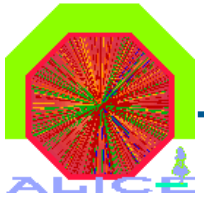


Status of the Calibration of the MUON Arm

A.Baldisseri

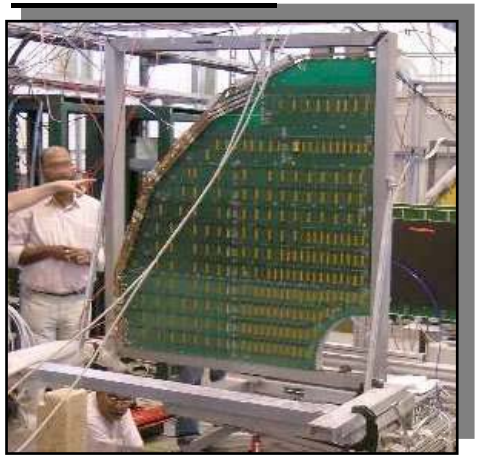
DAPNIA/SPhN, CEA Saclay

Outlook

- The hardware
- Tracking
  - Electronics calibration
    - Pedestals
    - Gains
    - Dead (Bad) channels
  - Position calibration
    - GMS : support position = f(t)
    - detElem position : Alignment with particles
  - DCS HV
  - Online/Offline link : The SHUTTLE
  - Offline : calibration related code
- Trigger
  - Dead map
  - Look-up-table
- Conclusion

The Tracking CPC's

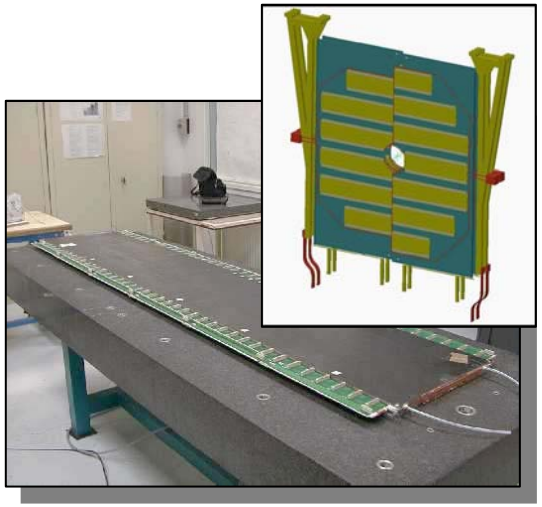
Stations 1&2



- 8 quadrants / station : 16
- 5 (4.2) mm gap St.2 (St.1)
- 3 segmentation

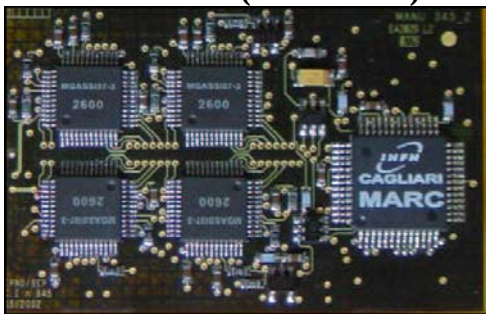
MANU St.12 (64 channels)

Stations 3, 4, 5

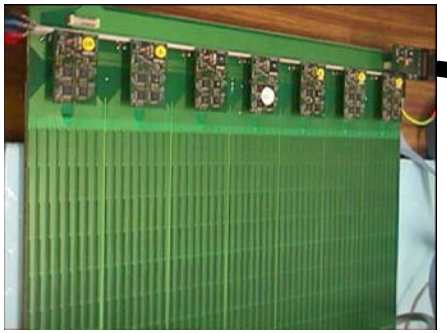


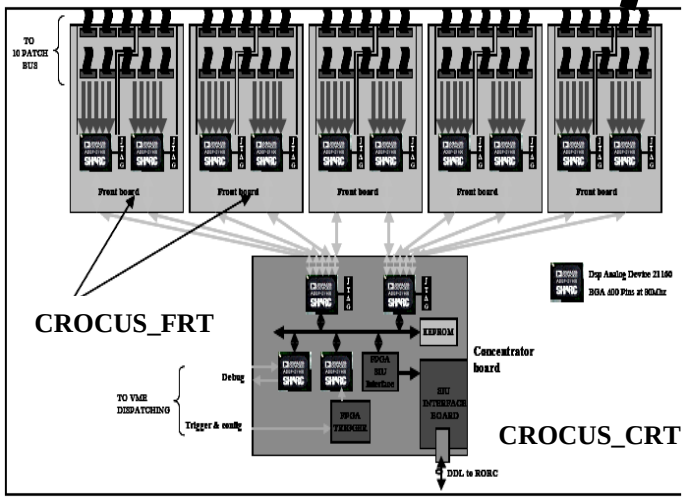
- 9 or 13 slats/half plane : 140
- 5 mm gap
- 3 segmentations

MANU St.345 (64 channels)



Readout

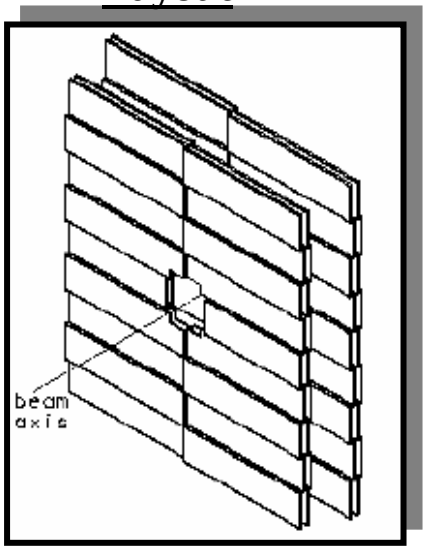




~ 800 buspatchs, 20 DDL's
> 5 LDC's, 1.1 M channels

The Trigger RPC's

Layout

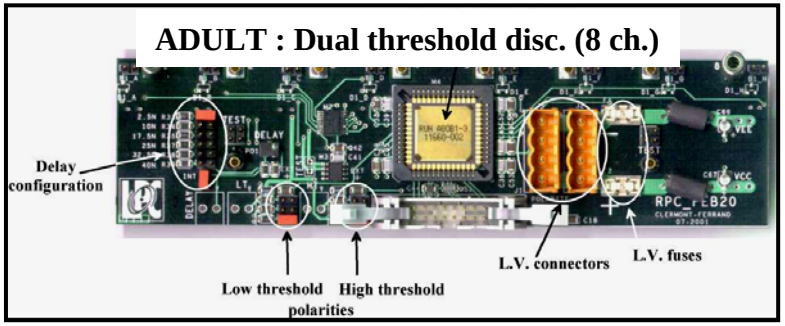


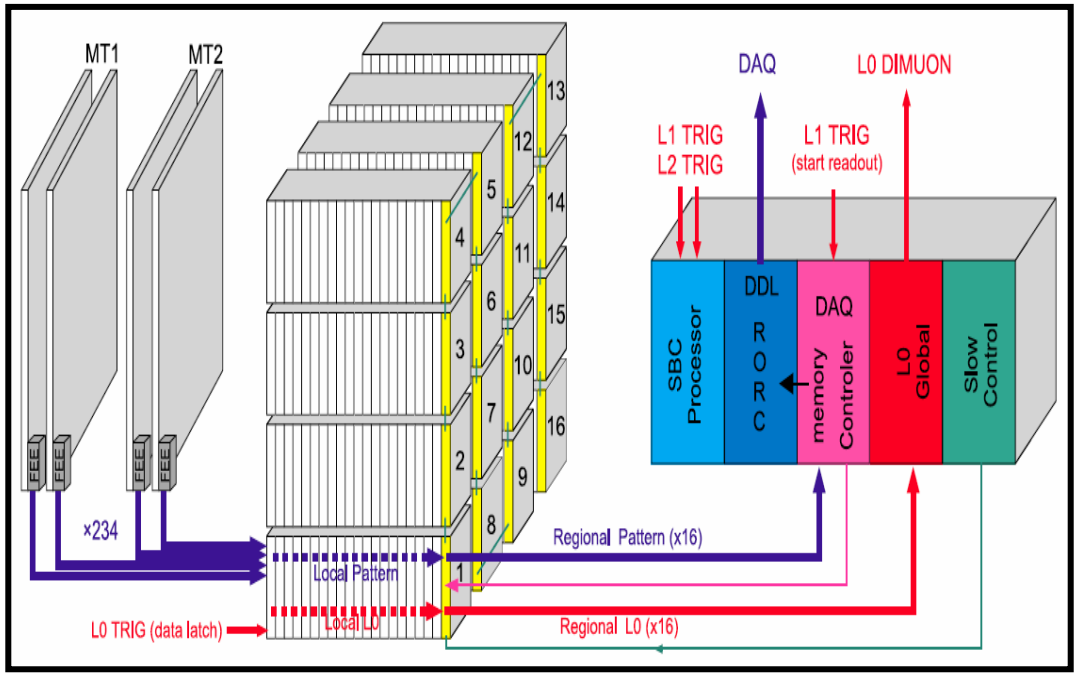
- 4 planes of 18 RPC's
- Bakelite plates
- 2 mm gap
- Strip cathodes
- 234 local boards (16 crates)
- 16 regional boards

2 DDL 1 LDC
21 K channels

RPC's

Readout electronics





Tracking Pedestals

- Before each physics data taking
  - ECS -> pedestals runs -> compute pedestals -> load to FEE
  - Scripts -> Makeped (compute the pedestals and sigmas)
  - Store the FEE files (configuration, pedestals) in the LDC SOR
- ECS command files
  - The script for computing pedestals will run in // in each LDC
  - The load to the FEE is also parallel
- Storage in the CDB using the SHUTTLE
  - Retrieve all the LDC pedestal files (flat ASCII files)
  - Assembly and convert to CDB format (needs AliRoot)

Using the SHUTTLE for the CBD format conversion avoid the installation of AliRoot in each LDC

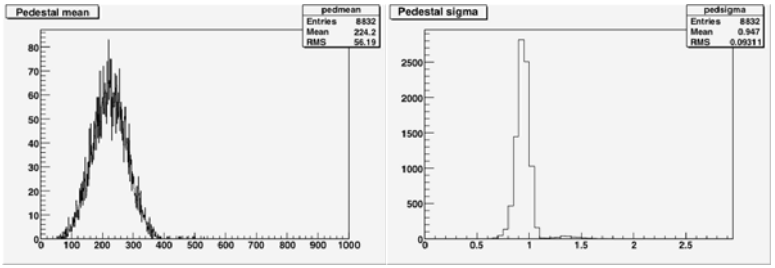
ECS : Tracking Pedestal run sequence

- Possible when
  - DCS status of MUON_TRK == READY **-> DCS**
- Consist of the following steps:
  - Select the “DEFAULT” DAQ configuration (or keep the current configuration if already defined)
  - Select “PEDESTAL” DAQ run parameters
    - Number of wanted events
    - Name of output files on local disk
  - Exec on every LDC the CONFIGURATION.sh script
  - Exec on every LDC the ZERO_SUPP_OFF.sh script
  - Data taking with “PEDESTAL” DAQ run options
    - **No event building : data on LDC local disk**
  - Exec on every LDC the COMPUTE THRESHOLDS.sh script
  - Exec on every LDC the LOAD_FERO.sh script
  - Exec on every LDC the CHECK_FERO.sh script

F. Carena’s talk 14 March 2006

Tracking *Makeped*

- Based on MuTrkOnline lib (*AliRoot free*)
- *Makeped -f <file.raw> -n <#events> …*
- Output
  - Histo file (ROOT)



  - CROCUS command file (FEE)
  - Flat ASCII file (SHUTTLE)

```
//=========================================================================
//                      NEW File calculated by makeped
//=========================================================================
//       * Statictics     : 1000
//       * # of MANUS     :
//      * # of channels :
//
//-------------------------------------------------------------------------
//-------------------------------------------------------------------------
//format : BUS_PATCH MANU_ADDR CHANNEL      MEAN       SIGMA
//-------------------------------------------------------------------------
1         4         0                  112.572            0.869952
1         4         1                  207.938            0.891154
1         4         2                  212.385            1.06901
1         4         3                  242.233            0.977093
1         4         4                  302.468            1.02615
1         4         5                  221.775            0.918899
1         4         6                  263.75             1.00871
1         4         7                  185.86             0.984073
1         4         8                  241.141            0.943991
1         4         9                  246.949            0.919999
1         4         10                 209.31             0.89883

…
```

```
; Pedestal file generated by makeped
;
; structCrocusCmdHeader
; uiChecksum eCrocusCommand uiFrtCrtTargetIds[2]
0x00010006
0x00000006
0x00020000
0x00030000
; structFrtCrtCmdHeader #0
; uiChecksum uiFrtCrtIdTarget uiFrtIdTargets[5]
0x000f0000
0x00020000
0x00050000
0x000b0000
0x00090000
0x000d0000
0x00070000
; structFrtCmdHeader #0
; uiChecksum eCrocusCommand uiFrtIdTarget
0x00050005
0x00000006
0x00050000
; FRT 0x00050000 Lport 0 -> BP 6
0x00000003
0x00000000
0x00000000
; FRT 0x00050000 Lport 1 -> BP 7
0x00000003
0x00000000
0x00000000
; FRT 0x00050000 Lport 2 -> BP 8
0x00000003
0x00000000
0x00000000
; FRT 0x00050000 Lport 3 -> BP 9
0x00000003
0x00000000
0x00000000
; FRT 0x00050000 Lport 5 -> BP 10
0x00000003
0x00000000
0x00000000
; structRawDataHeader
; uiHeaderChecksum bLastChunk uiRawDataLength uiRawDataChecksum
0x02900353
0x00000001
0x000003cf
0x0290009d
; RawData
; Lport 0 -> BP 6 with 3 manus
; Manu 16 (0x00400000)
0x00400000
0x000000c2
0x00000106
0x000000d1
0x00000073
0x00000101

….
```

Pedestals : What next ?

- All the pieces of code exist
- ECS integration
  - Sequence defined with DAQ
  - Full test with the ECS @ CERN in Oct. 06
- Makeped
  - Input : CROCUS configuration files needed
  - Generation of final config. files under way (I. Hrivnacova)
- SHUTTLE (L. Aphecetche)
  - Code to convert online ASCII files to CDB under way
  - Apply the mapping (AliRoot) : BusPatch -> detElem

Electronics gain calibration

- Why ?
  - Dispersion in gain (2.5-3%) quickly deteriorate the resolution
  - Correction for non-linearities
- How ?
  - Sending a signal to each channel
  - Sequence of ~ 5 runs with signal = 0, 500 mV, …
  - But … gain = f(internal calibration capacitors)
- When
  - In the cavern the conditions are stable (T ~ constant, …)
  - Once a day ▪

How we calibrate the gain

- Parameters from industry (once)
  - Each circuit will be measured in the industry (serial nb.)
  - Direct gain / calibration capacitors (needed for cal. signal)
  - Storage in the CDB
- How to calibrate during the experiment
  - Using the calibration signal
    - Gain = f(internal capacitors) : geographical position of each MANU
    - Several runs (5) for different input signals (amplitude variation)
    - Using the signal + capacitors, we get the gain
    - Storage in CDB files using the SHUTTLE (as pedestals)

ECS : Electronics calibration runs

- Possible when
  - DCS status of MUON_TRK == READY **-> DCS**
- Consist of the following steps:
  - Select the “ELECTRONICS_CALIBRATION” DAQ configuration
    - Configuration with one GDC
  - Select “ELECTRONICS_CALIBRATION” DAQ run parameters
    - Number of wanted events
  - Exec on every LDC the CONFIGURATION.sh script
  - Exec on every LDC the ZERO_SUPP_OFF.sh script
  - Execute “N_ITERATIONS” times the following subsequence
    - Exec on every LDC the SET_PULSE.sh script (with a loop counter as argument)
    - Data taking with “ELECTRONICS_CALIBRATION” DAQ run options
      - **Event building on : data on PDS**
  - Revert to a “DEAULT” DAQ configuration

F. Carena’s talk 14 March 2006

Gain : What next ?

- Code well advanced
  - Using simulated data
  - Waiting the real data from CROCUS (Oct. 06)
- ECS integration
  - Sequence defined with DAQ
  - Second step after the integration of pedestals
- SHUTTLE (L. Aphecetche)
  - Similar to pedestal one

Dead channels

- Why ?
  - Needed for the Offline clustering
  - Good calculation of the reconstruction efficiency
- How ?
  - Using the pedestals files in the SHUTTLE
  - Using the real data (improvement)
    - Online : Sampling using a monitoring (MOOD).
    - Offline : AliRoot
- When ?
  - For each run (same frequency as pedestal run)
- Who ?
  - Our SHUTTLE team (Laurent A. / Ivana H.)

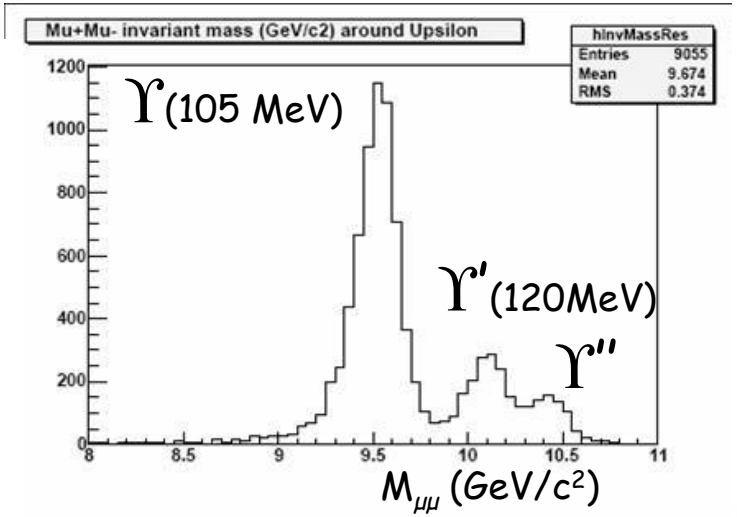
Position calibration

$$\sigma_{total} = \sqrt{\sigma_{ch}^2 + \sigma_{pads}^2 + \sigma_{PCB}^2 + \sigma_{sup}^2 + \sigma_{survey}^2}$$

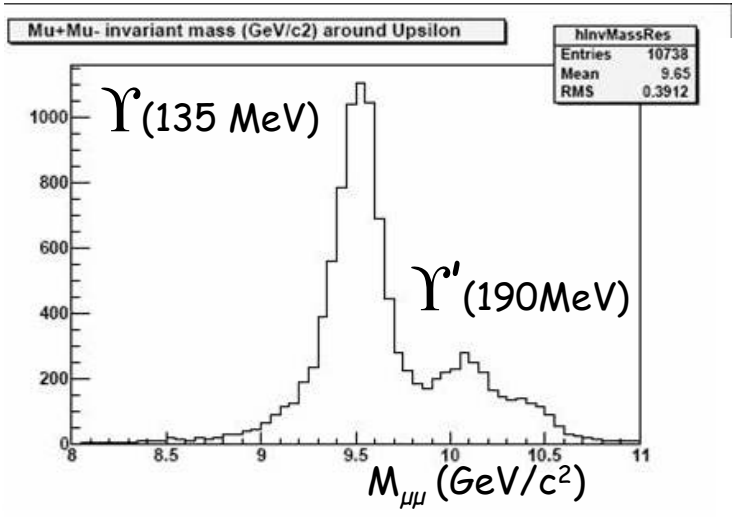
- Solutions
  - Photogrammetry (resolution 50-100 μm)
  - Alignment with particles
  - Variations f(t) : GMS

ϒ mass resolution vs position uncertainties

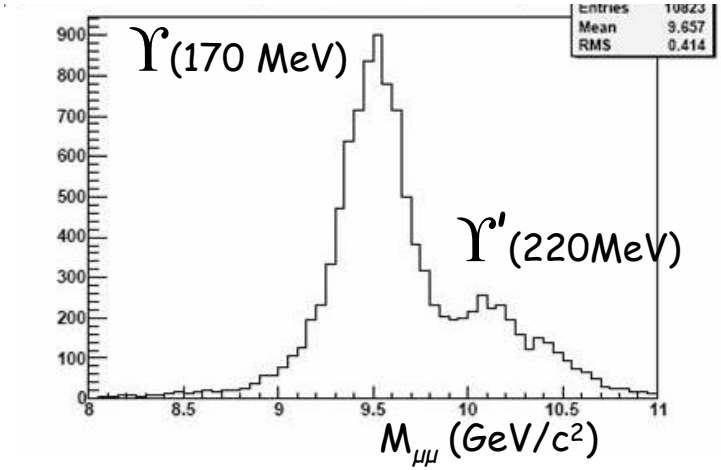
Chamber position exactly known



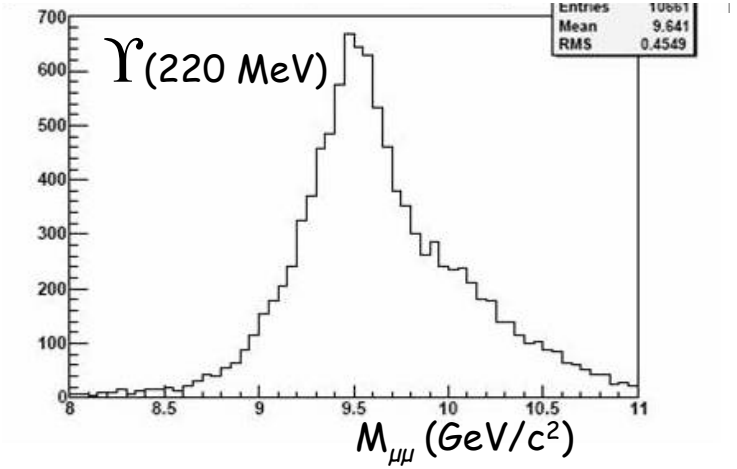
100 μm uncertainty on the chamber position



500 μm



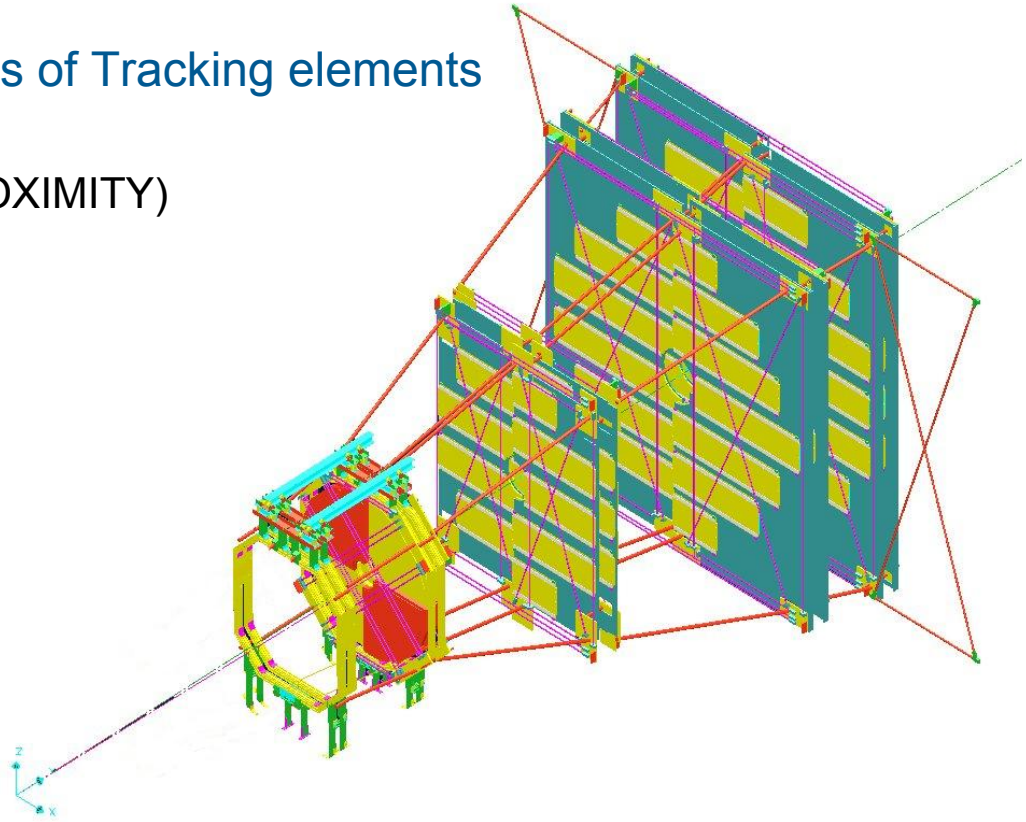
1 mm



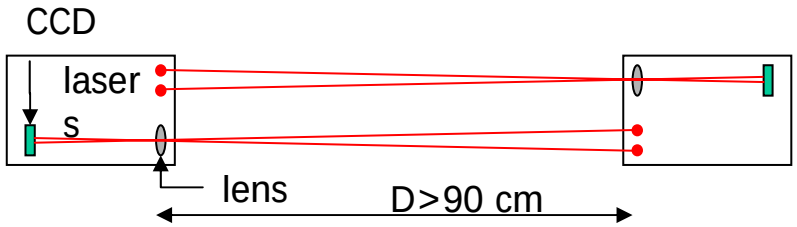
E. Dumonteil, PHD Thesis, Univ. of Caen, 2004

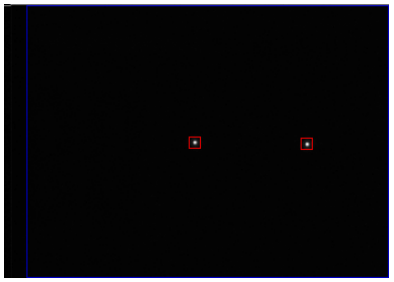
The GMS Overview

- Goal : Measure relative displacements of Tracking elements
- GMS : array of optical sensors
  - 2 types of sensors (BCAM and PROXIMITY)
  - 460 sensors in total
  - 1128 images per measurements

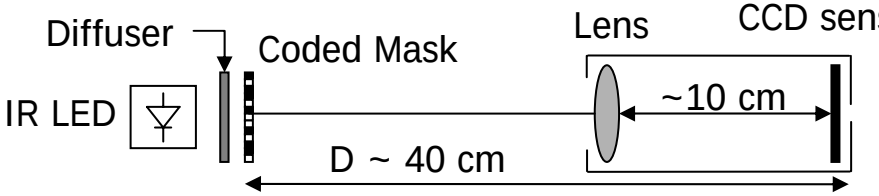


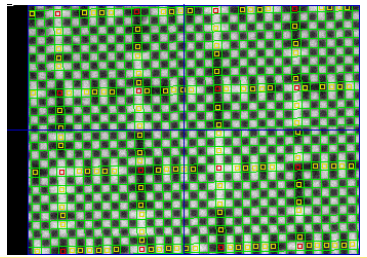
System BCAM





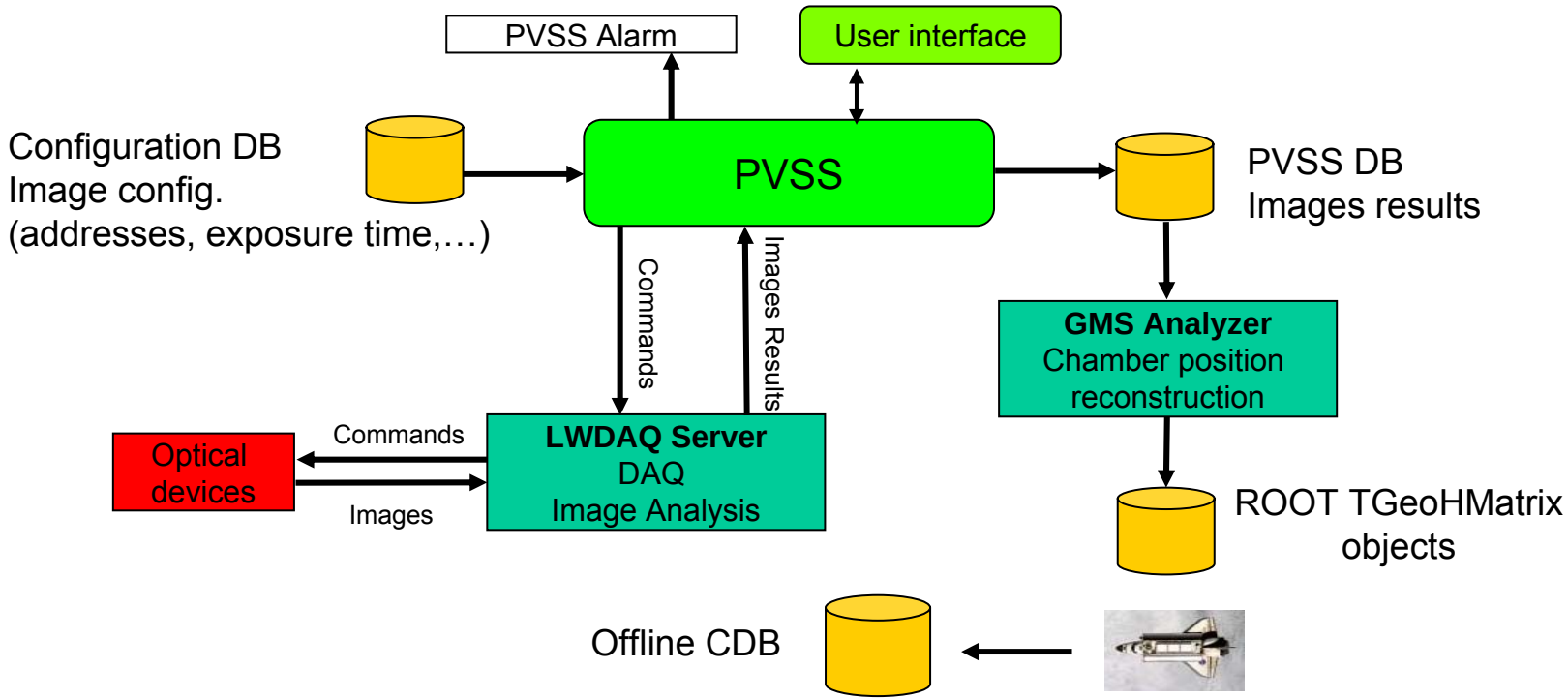
System PROXIMITY





GMS Data Acquisition

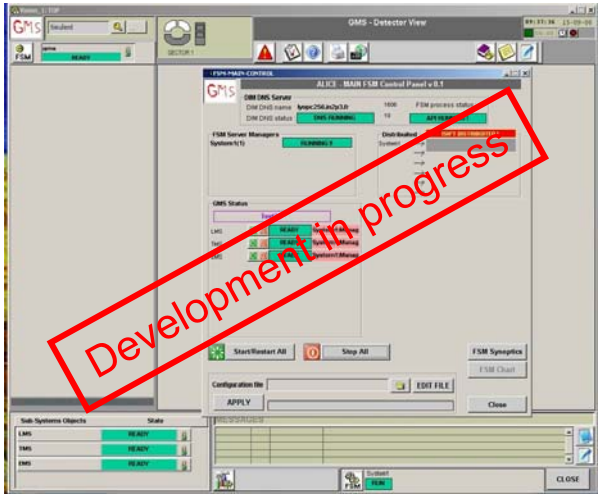
- GMS is a slow control system : Uses the DCS architecture (PVSS)

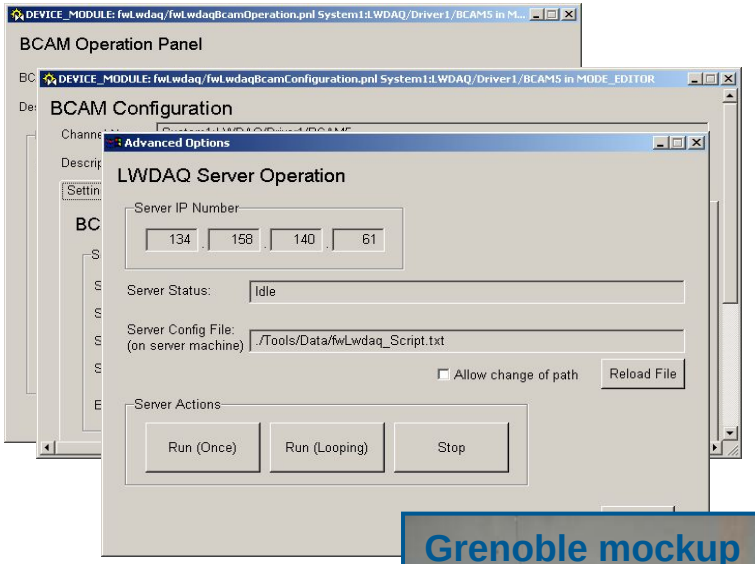


- Need 3 programs for DAQ, analysis and reconstruction
  - program to control the images acquisition developed by the EP/CO group (will be included into the JCOP framework, v 0.1.2 available)
  - program of image analysis (provided by the ATLAS collaboration)
  - program of geometry reconstruction (developed at Lyon)

GMS : Ongoing work

- Acquisition:
  - Test of the Framework component prototype under way (FSM)





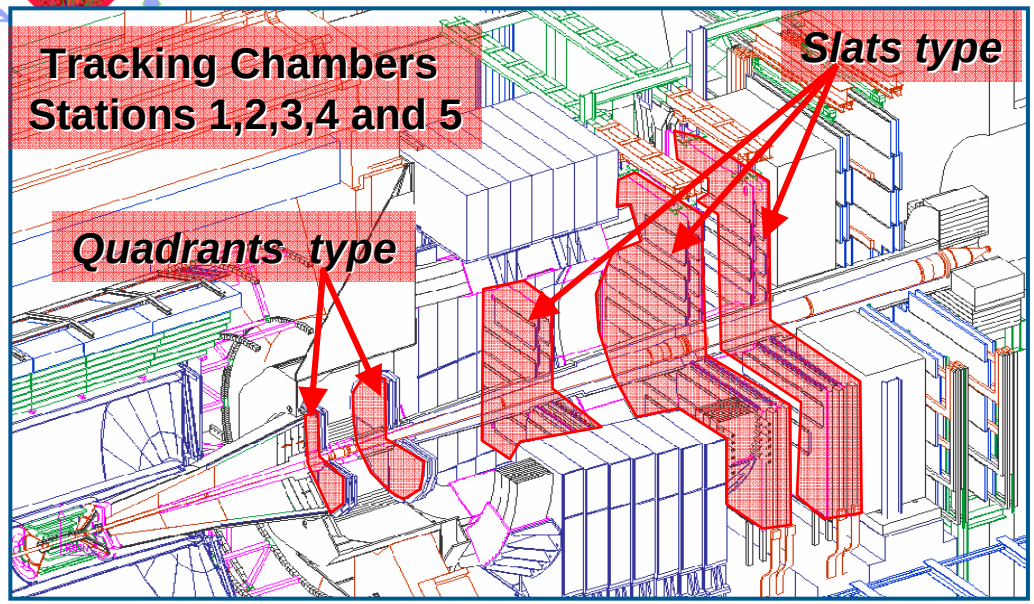
- Reconstruction program:
  - Developed for simulation purposes then adapted to real data
  - Retrieve displacements of the chambers (tested @ Grenoble)
  - Output is 1 TGeoHMatrix per chamber (or half chamber)

GMS : What remains ?

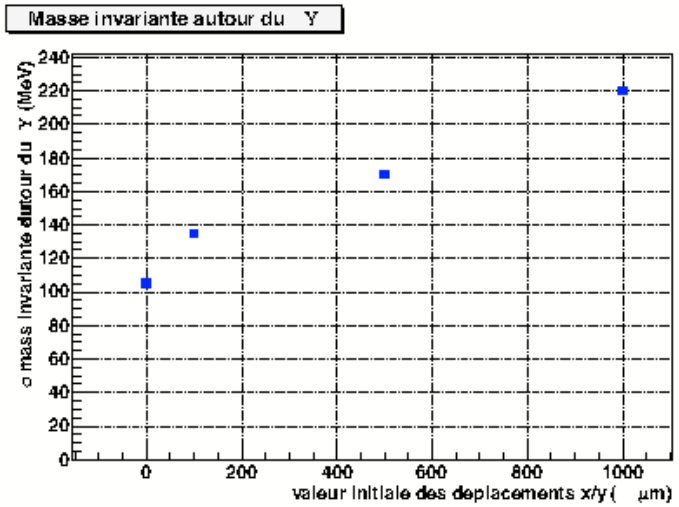
- Acquisition:
  - Develop a state diagram for the GMS [Oct 2006]
  - Implement the DAQ for the entire GMS system (only a test at small scale has been done) [Nov 2006]
  - Implement the alarm in PVSS [Dec 2006]

- Reconstruction program:
  - Implement the I/O using the ALICE databases [Jan 2007]
  - Commissioning on site (with fraction of detectors) : [March 2007]

Need of alignment with physics tracks



MUON tracking detectors:
- 5 stations
  - 2 quadrant type
  - 3 slat type
- 10 chambers (2 chambers / station)
- 156 detection elements
  - 2x4; 2x4; 2x18; 2x26; 2x26
  - provide
    - x (100 μm) - non bending plane
    - y (10 μm) - bending plane
- Expected initial precision:
  - chambers x,y,z ~ 1 mm (survey)
  - detection elements x,y,z ~ 500 μm
- Geometrical Monitoring System:
  - chambers x,y,z ~ 20 μm



➡ Use physics tracks to align detection elements:
- x,y ~ 50 μm
- φ ~ 50 μrad

Alignment approach : Millepede

- Original development
  - V. Blobel (DESY) : hep-ex/0208021
  - But : Fortran used !
- Implementation in AliRoot MUON

AliMillepede, c++ class modified from a c++ translation by S. Viret (LHCb) of the original fortran package

Detector specific procedure:

1. Define your "alignment parameters"
   - Global parameters
2. Define your "track model" (B=0, B!=0)
   - Local parameters
3. Define your "measurement"
4. Write your χ^2 to minimize:
   - $$\chi^2 = \sum_{i=1}^{N_{tracks}} \chi_i^2 = \sum_{i=1}^{N_{tracks}} \sum_{j=1}^{N_{det}} \frac{\left| F_j(t_k; d_l) \right|^2}{\sigma_j^2}$$
5. Express *F* derivatives with respect to:
   - Local parameters (track)
   - Global parameters (alignment)
6. Define constraints (local or global)

Per detection element:
- X and Y translation
- Phi (azimuth) rotation

- B=0, straight track (4 parameters)
- B!=0, kalman track (+ local straight track approximation)

X (~100 μm) and Y (~10 μm) position of hit

With the residual of each track at each detector element
$F_j(t_1,t_2,\ldots;d_1,d_2,\ldots) = T_j - C_j$

Needed, under study

Alignment : Status of committed code

- Simulation. Generating misalignments:
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/AliMUONGeometryMisAligner.cxx?view=log
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/MUONCheckMisAligner.C?view=log
- Simulation or Real Data. Alignment (Minimization) algorithm:
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/AliMillepede.cxx?view=log
- Simulation or Real Data. Reading tracks and hits (+data manipulation) and calling the alignment algorithm:
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/AliMUONAlignment.cxx?view=log
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/MUONAlignment.C?view=log
- Simulation (Real Data?). Full chain test script:
  - http://aliceinfo.cern.ch/alicvs/viewvc/MUON/AlirootRun_MUONtestAlign.sh?view=log

Alignment : What next ?

- Alignment to do list
  - Software development
    - AliMillepede class optimization (fully use symmetric properties of matrix)
    - Problem with stations 1 and 2 (quadrant type) -> 4 almost independent detectors
    - Improve alignment performance
      - Track selections (B-on)
      - Other constraints
      - Multi-step procedure (e.g. fix some stations to align others etc …)
    - Extend to other degrees of freedom
    - Carry complete study of alignment performance (including physics)
      - Initial misalignment
      - Number of tracks
    - Read survey (photogrammetry files)
  - Final alignment procedure
    - Zero field runs (link with GMS)
    - Field on runs
    - Frequency

Use dimuon trigger events in PDC06 reconstructed with various misaligned geometries …

Tracking DCS HV

- HV = 0 in a part of the detector
  - DCS know it
    - Solution : Use the DCS data
  - Pedestal file have those channels (LV ON)
    - Solution : NO
  - Gains file have those channels (LV ON)
    - Solution : NO
- Idea : Use the DCS HV monitored data
  - SHUTTLE Use case 4
  - Under study

The SHUTTLE

- Use case 1 (reading from DAQ FES) well under way
  - Pedestals
    - Code written, currently under test (BTW, it uncovered some bugs in our AliMUONRawWriter, demonstrating -once more?- the importance of stress-testing the code *…)
  - Gains
    - Very similar to pedestal case. Coding not started
  - Dead channels
    - A bit more tricky, as information from both pedestals and gains might be used. How to deal with this within a Shuttle preprocessor ? (discussion started with Alberto/Jan-Fiete)
- Use case 3 (GMS)
  - Preprocessor implemented (under test).
- Use case 4 (DCS)
  - To store HV status
  - Just starting to investigate…

* It was the first time we generated 1.06M digits per event…

SHUTTLE framework questions

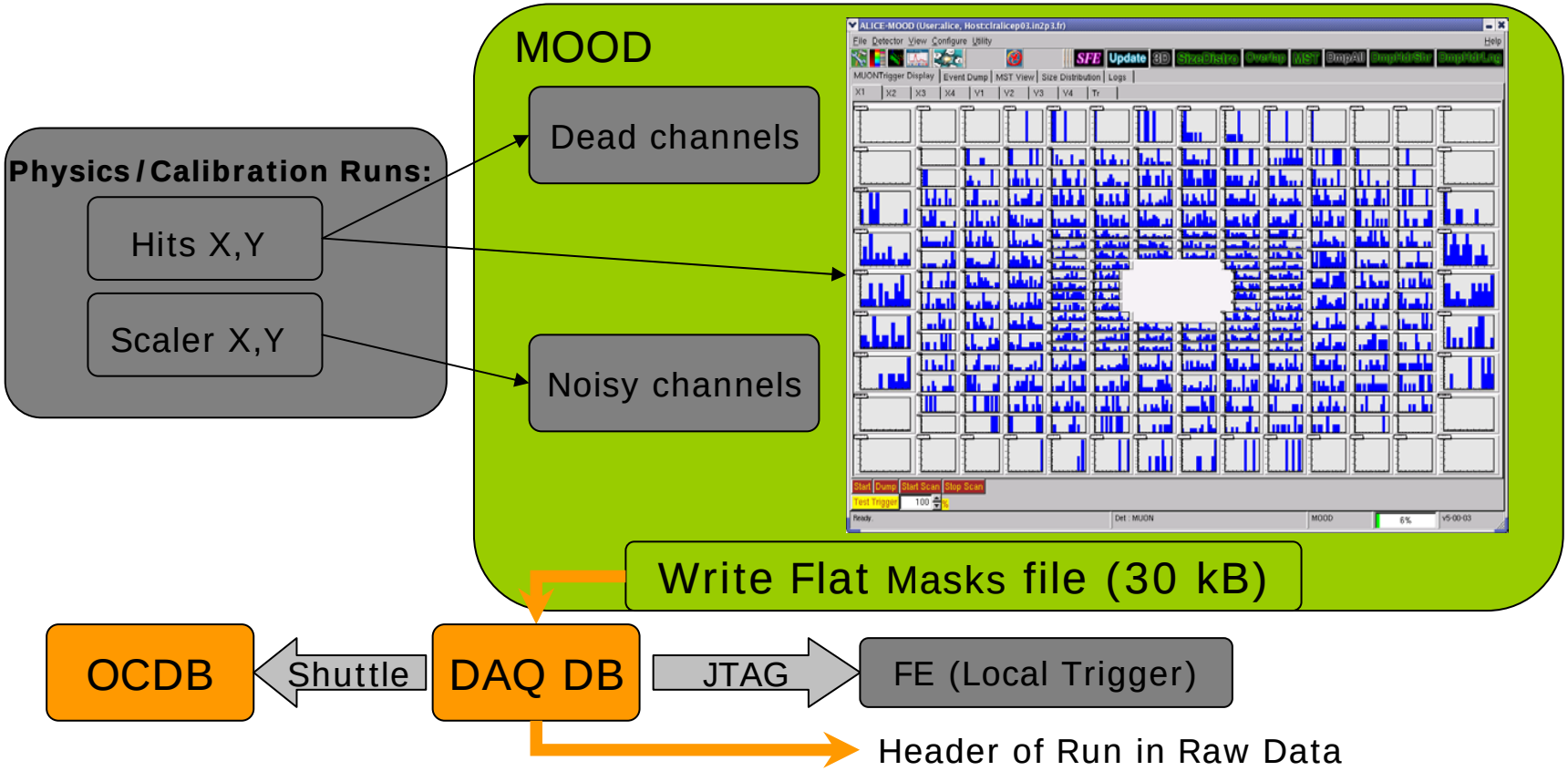
- Understood that there will be ONE preprocessor per subsystem
  - We obviously have more than one task to do per subsystem. How the preprocessor's supposed to know what to do ?
  - Even if driven by one preprocessor, we'll for sure have one class per "type of job". Would be great to have this incorporated into the framework (e.g. have the Preprocessor a Ttask-like object ?)
- Cooperation between preprocessors
  - Typical use case for us is dead channels. Basically we'd like the dead channel preprocessor to be ran after a pedestal and/or gain run, taking advantage of as much information as available (i.e. both ped and gain). Would mean some persistency of the pedestal and gain files on FES. Is that possible ?

Offline Calibration code

- Nothing new since march 2006 : here's a recap
- Storage/Retrieval to/from OCDB
  - MUON TRK : implemented for pedestals, gains, dead channels
  - MUON TRG : implemented for LUT, masks
- AliMUONDigit(de)Calibrator exists
  - And is always "ON" in AliRoot
  - Apply pedestals, gains, dead channels
- TODO
  - Update gain correction (using 1th order correction, 2nd order will be used). Minor point though
  - Update dead channel treatment : so far dead channel simply rejected. Must instruct clusterizer how to better deal with this information. Not so minor job to do. First shot at it planned end Oct. 2006 during MUON Offline Working Week.

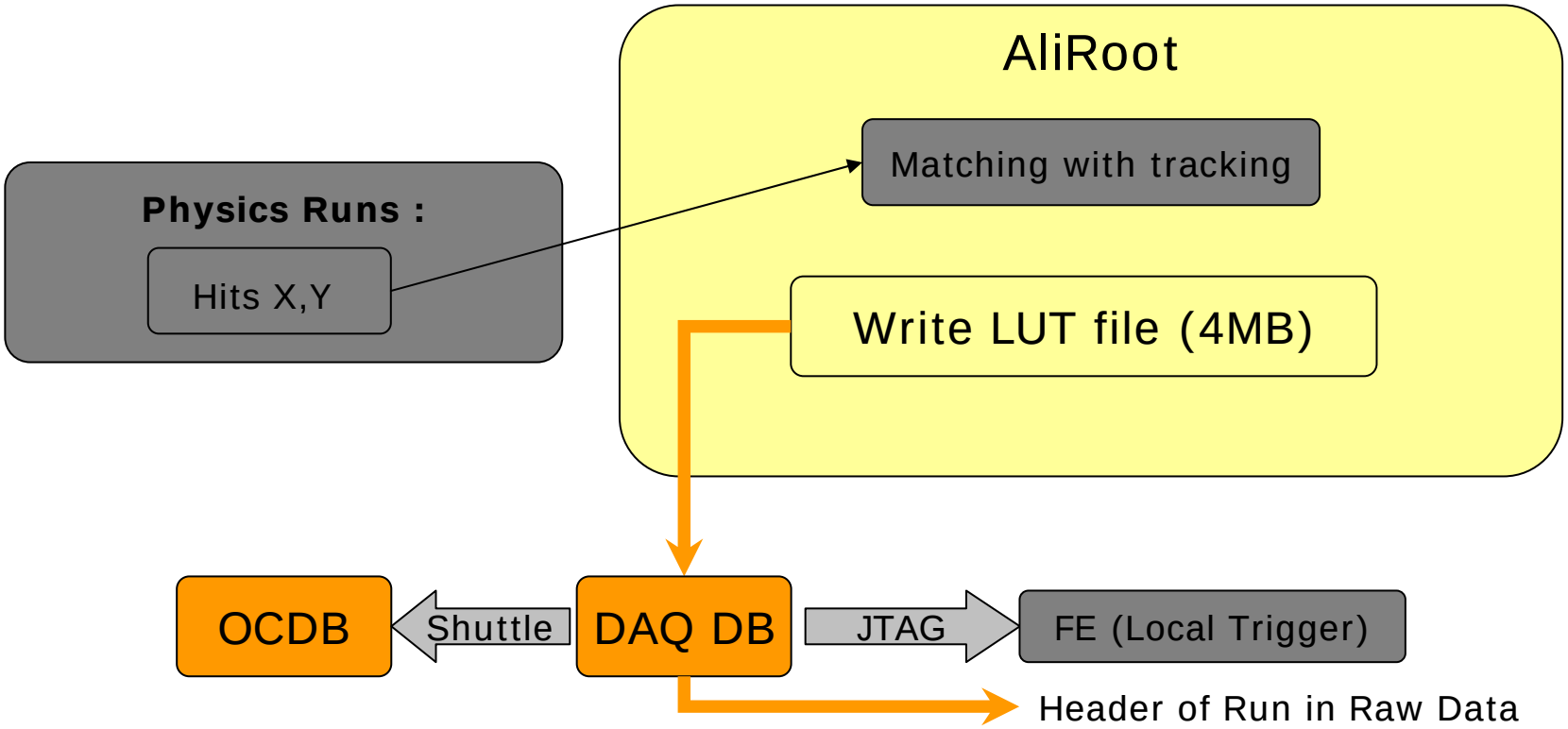
MUON Trigger Calibration

- Dead Map (Masks) : issued from MOOD (in progress)



MUON Trigger Calibration

- Look-Up-Table : issued from AliRoot (in progress)



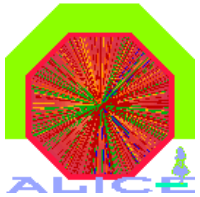
People

- MUON Tracking
  - ECS / Pedestals : AB
  - Electronics gain : J.L Charvet, B. Espagnon, M. Malek
  - Dead map (dead, noisy channels) : L. Aphecetche
  - GMS (global chamber displacement) : R. Tieulent
  - Alignment with part. (each detElem) : J. Castillo
  - Offline (calibration) + SHUTTLE : I. Hrivnacova, L. Aphecetche, C. Finck G. Martinez
  - Detector configuration : AB, I. Hrivnacova
  - DCS : I. Atanassov
  - MOOD : G. Batigne
  - DAQ CROCUS : S. Rousseau
- MUON Trigger
  - Calibration : dead map : V. Barret, R. Guernane
  - Calibration : LUT : B. Vulpescu
  - MOOD : V. Barret
  - SHUTTLE : Nantes
  - Offline (calibration) : P. Crochet, R. Guernane, L. Aphecetche, C. Finck

Conclusion

- Calibration scheme for the MUON is final
  - Tracking : Electronics, Dead Map, GMS, Alignment, DCS
  - Trigger : Dead Map, Look-up-Table
- Most of the code is already available and tested
- Under way for the Tracking
  - Pedestals/Gains -> final ECS integration
  - GMS : Optimization, finishing the GUI
  - Alignment : Optimization, interface the survey files
  - SHUTTLE : Strategy defined, coding under way
  - Offline : Reconstruction from raw data, pedestal, calibration & noisy channels is working
- Under way for the Trigger
  - Final code for the Dead Map (in MOOD) and LUT (in AliRoot)
  - SHUTTLE : Coding (similar to the Tracking)
  - Offline : Reconstruction from rawdata including mask and LUT is working.

The calibration of the MUON arm is progressing well



BACKUP

Readiness (v8 updated)

Par #	Parameter	Data format/size per channel	Data size (Total) Bytes in OCDB	Data size (Total) Bytes reference	Update freq	Source	Confirmed	Run type / Trigger type
1	Pedestal corrections	Buspatch, manuid, channelid, mean, sigma	1,00E+07	no	Run	DAQ	yes	pedestal / pulser
2	Gain corrections	Buspatch, manuid, channelid, a0, a1, a2	1,25E+07	no	Day	DAQ	yes	calibration / pulser
3	FEE parameters from industry	seria n°, channel, capa, gain	5,00E+06	no no	Once	DCDB (XML files)	yes	-
4	Dead map - Tracking	Buspatch, manuid, channelid, level	1,00E+06	no	Run	DAQ	yes	pedestal / pulser
5	GMS Tracking	AliAlignObjMatrix	2,50E+04	no	Run	DCS	yes	-
6	Aligment Tracking	AliAlignObjMatrix	2,50E+04	no	few/Day	Offline	yes	Field OFF + ON
7	Dead map - Trigger	#RegionalBoard, #LocalBoard, #stripNumber, level	5,00E+03	no	Run	DAQ	yes	calib and phys runs
8	Masks (Trigger)	#RegionalBoard, #LocalBoard, #stripNumber, level	5,00E+03	no	Run	DAQ	yes	calib and phys runs
9	Look-up-Table (Trigger)	32768 (15 adress bits) * 4 output bit word (2 bits for lpt and 2 bits for hpt)	4,00E+06	no	Each change of physics conditions	First runs Simulation then real data	yes	phys runs

# of required events/sampling rate	Processing level: sub-event or event	Results: FEE/Archive	Accessible by offline	Calib. Procedure in AliRoot	use case #
1000 events / run	sub-event	FEE + DAQ FES/OCDB	Yes	yes	1
5 * 1000 events / run	sub-event	DAQ FES/OCDB	Yes	yes	1
-	-	DCDB	Yes	yes	1 (once)
1000 events / run	sub-event / event	DAQ FES/OCDB	Yes	yes	1 (and offline)
-	-	DCS ArchiveDB/OCDB	Yes	yes	3
10-100 Kevents	event	OCDB	Yes	yes	produced offline (CAF)
100 calib events / run	sub-event	DAQ FES/OCDB	Yes	yes	1
100 calib events / run	sub-event	DAQ FES/OCDB	Yes	yes	1
all events	event	DAQ FES/OCDB	Yes	yes	produced offline

Calibration Milestones (v3 updated)

New calibration Milestones (Alberto Colla)						
Milestones	provide list of milestones	14-juil-06	DONE		14-juil-06	
User Requirements	provide size of reference data	15-août-06	DONE		15-août-06	
	Confirmation by DAQ experts on calibration strategy	1-oct-06	DONE		1-oct-06	
	Confirmation by DCS experts on calibration strategy	1-oct-06	DONE		1-oct-06	
	Finalize requirements for dead map	17-juil-06	DONE		17-juil-06	
	Define strategy	17-juil-06	DONE		17-juil-06	
	revise size of calibration and reference data	3-oct	DONE		3-oct-06	
Offline	Calib procedure implemented in AliRoot	31-juil-06	DONE		31-juil-06	
	Provide name of contact for MC data quality control	1-août-06	DONE		1-août-06	Frederic Yermia <yermia@to.infn.it>
	Provide data quality control macro. Check of occupancy.	15-sep-06	DONE		15-sep-06	
	Check memory consumption of reconstruction	15-sep-06	DONE		15-sep-06	
SHUTTLE	preprocessor algorithm implemented for use case 1	2-oct-06	LATE	0	31-oct-06	DAQ ECS
	preprocessor algorithm implemented for use case 3	2-oct-06	LATE	0	30-nov-06	GMS
	preprocessor algorithm implemented for use case 4	2-oct-06	LATE	0	31-jan-07	DCS
Online	algorithm for DAQ implemented	30-sep-06	DONE		30-sep-06	The DAQ sequence for pedestal and calibration is done
	algorithm benchmark by DAQ experts	30-sep-06	LATE	0	15-nov-06	The final intregration of pedestal and calibration scripts in the ECS is foreseen for mid-Novemver (or before)
New Alignment Milestones (Raffaele Grosso)						
Geometry	Provide symbolic volume names AddAlignableVolumes	3-oct-06	DONE		3-oct-06	
Survey data	Format of Survey data and conversion into alignment objects	3-oct-06	DONE		3-oct-06	
Sim/Rec	alignment aware simulation	3-oct-06	LATE	0	30-nov-06	Aligment aware simulation done. Handling half chambers to be enabled.
	alignment-aware reconstruction	3-oct-06	DONE		3-oct-06	
	alignment procedures	3-oct-06	DONE		3-oct-06	

Software Milestones (v3 updated)

MUON Software Status					
Item	sub item	Due Date	Status	New Date	Comment
Alignment	General	11-fév-06	DONE	11-fév-06	using TGeoVolumeAssembly commited
	mis-alignment	11-fév-06	DONE	11-fév-06	applying mis-alignement to geometry
	alignment from physics tracks	30-avr-06	DONE	30-avr-06	Compute alignment from physics tracks without and with B: code exists and will be committed after the code is made AliRoot compliant Code committed in June 06 Alignment Data in local CDB storage
	Data	6-avr-06	DONE	6-avr-06	The macro for generation mis-alignment data was put in AliRoot in April and after disussion with Raphaelle et Peter it was decided that the data going to CDB will be generated via this macro (by CERN team) when it will clear where should they go to.
Calibration	General	30-jan-06	DONE	30-jan-06	Calibration classes exist together with calibration and de-calibration methods usingg the CDB framework and will be committed. March March offline week: done
	parameters	15-déc-06	0	0	15-déc-06	calibration and external parameters defined. It is not clear what the source of every parameters is, what is the full list of parameters, and how to collect them. Information will be provided as they become available. March offline week: Pedestals and g
	external DB	23-mars-06	DONE	23-mars-06	March offline week: List of parameters and respective source available. Several points still need to be discussed. Document published
Trigger		30-jan-06	DONE	30-jan-06	Trigger classes are there, however there is no link with the general classes we provide to simulate CPT March offline week: done
Geom					The remaining overlaps between MUON and the Structure will be corrected
Recon					
Raw D					
Docur					
Raw d					

New Milestones on Raw Format (Cvetan Cheshkov)						
Commissionning	Provide commissionning schedule and persons in charge of DAQ and data analysis	3-oct-06	LATE	LATE	3-oct-06	TO BE CLARIFIED
Hardware mapping	Provide DDL to equipment ID mapping	3-oct-06	DONE		3-oct-06	
	Provide Geometrical mapping	3-oct-06	DONE		3-oct-06	
Reconstruction	Status of raw-data reconstruction	3-oct-06	DONE		3-oct-06	
	Removal of dependencies on gAlice (AliRun)	3-oct-06	LATE	0	30-nov-06	
Simulation	Status with raw-data format	3-oct-06	DONE		3-oct-06	
	Implement Raw2(S)Digits for event embedding	3-oct-06	LATE	0	15-oct-06	Raw2SDigit: done for tracker, for trigger this week
Visualisation	Raw data visualisation within the aliroot event display (EVE)	3-oct-06	LATE	LATE	3-oct-06	TO BE CLARIFIED