E835 Event Header for 1999-2000 Run

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The addition of new ADC and TDC crates for the scintillating fiber detector as well as additional CPUs requires the E835 event header to be changed. The table shows the old 96/97 and the 99/00 event header format. Modifications are in italics and are discussed after the table. Also included is the fortran array element number for the offline array INBUF.

96/97 Word	96/97 Bits	Description (GENINFO Offline variable)	99/00 Word	99/00 Bits	INBUF
0	0-31	Number of inclusive bytes for event	0	0-31	
1	16-31	Gateway Buffer Number (KGBUF)	1	16-31	1
1	14-15	*Number of DART Streams* (KSTREAMS)			
1	0-13	Run Number (KRUN)	1	0-15	2
2	30-31	*Processor Number* (KPROC)			
2	0-29	Sowtare Event Number (KEVT)	2	0-31	3,4
3	24-31	Error Flag	3	24-31	5
3	16-23	Software trigger ID (KPRID)	3	16-23	5
3	0-15	Gatemaster Bits (KTRGW)	3	0-15	6
4	0-31	Software Trigger Bits 32-63	4	0-31	7,8
5	0-31	Software Trigger Bits 0-31	5	0-31	9,10
6	16-31	Pointer to DYC 1	6	16-31	11
6	0-15	Pointer to DYC 2	6	0-15	12
7	16-31	Pointer to DYC 3	7	16-31	13
7	0-15	Pointer to DYC 4	7	0-15	14
8	16-31	Pointer to DYC 5	8	16-31	15
8	0-15	Pointer to DYC 6	8	0-15	16
9	16-31	Pointer to DYC 7	9	16-31	17
9	0-15	Pointer to DYC 8	9	0-15	18

96/97 Word	96/97 Bits	Description (GENINFO Offline variable)	99/00 Word	99/00 Bits	INBUF
10	16-31	Pointer to DYC 9	10	16-31	19
10	0-15	Pointer to DYC 10	10	0-15	20
11	16-31	Pointer to DYC 11	11	16-31	21
11	0-15	Pointer to DYC 12	11	0-15	22
12	16-31	Pointer to DYC 13	12	16-31	23
12	0-15	Pointer to DYC 14	12	0-15	24
13	16-31	*Pointer to ROC*			
13	16-31	*Pointer to Summary*			
14	0-31	*DART Stream 0 DYC order*			
15	0-31	*DART Stream 1 DYC order*			
		Pointer to DYC 15	13	16-31	25
		Pointer to DYC 16	13	0-15	26
		Pointer to DYC 17	14	16-31	27
		Pointer to DYC 18	14	0-15	28
		Pointer to Summary	15	16-31	29
		Processor Number (KPROC)	15	0-15	30
16	0-31	Time Stamp (KEVTIM4, KTIME, KDATE)	16	0-31	31,32

The modifications listed below will have to be incorporated into the offline unpacking routines getev and crapnt as well as the scintillating fiber routines.

Number of DART Streams: For 99/00 will always be two streams (no ROC).
Processor Number: Moved - since need more than 2 bits; from 4 to 12 CPUs.
Pointer to ROC: Removed.
Pointer to Summary: Moved - to be logically after all DYCs' pointers.
DART Stream # DYC order: Removed - was limited to 8 DYCs per stream.
Pointers to DYC 15-18: Added.

Note that the Number of inclusive bytes are used by daft and not available in INBUF.

This new event header format will be implemented in PRUDE. The appropriate changes to the E835 offline library will also be made.