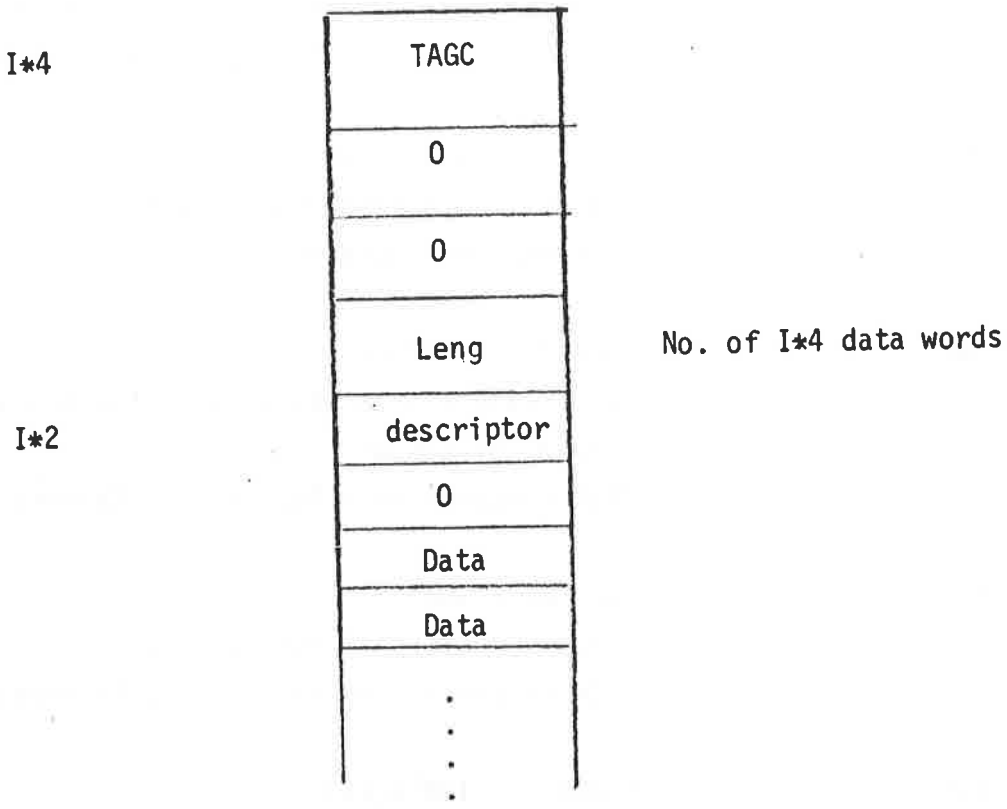
I*4	ATAG	
	0	
	0	
	Leng	No of I*4 data words
I*2	descriptor	
	0	
	Pointer 1	pointer to -z
	Pointer 2	pointer to +z
	Pointer 3	pointer to lumi.
	Pointer 4	pointer to first free location
repeat	ADDR	
	DATA	ADC - Amplitude
	.	
	.	
	.	
	.	

Address scheme :

0 - 95	- z
	0, 47, 48, 95 are empty
96 - 191	+ z
	96, 143, 144, 191 are empty
192 - 207	Lumi. counters
216 - 227	lead glass sums
228	lead glass sum - z
229	lead glass sum + z

TAGC

Pointer : IDATA(66)
Tagging System Chamber Data
(JADE computer note No. 16)



Data word : bit 0 - 3 = drift time
bit 8 - 15 = Address

Result Banks

JHTL

Pointer : IDATA(69)
Hit lable bank
JADE computer note No. 21 (P. Steffen)

PATR

Pointer : IDATA(70)
Track bank from pattern recognition program
JADE computer note No. 12, version of 23/2/79 (P. Steffen)

ZVTX

Pointer : IDATA(71)
z-vertex as computed by ZVERTF
JADE computer note No. 17

LGCL

Pointer : IDATA(72)
Lead glass cluster bank generated by LGANAL and updated by LGCDIR
JADE computer note No. 14 (S. Yamada)

MUR1

Pointer : IDATA(73)
Linear clusters in Mu-chambers
JADE computer note No. 22 (J. Allison)

MUR2

Pointer : IDATA(74)
Mu-hits connected to inner detector tracks
JADE computer note No. 22 (J. Allison)

TPEV, TPVX, TPTR

Pointers : IDATA(91), 92, 93
These banks will contain information which is related to the TP-tapes
JADE computer note in preparation (S. Yamada)

ALGN

Pointer : IDATA(75)
Reorganized lead glass ADC-data according to clusters.
ADC-data in MeV, gain corrected
Format same as ALGL with calibration flag set
JADE computer note No. 14 and 14a (S. Yamada)

TAGG

Pointer : IDATA(76)
Result banks from tagging system analysis.
5 banks.
JADE computer note No. 16 (G. Hughes, H. Wriedt)

ACLS

Pointer : IDATA(77)
Tagging ADC-data reorganized according to clusters.
JADE computer note No. 16 (G. Hughes, H. Wriedt)

TOFR

Pointer : IDATA(78)
Results from TOF-counter analysis
JADE computer note No. 20a (S. Kawabata)