

8.4. ADC Modes. All of the fADC operating modes produce the header and trailer words: block header (type 0), block trailer (type 1), event header (type 2), trigger time (type 3), data not valid (type 14) and filler (type 15). There is one operating mode for each of the CDC and FDC pulse data formats. The modes and data types included are listed below. The data types in parentheses are output when necessary; if ‘data not valid’ (type 14) appears, then it will be alone, as it is caused by attempted reads when the fADC buffer is empty. The number of words listed below for the pulse data types is for the case when NPK=1.

Mode A (CDC short):

(block header)	type 0	1 word	0x8
event header	type 2	1 word	0x8
trigger time	type 3	2 words	0x98 00
CDC pulse data	type 4	2 words	0xA
(block trailer)	type 1	1 word	0x8
(filler)	type 15	1 word	0xF

Mode B (FDC short):

(block header)	type 0	1 word	0x8
event header	type 2	1 word	0x8
trigger time	type 3	2 words	0x98 00
FDC pulse data	type 5	2 words	0xA
(block trailer)	type 1	1 word	0x8
(filler)	type 15	1 word	0xF

Mode C (FDC short, with amplitude):

(block header)	type 0	1 word	0x8
event header	type 2	1 word	0x8
trigger time	type 3	2 words	0x98 00
FDC pulse data	type 6	2 words	0xB
(block trailer)	type 1	1 word	0x8
(filler)	type 15	1 word	0xF

Mode D (CDC long):

(block header)	type 0	1 word	0x8.
event header	type 2	1 word	0x8.
trigger time	type 3	2 words	0x98. 00.
CDC pulse and raw data	type 7	2+NW/2 words	0xB. etc
(block trailer)	type 1	1 word	0x8.
(filler)	type 15	1 word	0xF.

Mode E (FDC long):

(block header)	type 0	1 word	0x8.
event header	type 2	1 word	0x8.
trigger time	type 3	2 words	0x98. 00.
FDC pulse and raw data	type 8	2+NW/2 words	0xC. etc
(block trailer)	type 1	1 word	0x8.
(filler)	type 15	1 word	0xF.

REFERENCES

- [1] "VME Data Format Standards for JLab Modules" GlueX-doc-2365 <http://argus.phys.uregina.ca/cgi-bin/public/DocDB/ShowDocument?docid=2365> and also a more recent version at <https://halldweb1.jlab.org/wiki/images/5/58/JlabModuleDataFormat.pdf>
- [2] E.Jastrzembski, H.Dong "Summary of the FADC250 Operating Modes" 2/18/2014