

Using the ALICE DATE system

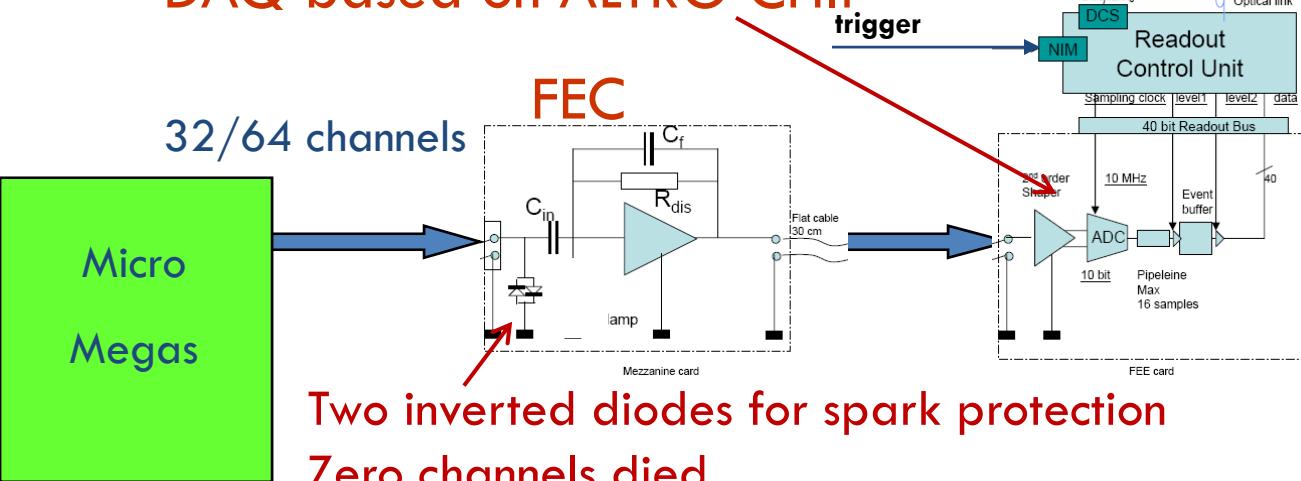
Some remarks from a user's point of view

Disclaimer

- This is NOT a talk about the ALICE DATE system
But some remarks bout the experience that we had with the system as casual users
- We have been using the system since fall 2007 together with electronics on loan from ALICE (based on the ALTRO chip) to read out the MAMMA micromegas (ATLAS muon chamber upgrade project).

Setup

DAQ based on ALTRO CHIP



32/64 channels

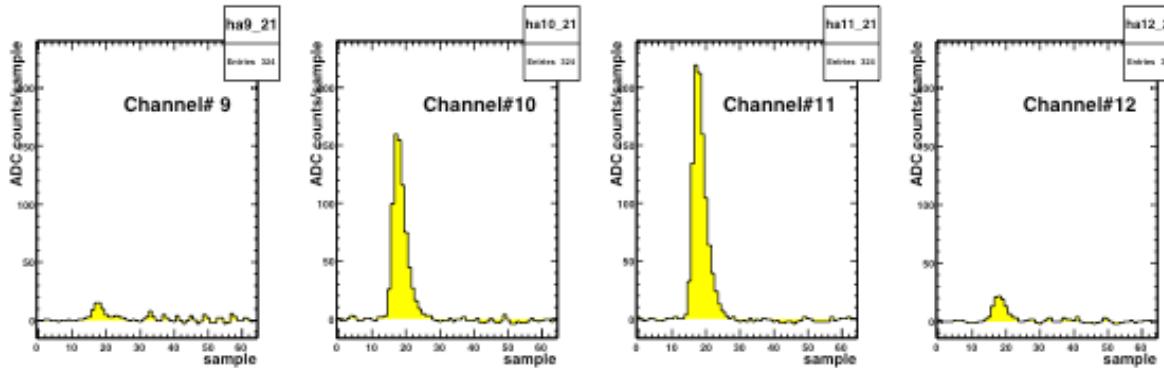
FEC

Micro
Megas

Two inverted diodes for spark protection
Zero channels died

Typical ADC spectra

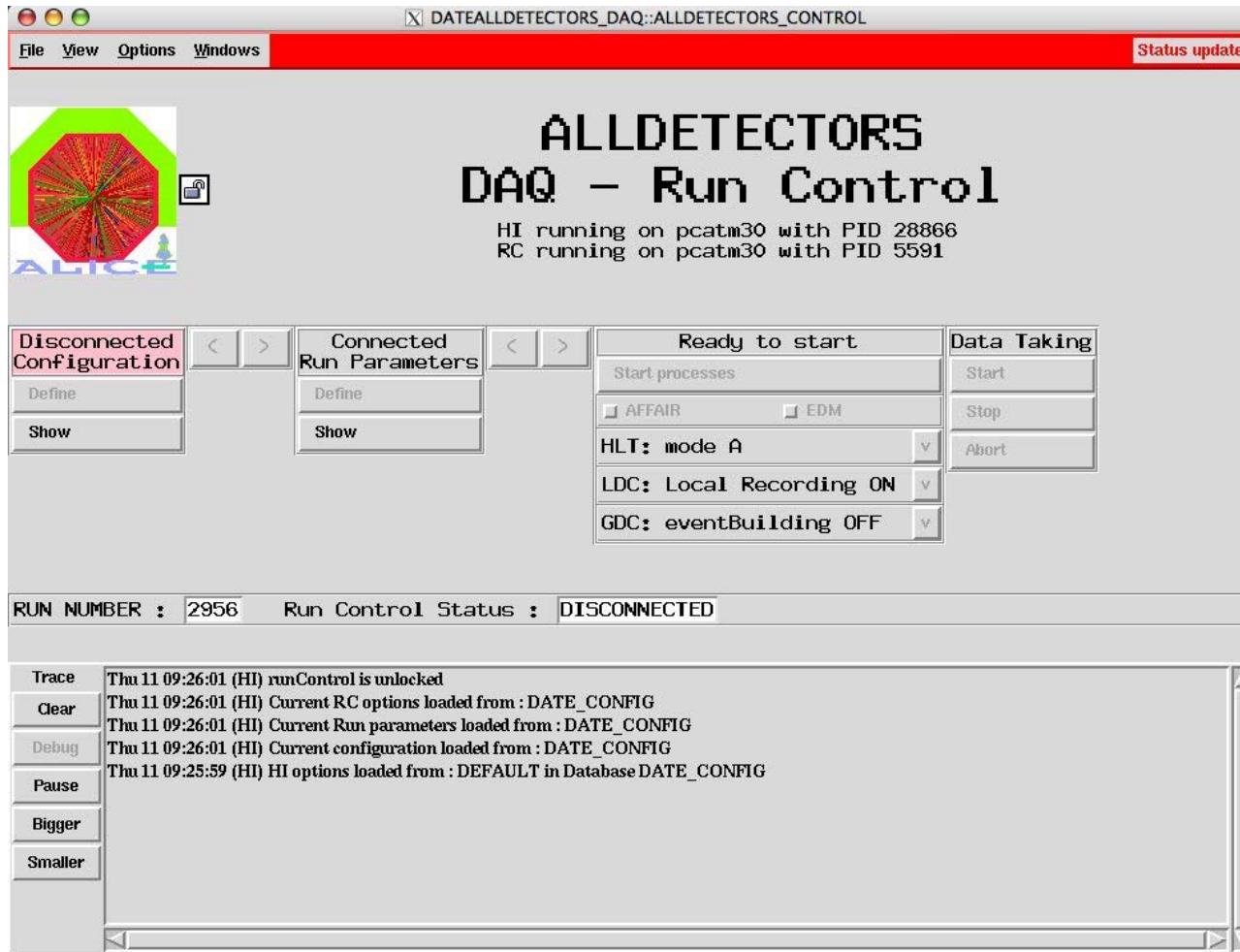
- Noise subtraction (from 12 pre-samples)
- Custer position from center of gravity



Experience

- Run Control system (DATE): very nice
Easy to handle and extremely stable
- Readout controller (RCU)
Fragile: must be protected against trigger signals while initializing, and during processing
Initialization through ethernet connection, not integrated in the RunControl (a bit clumsy)

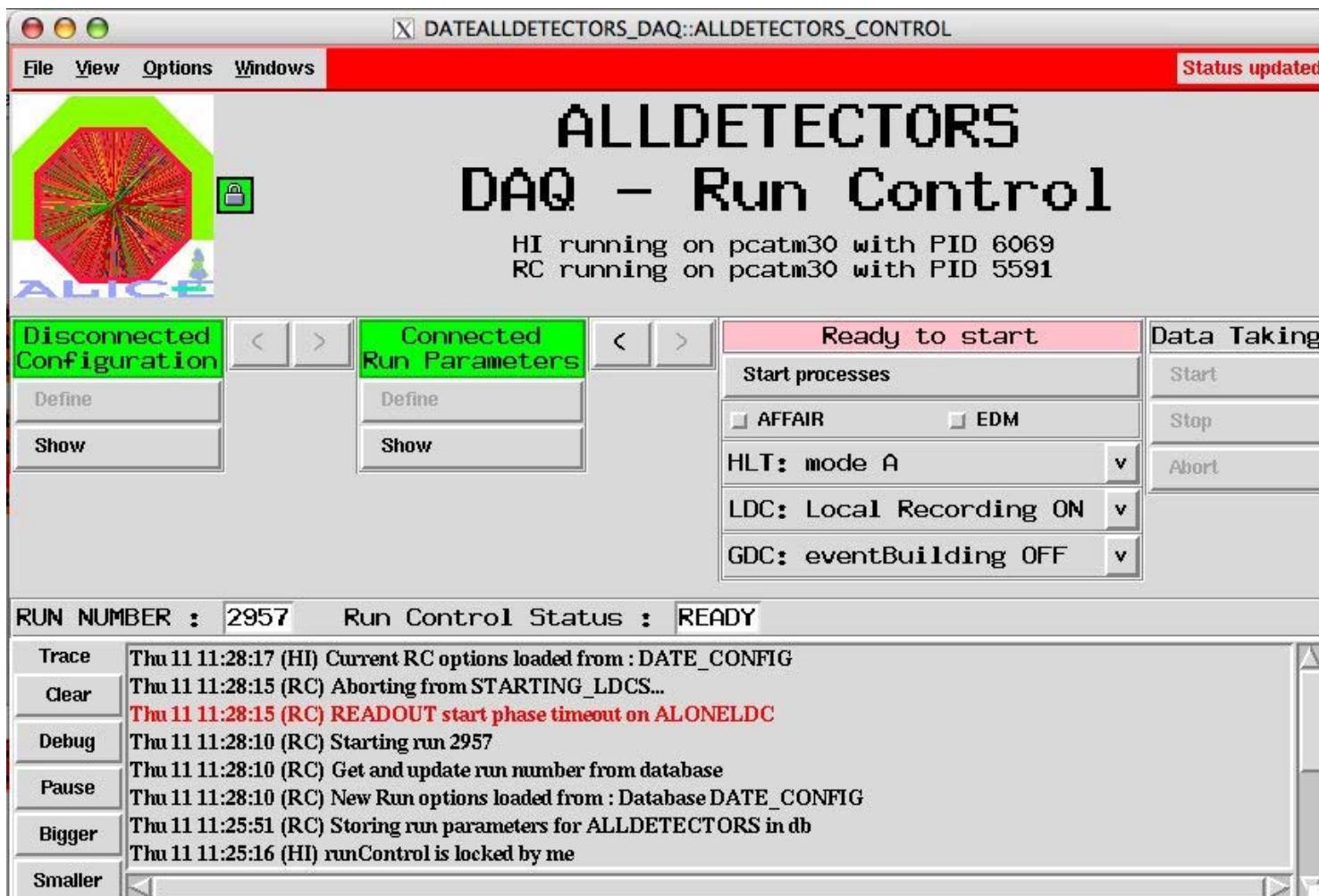
How does it look



... then you take control



... so you can start a run



... if everything works, if not ...

infoBrowser – DATE_SITE = /dateSite

<input checked="" type="checkbox"/> Level	<input type="checkbox"/> Date	<input checked="" type="checkbox"/> Time	<input type="checkbox"/> 0 decimals	<input checked="" type="checkbox"/> Host	<input type="checkbox"/> Role	<input type="checkbox"/> Pid	<input type="checkbox"/> Username	<input type="checkbox"/> System	<input checked="" type="checkbox"/> Facility	<input type="checkbox"/> Stream	<input type="checkbox"/> Run	<input checked="" type="checkbox"/> Message
Info		11:28:10		pcatm30		runControl			Detector LDCs: aloneLdc			
Info		11:28:13		pcatm30		recorder			Recorder version V07.06			
Info		11:28:13		pcatm30		dateRec			dateRec setup completed nCh:1 nChLocal:0 nChRemote:0 writeTo:local localSet:(nil) remot			
Info		11:28:13		pcatm30		recorder			Recorder sleep time: 10 usec			
Info		11:28:13		pcatm30		recorder			Recorder checkCompletion sleep time: 1 msec			
Info		11:28:15		pcatm30		ReadoutShell			Readout starting, launching "/date/readout/Linux/readout_DDL" (2007-10-23 16:49:03.000000			
Info		11:28:15		pcatm30		equipmentList			Arming RorcData: eqId=1800, source = detector electronics, revision number=3, serial numl			
ERROR		11:28:15		pcatm30		equipmentList			Arming RorcData: eqId=1800, (ERROR 313) rorcCheckLink fails, rorcStatus=-4			
ERROR		11:28:15		pcatm30		equipmentList			RORC status of RORC: eqId = 1800, C_CSR: 0x00362000, Link is down, Receive report bas			
ERROR		11:28:15		pcatm30		equipmentList			DIU status of RORC: eqId = 1800, 0x000340c1, i.e.,DIU port in Offline No Signal state,rem			
Info		11:28:15		pcatm30		DDL/RORC			ddlReadSiu: SIU command can not be send since link is not on			
ERROR		11:28:15		pcatm30		equipmentList			SIU status of RORC: eqId = 1800, not given			
ERROR		11:28:15		pcatm30		readout			Error 313 in routine ArmHw active equipment 2			
FATAL		11:28:15		pcatm30		readout			Fatal error in SOR phases, see details above			
ERROR		11:28:15		pcatm30		runControl			READOUT start phase timeout on ALONELDC			
Info		11:28:15		pcatm30		runControl			Aborting from STARTING_LDCS...			
Info		11:28:16		pcatm30		recorder			recorder exited with status: 0			
Info		11:28:16		pcatm30		recorder			recorderFinish: readoutData bmGetBlocksInUse = 1			
Info		11:28:16		pcatm30		recorder			recorderFinish: readoutFirstLevel bmGetBlocksInUse = 1			
Info		11:28:16		pcatm30		recorder			recorderFinish: readoutSecondLevel bmGetBlocksInUse = 0			
Info		11:28:16		pcatm30		dateRec			dateRec Shutdown(TRUE) start			
Info		11:28:16		pcatm30		dateRec			dateRec Shutdown(TRUE) end			
Info		11:28:16		pcatm30		recorder			Exit handler to clear recorder Pid 6486			
Info		11:28:17		pcatm30		runControl			Run stopped			
Info		11:28:17		pcatm30		runControlHI			Current RC options loaded from : DATE_CONFIG			

Archive	Filters		
Select	Clear		
Create	Save		
Delete	Load		
Time			
min.		match	
max.		exclude	
Level	Hostname	Rolename	Username
System	Facility	Stream	Run

Status : Connected

Query : Online data - from 11/06/2009 11:22:39

38 messages, 6 errors, 1 fatals

Find

... and run

LDC name	aloneldc
host	pcatm30
Number of sub-events	0
Sub-event rate	0
Sub-events recorded	0
Sub-event recorded rate	0
Bytes injected	0
Byte injected rate	0 B/s
Bytes recorded	0
Byte recorded rate	0 B/s

LDC name	aloneldc
host	pcatm30
Number of sub-events	529
Sub-event rate	0
Sub-events recorded	533
Sub-event recorded rate	0
Bytes injected	6068960
Byte injected rate	0 B/s
Bytes recorded	6068960
Byte recorded rate	0 B/s

Concluding remarks

- ✌ DATE is a DAQ and run control environment that has been in use since a number of years
- ✌ Easy to use, user friendly
- ✌ Has many features that were not (or only partly) used by us (e.g. electronic runbook, basic online monitoring, raw data -> root data format conversion package, ...)
- ✌ Maintained by ALICE, i.e. long life is guaranteed
- 👉 But: no support from ALICE team