

CALIBRATIONS WITH EXTERNAL GENERATOR

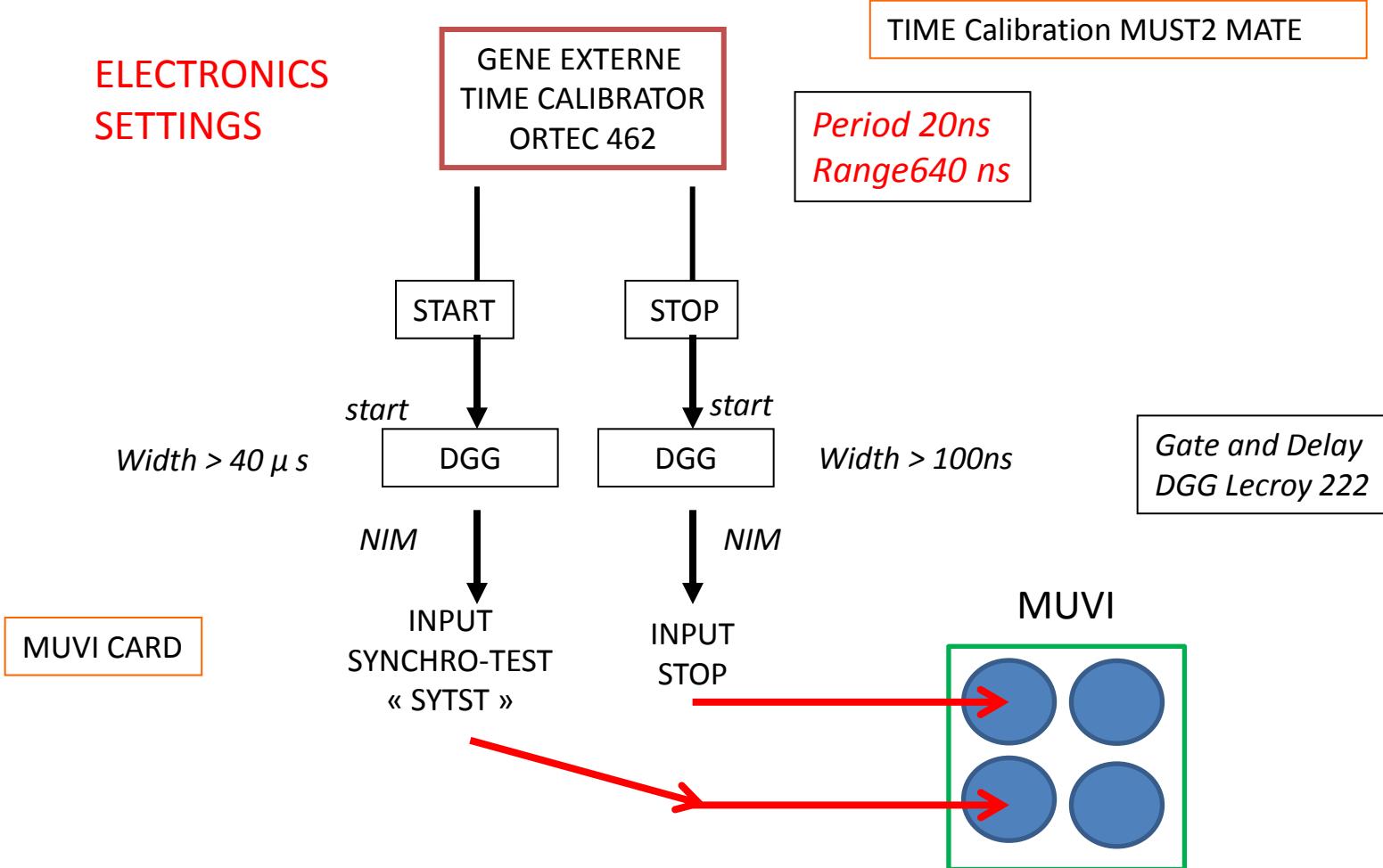
TIME CALIBRATION (TC) WITH THE ORTEC GENERATOR

Configuration DAS – CALIMERO STEPS:

- I Low and High voltages ON on MUST2 ; T -5°C
- II Connect the Time Calibrator (slide 2)
- III Exit from the experiment run control e** : acqmenu::
Type TK then KALL in the Menu then return (twice)
Launch again: RC
- IV Run Control with MUST2 stand-alone. *If the experiment is in the stage of a coupled mode with Cats ans other detectors, first gorto the Das menu for the CENTRUM and disconnect the slaves to do the Time Calib*
- IV DAS configuration correctly set for CALIMERO, GMT with only MM triggers
- V Be sure that the MUFI configuration is correct, see reference pages.

BT ON , HT ON telescopes DSSD
Check that the Time calibrator is ON !!

ELECTRONICS SETTINGS



RUN CONTROL

Run Control RC

select the configuration .xml corresponding to the Must2 « stand alone » mode:

OPEN in the MENU « File » of the NARVAL window of Run control

Select **e7**Muvi.xml**

WAIT

In the Menu select Mode : change from Editing to **Monitoring** Mode

Click on **INIT** → all actors shoud have « blue » frame

Then it will be ready to start once the DAS is correctly set.

Check the double Path for the storage:

/data/e7**X/e7**/acquisition/run/

/media/USBDISK/e7**/run

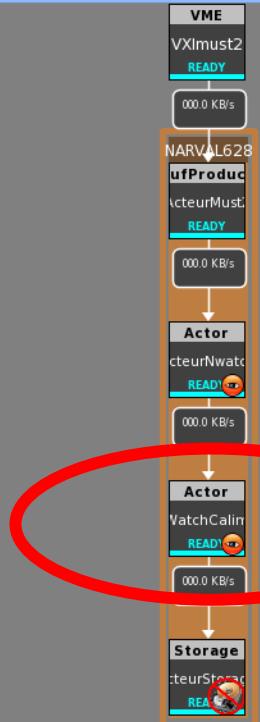


RUN
CONTROL

oring mode



e628



WATCHER CALIMERO

Messages

Date	Level	Logger	Message
			Filter
11/03/2014 10:09:13	INFO	rcc	configuration saved in /home/e628/ganacq_manip/e628/e628_Muvi.xml
11/03/2014 10:07:42	ERROR	vme	OUTPUT on ganlx14 : SBUF - - TcpWrite()
11/03/2014 10:07:41	INFO	rcc	finished execution of STOP
11/03/2014 10:07:19	INFO	rcc	received STOP
11/03/2014 10:06:44	INFO	rcc	finished execution of START
11/03/2014 10:06:41	INFO	vme	OUTPUT on ganlx14 : SBUF - - Tape Server connected -
11/03/2014 10:06:40	INFO	rcc	received START
11/03/2014 10:06:18	ERROR	vme	OUTPUT on ganlx14 : SBUF - - TcpWrite()
11/03/2014 10:06:13	INFO	rcc	finished execution of STOP
11/03/2014 10:06:01	INFO	rcc	received STOP
11/03/2014 10:04:09	INFO	rcc	finished execution of START
11/03/2014 10:04:07	INFO	rcc	received START
11/03/2014 10:04:07	INFO	vme	OUTPUT on ganlx14 : SBUF - - Tape Server connected -

Nettoyer la config avant de démarrer
(ou en cas de problème de blocage répété sur Calimero)
fenêtre du Menu de l'acquisition : pour tuer tous les process
Tk puis kall

Fenêtre Acqmenu Terminal

Taper : RC

Attendre la fenêtre du run control (**RC**)

Selectionner le fichier correspondant à la config Must2 seul ...Muvi.xml

Vérifier la séquence de START /STOP (Menu Setup du RC → LIST)

STORAGE: ON ; Vérifier le path (disque data + disque Usb suivant les cas)

Fenêtre RC cliquer sur INIT :

attendre que tous les acteurs/VXI soient bleus. Sinon reprendre le INIT.

DAS: configurer pour les calibs Calimero (*cf pages suivantes*)

Fenêtre RC : cliquer sur START, attendre que tous les rectangles soient verts

DAS >>> fenêtre géné Calimero, Appuyer sur le start

Attendre les 100%, quand la Fenêtre de progression Calimero disparaît - attendre

Puis cliquer sur STOP dans le RC

Résumé - VERIFICATION DE LA CONFIG DAS

Avant de lancer le run Calimero,

- Vérifier les signaux de déclenchement sur chaque carte CAS de Muvi → ORDi
- Vérifier la configuration des Mates :
→ gamme des TAC, seuils à 402 keV, polarité des Mates X +, Mates Y -
- Vérifier le GMT : configuration MUFI GMT , IN1 à IN4
- VÉRIFIER que la seule source de déclenchement physique des CAS est le génér, i.e. pas de source alpha (ou bien la tourner pour qu'elle ne soit pas face aux Must2 en cours de calib en temps) pas de génér interne sur les MufeeY quand on lance la calib Calimero sur les MufeeX
- Vérifier qu'il ne reste pas le signal d'horloge interne (cf page DAS de MUFI)
→ synchro test généré par l'horloge CKTST → non (rouge)

Run Control **RC** se mettre dans une configuration .xml qui correspond au mode « stand alone » deMust2.

GMT TRIGGERS

File Utilities Update Acquisition Visualization Option Reserved Help

Add Crate Delete Crate Online e628

VXI Crate : 1 Cpu : ganix14

CATS MUST2

Add Module Delete Module Move module Change CPU

INSPECTION GMT CENTRUM MUVI ADC U2M

[GMT Slot(2), Type(GMT)]

User Interface Generic Interface Parameters

All MUST2 of
MUVI1
in the trigger
MM1
MM2
MM3
MM4

Input Channel

1: MM1	NIM
2: MM2	NIM
3: MM3	NIM
4: MM4	NIM
5: Cats1div	NIM
6: Cats2div	NIM
7: TIARA	NIM
8: CHARISSAdiv	NIM
9: EXOGAMdiv	NIM
10: GMT_10	NIM
11: Hyball	NIM
12: Barrel	NIM
13: GMT_13	NIM
14: GMT_14	NIM
15: GMT_15	NIM
16: GMT_16	NIM
MTI	NIM

Inputs Outputs

General Configuration ▾

Analysis modes ▾

Sampling ▾

Time Markers ▾

Data Block ▾

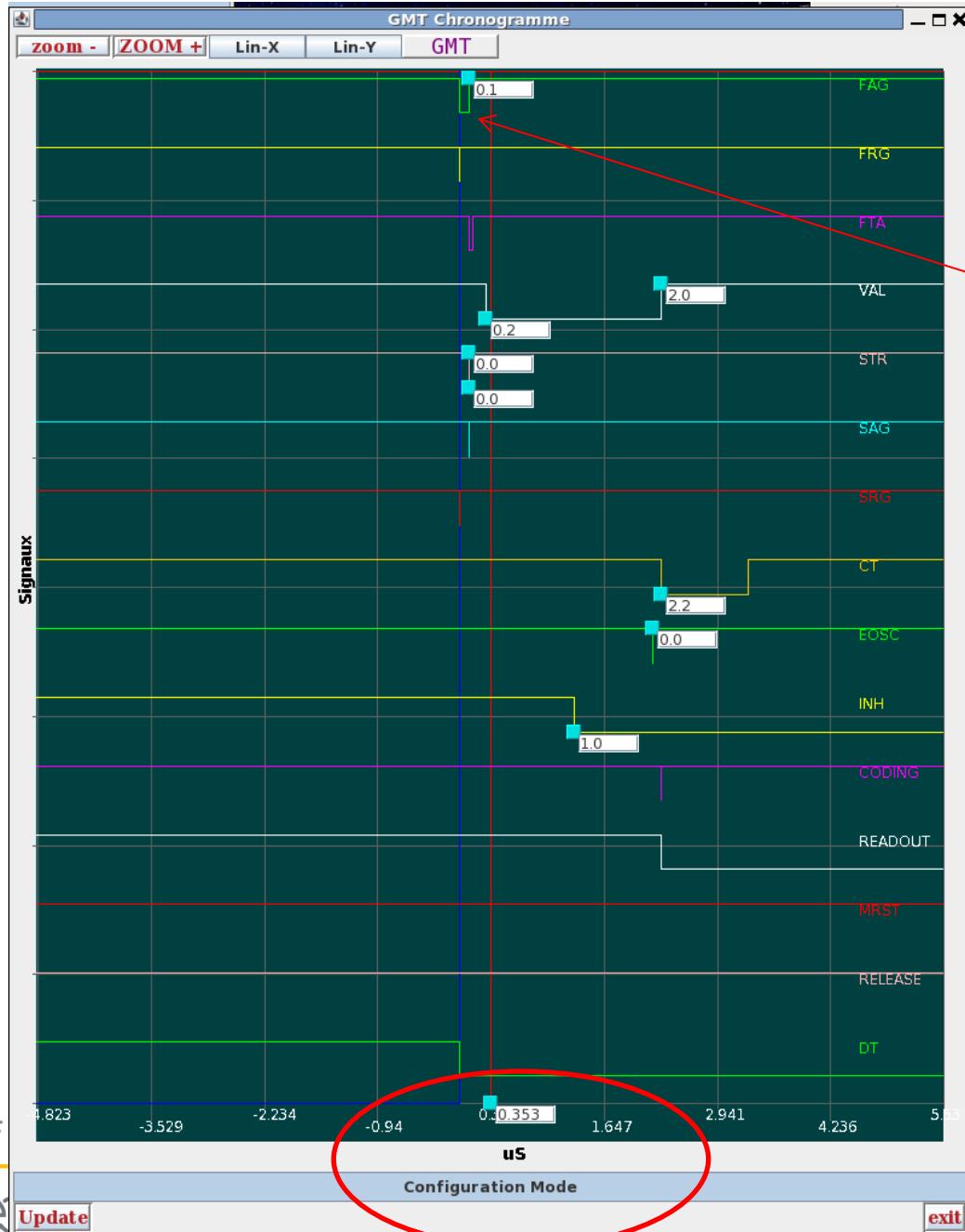
GMT Coupling ▾

Test

Check GMT chronogramme

Expert Registers Access

Modified Tuesday, March 11, 2014 9:10:41 AM Document :: : SUCCESS < e628.das >



GT chronogramme

GMT
set the FAG window (100/200ns)
correctly for CALIMERO runs

GMT (MUFI crate)
Click on oscilloscope
Click on
Configuration Mode

CENTRUM: initial configuration of the CENTRUM for e7**

CENTRUM: disconnect the slaves to do the Time Calib

Utilities Update Acquisition Visualization Option Reserved Help

Add Crate Delete Crate Online e628

Crate : 1 Cpu : ganix14

NSPECTION_ **CENTRUM** MUVI ADC U2M Add Module Delete Module Move module Change CPU

CENTRUM Slot(4), Type(CENTRUM)

User Interface Generic Interface Parameters

Master TX1 CATS OFF

Mode Connected

Local OFF

Sent... When hit

Delay TAG 0 ns

Universal clock

```
graph LR; Input((Input clock)) --> AND1[AND]; AND1 --> VXIGO[VXIGO signal]; AND1 --> ClockOff[Clock OFF]; VXIGO --> PreLoad[PreLoad]; ClockOff --> ClockReset[Clock reset]; PreLoad --> ClockReset;
```

Expert Label Reserved

CHECK MUVI CONFIGURATIONS

in electronic setup
and
physicist setup

MUVI configuration (for Exp and for Calib)

GANIL DAS v14.03-03 [Language : English(en)] must2

File Utilities Update Acquisition Visualization Option Reserved Help

Add Crate Delete Crate Online must2

MUST2

VXI Crate: 1 Cpu: ganlx11 Add Module Delete Module Move module Change CPU

INSPECTION GMT MUVI1 MUVI2 ADC U2M CENTRUM

[MUVI1 Slot(5), Type(MUVI)]

User Interface Generic Interface Parameters

Electronics Setup Physicist Setup

MUVI CAS/TELESCOPE 1 CAS/TELESCOPE 2 CAS/TELESCOPE 3 CAS/TELESCOPE 4

Mode Acquisition Temps mort commun

Mode Lecture Donnée VME Standard

Cycle d'acq courants de polarisations Executer Lecture

Entrée STOP terminée sur 50 Ohms oui

RAZ Automatique non

Horloge Locale non

Echelles

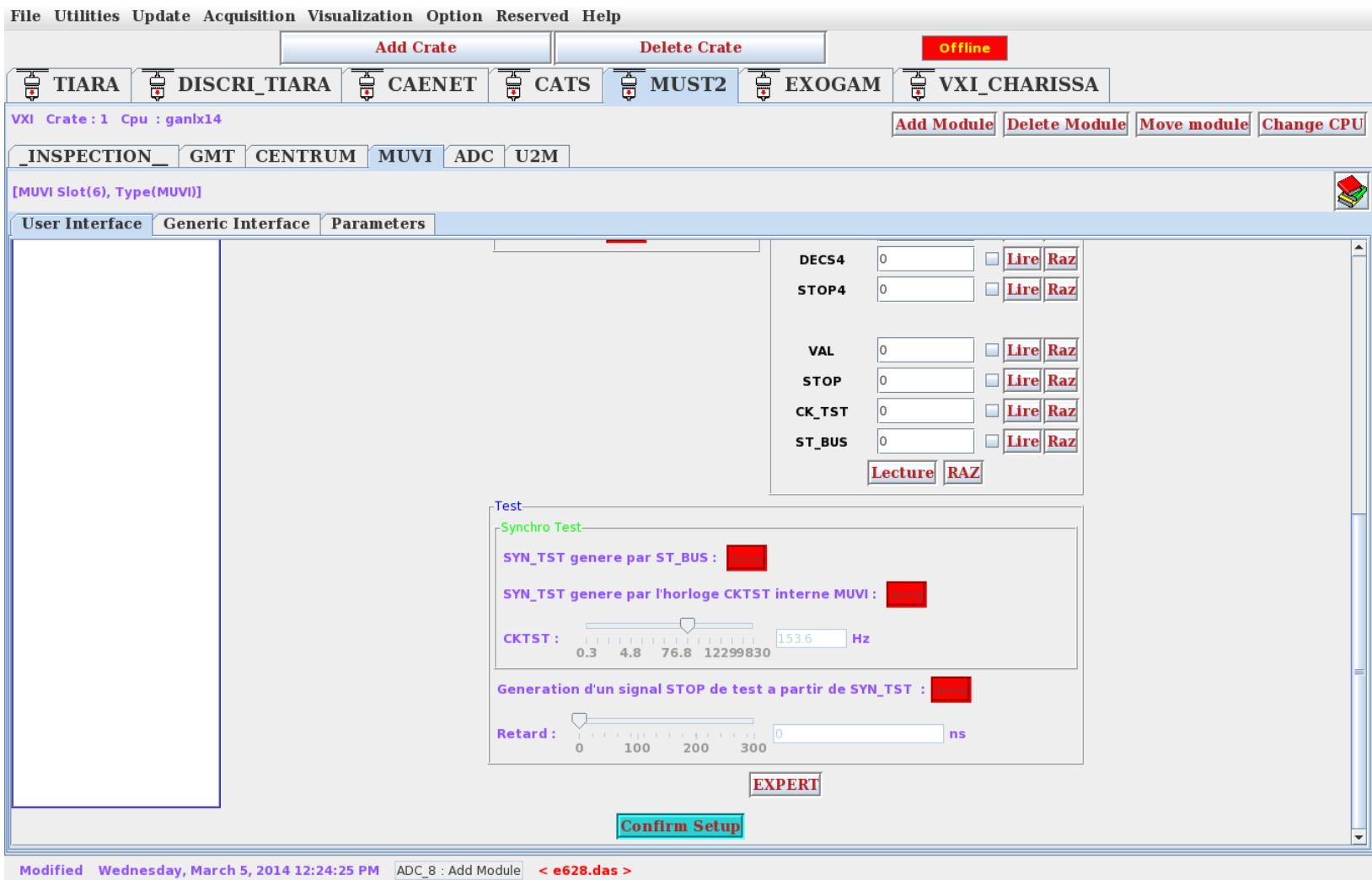
Nom	Comptage	M/A
ORD1	104816	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
DECS1	55721	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
STOP1	55721	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
ORD2	330743103	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
DESC2	73916	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
STOP2	159597949	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
ORD3	112612	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
DECS3	59995	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
STOP3	59995	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
ORD4	109604	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
DECS4	55600	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
STOP4	55600	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
VAL	199752	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
STOP	0	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
CK_TST	469	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz
ST_BUS	0	<input checked="" type="checkbox"/> Lire <input type="checkbox"/> Raz

Lecture Raz

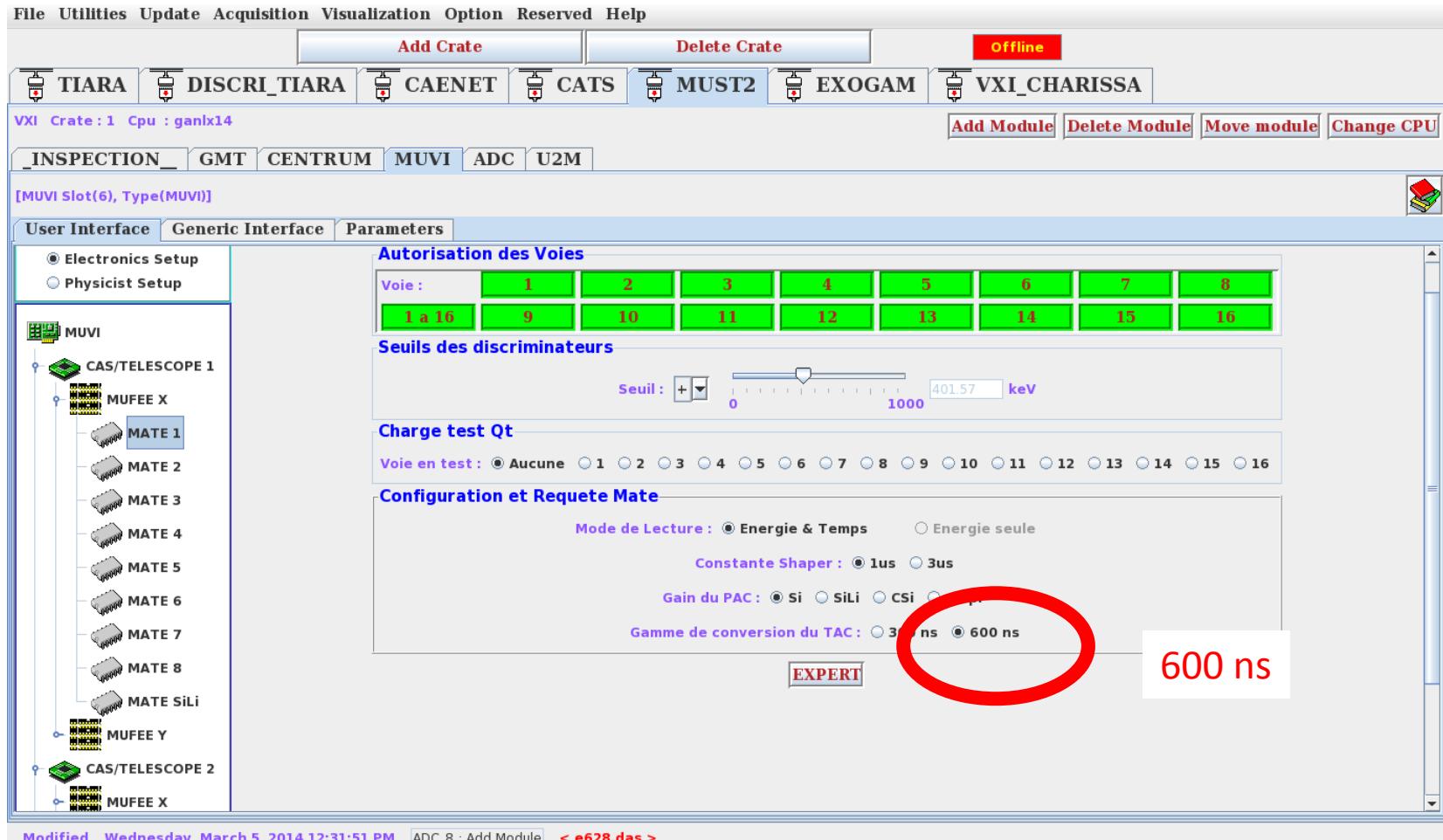
Test Synchro Test

Modified Monday, June 12, 2017 6:37:43 PM Document :: : SUCCESS < must2.das >

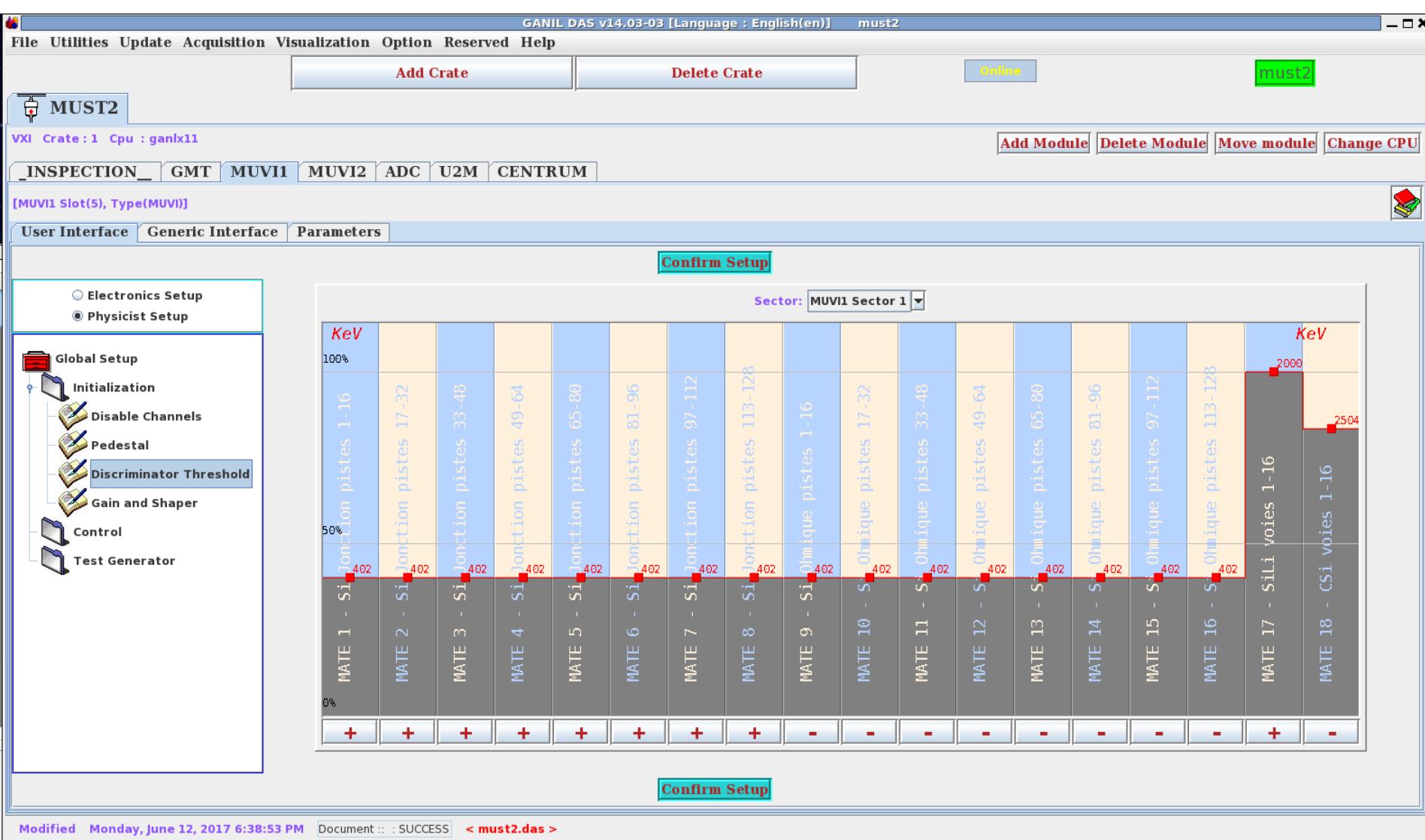
MUVI Configuration (for Exp and Time Calib)



TAC Range on Mate (for Exp and for Calib)



Discriminator thresholds, polarities of the MufeeX/MufeeY



MUVI, MATE gain and shapers

GANIL DAS v14.03-03 [Language : English(en)] must2

File Utilities Update Acquisition Visualization Option Reserved Help

Add Crate Delete Crate Online must2

VXI Crate:1 Cpu : ganlx11

INSPECTION GMT MUVI1 MUVI2 ADC U2M CENTRUM Add Module Delete Module Move module Change CPU

[MUVI1 Slot(5), Type(MUVI)]

User Interface Generic Interface Parameters Confirm Setup

Sector: MUVI1 Sector 1

	MATE 1	MATE 2	MATE 3	MATE 4	MATE 5	MATE 6	MATE 7	MATE 8
PAC gain	Si							
Shaping Constant	1us							
	MATE 9	MATE 10	MATE 11	MATE 12	MATE 13	MATE 14	MATE 15	MATE 16
PAC gain	Si							
Shaping Constant	1us							
	MATE 17	MATE 18						
PAC gain	SiLi	CSi						
Shaping Constant	3us	3us						

Electronics Setup
Physicist Setup

Global Setup
Initialization
Disable Channels
Pedestal
Discriminator Threshold
Gain and Shaper

Paramètres de calibration

Selection Mate 1

Coefficient/Mate	1	2	3	4	5	6	7	8
Coef 1	0	0	0	0	0	0	0	0
Coef 2	0	0	0	0	0	0	0	0

Coefficient/Mate	9	10	11	12	13	14	15	16
Coef 1	0	0	0	0	0	0	0	0
Coef 2	0	0	0	0	0	0	0	0

Identite : 0 Temperature : 0 °C Seuil haut alarme de Temperature : 0 °C Seuil bas alarme de Temperature : 0 °C

Voies en Panne

Selection Mate 1

Voie :	1	2	3	4	5	6	7	8
	9	10	11	12	13	14	15	16

MufeeX

Tension de decalage

+0.8V	-0.8V	GND	
Si a pistes	<input type="radio"/>	<input type="radio"/>	
SiLi	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Paramètres de calibration

Selection Mate 9

Coefficient/Mate	1	2	3	4	5	6	7	8
Coef 1	0	0	0	0	0	0	0	0
Coef 2	0	0	0	0	0	0	0	0

Coefficient/Mate	9	10	11	12	13	14	15	16
Coef 1	0	0	0	0	0	0	0	0
Coef 2	0	0	0	0	0	0	0	0

Courant des pistes Si (cote ohmique)

Selection Mate 9

Piste 1	Piste 2	Piste 3	Piste 4	Piste 5	Piste 6	Piste 7	Piste 8
Courant (nA)	0	0	0	0	0	0	0
	Piste 9	Piste 10	Piste 11	Piste 12	Piste 13	Piste 14	Piste 15
Courant (nA)	0	0	0	0	0	0	0

Identite : 0 Temperature : 45 °C Seuil haut alarme de Temperature : 0 °C Seuil bas alarme de Temperature : 0 °C

Voies en Panne

Selection Mate 9

Voie :	1	2	3	4	5	6	7	8
	9	10	11	12	13	14	15	16

MufeeY

Tension de decalage

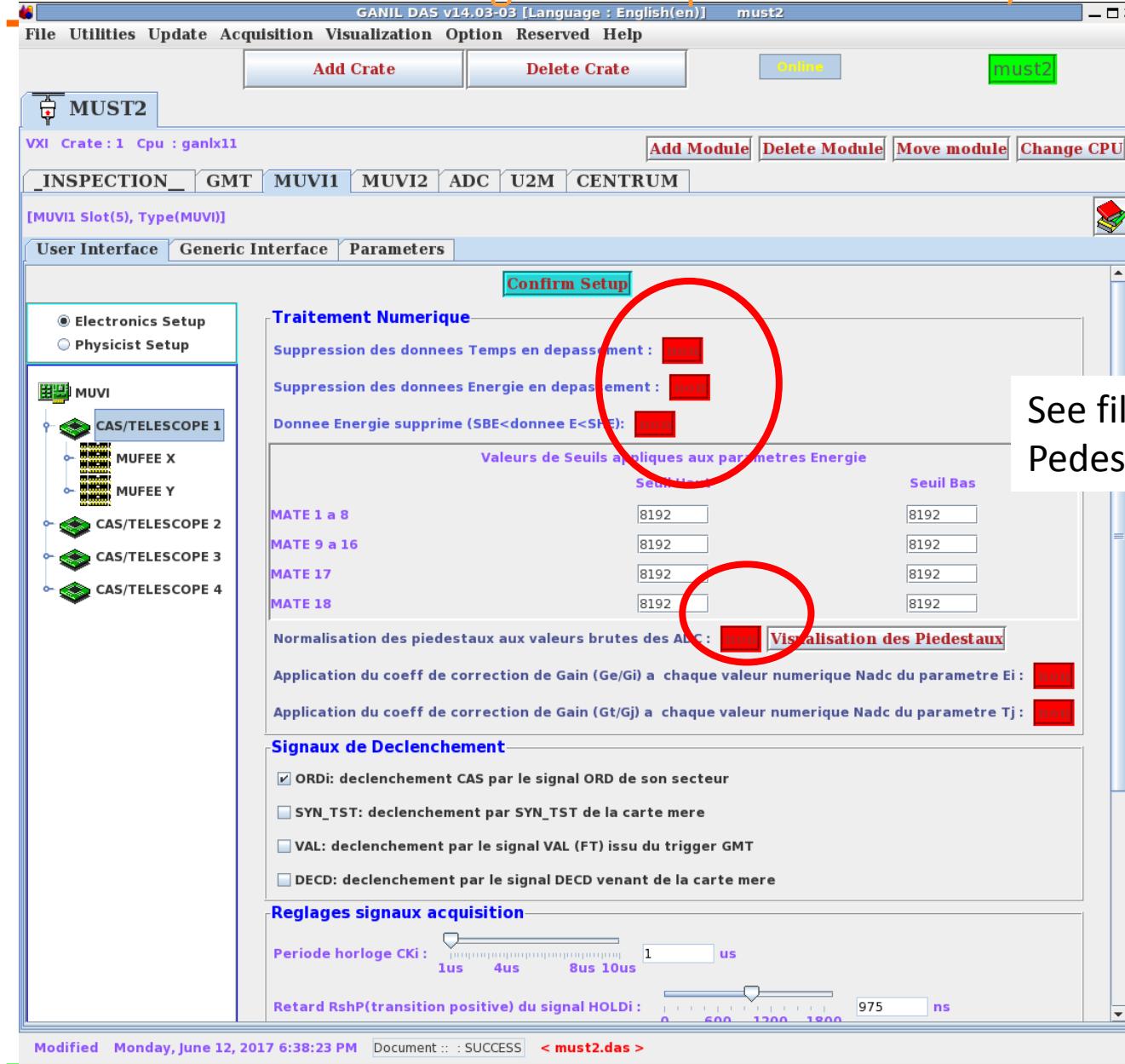
+0.8V	-0.8V	GND	
Si a pistes	<input type="radio"/>	<input type="radio"/>	
CsI	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Visualisation de la sortie Debug des Mates

0	10	11	12	13	14	15	16
---	----	----	----	----	----	----	----

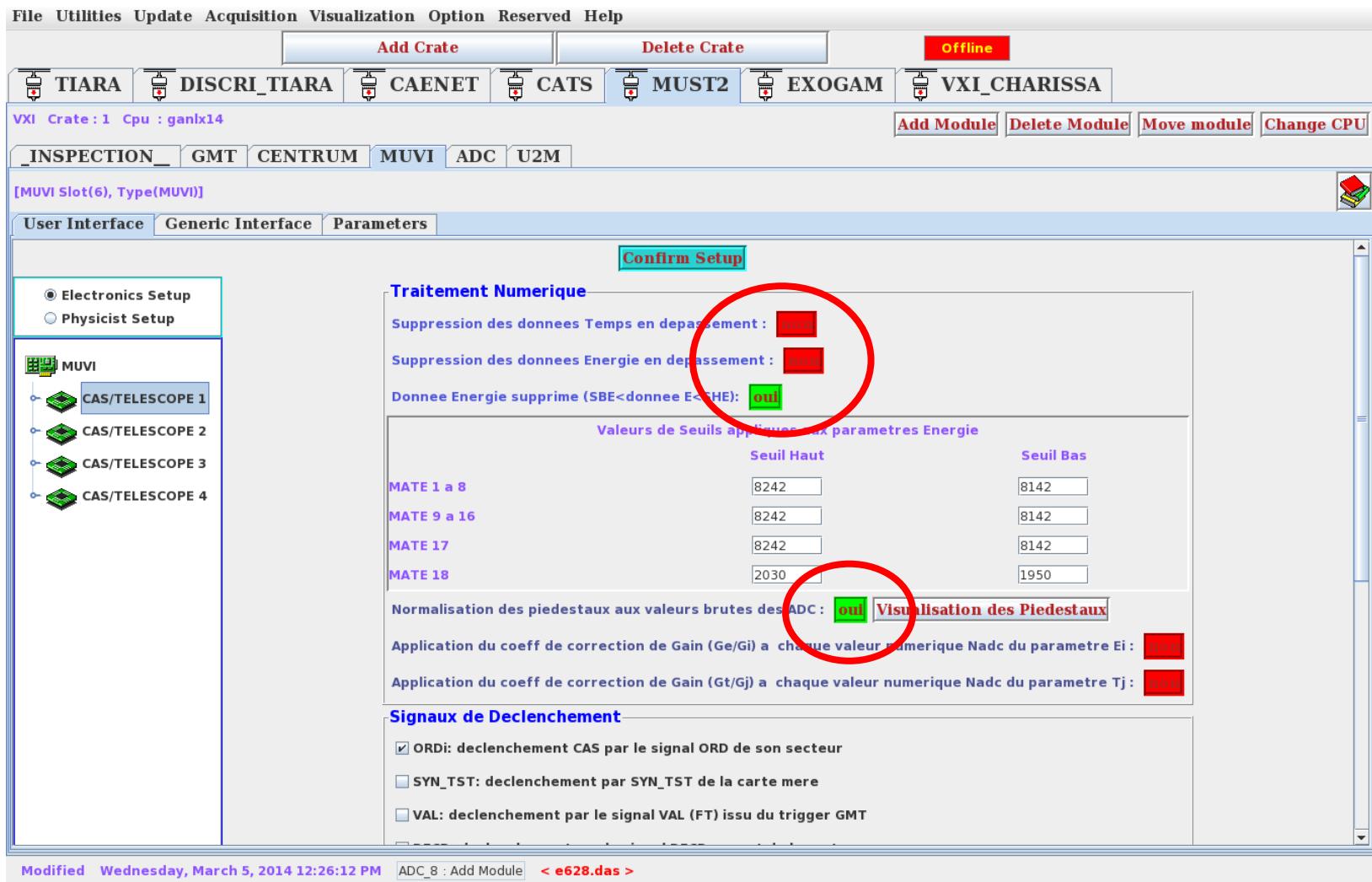
Exit

EXP Initial configuration: pedestals in Cas/telescope

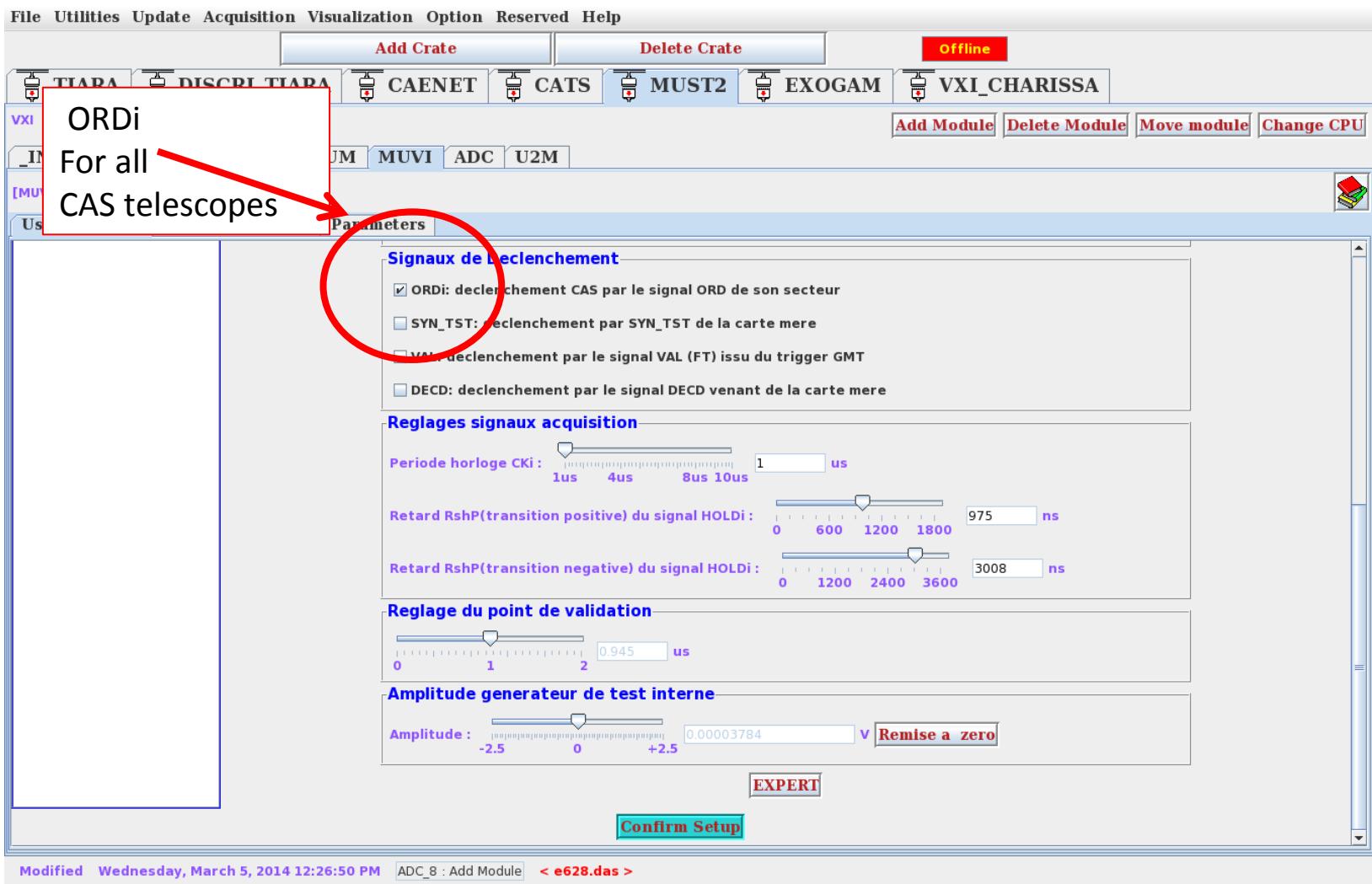


See file to operate the Pedestal suppression

EXP Initial configuration: suppression of pedestals in Cas/telescope



Configuration for CAS/telescopes: ORDI ok for all cases (EXP, Calib)



CONFIGURATION OF CAS/TELESCOPE FOR TIME CALIBRATION (for all MM2)

VXI Crate : 1 Cpu : ganix7

INSPECTION **GMT1_1_2** **CEN1_1_5** **ADC1_1_7** **MUVI1_1_9** **MUVI1_1_11**

Add Module Delete Module Move module Change CPU

[MUVI1_1_9 Slot(9), Type(MUVI)]

User Interface Generic Interface Parameters

Confirm Setup

Traitement Numerique

Suppression des donnees Temps en depassement :

Suppression des donnees Energie en depassement :

Donnee Energie supprime (SBE<donnee E<SEIE) :

Valeurs de Seuils appliques aux parametres Energie

	Seuil Haut	Seuil Bas
MATE 1 a 8	8192	8192
MATE 9 a 16	8192	8192
MATE 17	8192	8192
MATE 18	8192	8192

Normalisation des piedestaux aux valeurs brutes des ADC : Visualisation des Piedestaux

Application du coeff de correction de Gain (Ge/Gi) a chaque valeur numerique Nadc du parametre Ei :

Application du coeff de correction de Gain (Gt/Gj) a chaque valeur numerique Nadc du parametre Tj :

Signaux de Dclenchement

ORDI: dclenchement CAS par le signal ORD de son secteur

SYN_TST: dclenchement par SYN_TST de la carte mere

VAL: dclenchement par le signal VAL (FT) issu du trigger GMT

DECD: dclenchement par le signal DECD venant de la carte mere

Reglages signaux acquisition

Periode horloge CKi : 1us 4us 8us 10us

Retard RshP(transition positive) du signal HOLDi : 0 600 1200 1800

ORDI CAS

Modified Wednesday, June 26, 2013 4:10:07 PM ADC2_1_9 : Add Module < e655s.das >

DAS CONFIGURATION

When the configuration is correctly set,
Stay on the page of the GMT of the MUST2 crate

change DAS from OFFLINE TO ONLINE

The window appears:

Click on CANCEL



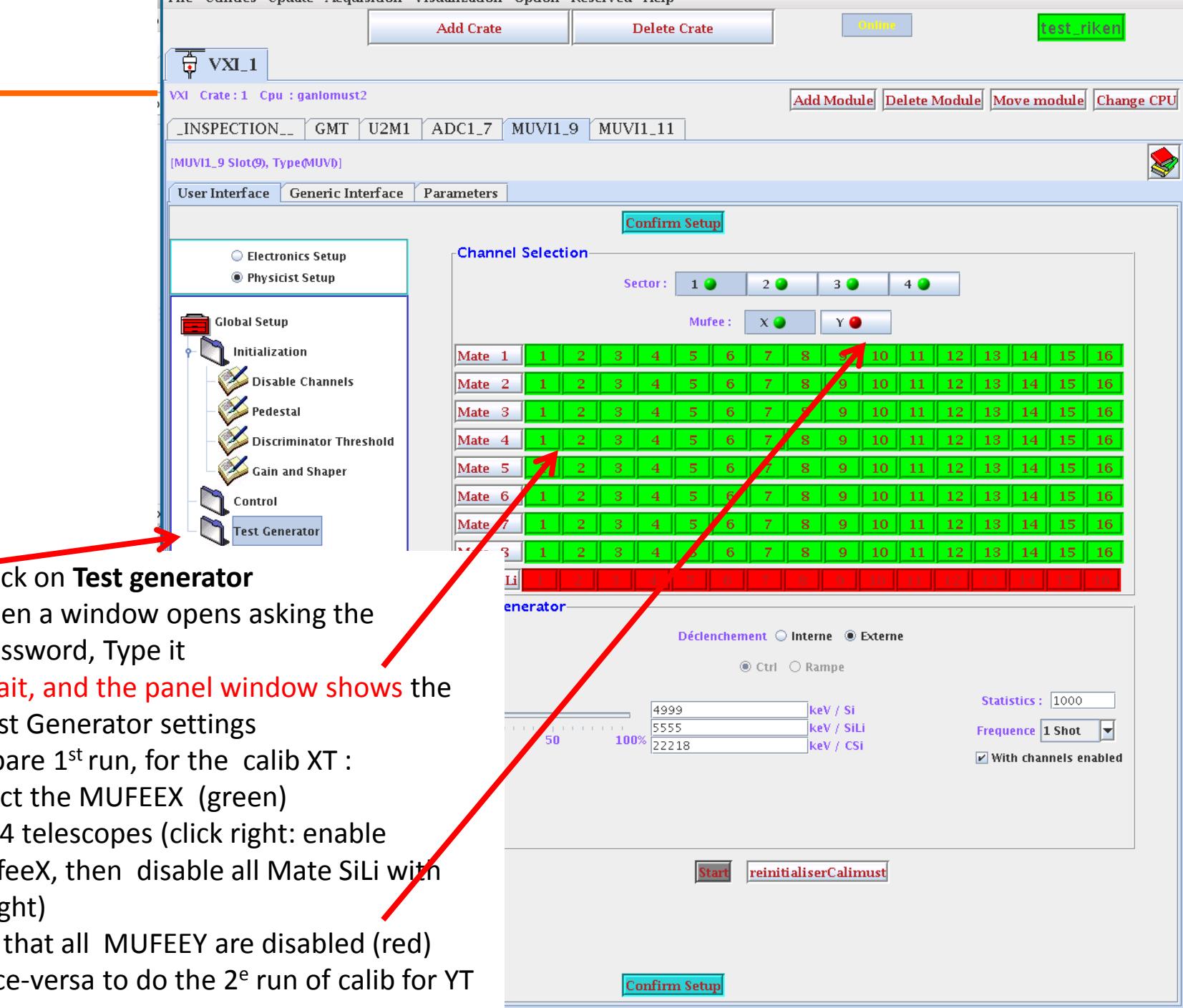
THEN (staying on MUST2 GMT module)

Go to Menu UPDATE

And select FOR THE CURRENT CRATE

write SOFTWARE TO HARDWARE

LAUNCHING CALIMERO



1. Click on **Test generator**
2. Then a window opens asking the password, Type it
3. Wait, and the panel window shows the Test Generator settings
4. Prepare 1st run, for the calib XT :
4. Select the MUFEEX (green) of the 4 telescopes (click right: enable all MufeeX, then disable all Mate SiLi with click right)
- check that all MUFEY are disabled (red) and vice-versa to do the 2^e run of calib for YT

The Cables Update Acquisition Visualization Update Reserved Help

Add Crate Delete Crate Online test_riken

VXI Crate : 1 Cpu : ganlomust

INSPECTION GMT U2M1 ADC1_7 MUVI1_9 MUVI1_11

[MUVI1_9 Slot(9), Type(MUVIb)]

User Interface Generic Interface Parameters

Confirm Setup

Electronics Setup Physicist Setup

Global Setup Initialization Disable Channels Pedestal Discriminator Threshold Gain and Shaper Control Test Generator

Channel Selection

Sector: 1 2 3 4

Mufee: X Y

Mate 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate SiLi	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Test Generator

Déclenchement: Interne Externe

Ctrl Rampe

Statistics: 1000

Frequency: 1 Shot

With channels enabled

Value > thresholds
Typical 5 MeV

Start reinitialiserCalimust

Confirm Setup

FIRST START DAQ with the Run Control
Then START here the Calimero

STATISTICS: 1000
Frequency: 1 shot
With channels enabled



[MUFI2_9 Slot(9), Type(MUVI)]

Interface Utilisateur Interface Générique Paramètres Valider la Configuration

Sélection Voie

Telescope : 1 (red) 2 (green) 3 (red) 4 (red)

Mufee : X (red) Y (green)

Mate 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate CSi	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Generateur de Test

Déclenchement : Interne (radio) Externe (radio)

Ctrl Rampe

Statistique : 1000

Fréquence 1 Coup

Avec masquage des voies

Stop Réinitialiser Calimust

Progression : GeneTest MUFI MUFI2_9 : 50%

Valider la Configuration

FIRST:
START ACQUISITION
in the Run Control
Then click on « START »
in the
Generator window

Wait for the window
showing the progress

For each Mate
channels 1: 6%

All ch. 2 13%

3: ...

14: 88%

channels 15: 94%

Wait till the end to stop
the Run in the RC window

Add Crate

Delete Crate

Online

test_riken



VXI Crate : 1 Cpu : ganlomust2

Add Module Delete Module Move module Change CPU

_INSPECTION__ GMT U2M1 ADC1_7 MUVI1_9 MUVI1_11

[MUVI1_9 Slot(9), Type(MUVB)]



User Interface Generic Interface Parameters

Confirm Setup

 Electronics Setup Physicist Setup

Initialization



Pedestal



Gain and Shaper



Channel Selection

Sector: 1 2 3 4

Mufee: X Y

Mate 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate SiLi	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Test Generator

Déclenchement Interne Externe Ctrl Rampe

4999	keV / Si
5555	keV / SiLi
22218	keV / CSI

Statistics : 1000

Fréquence 1 Shot

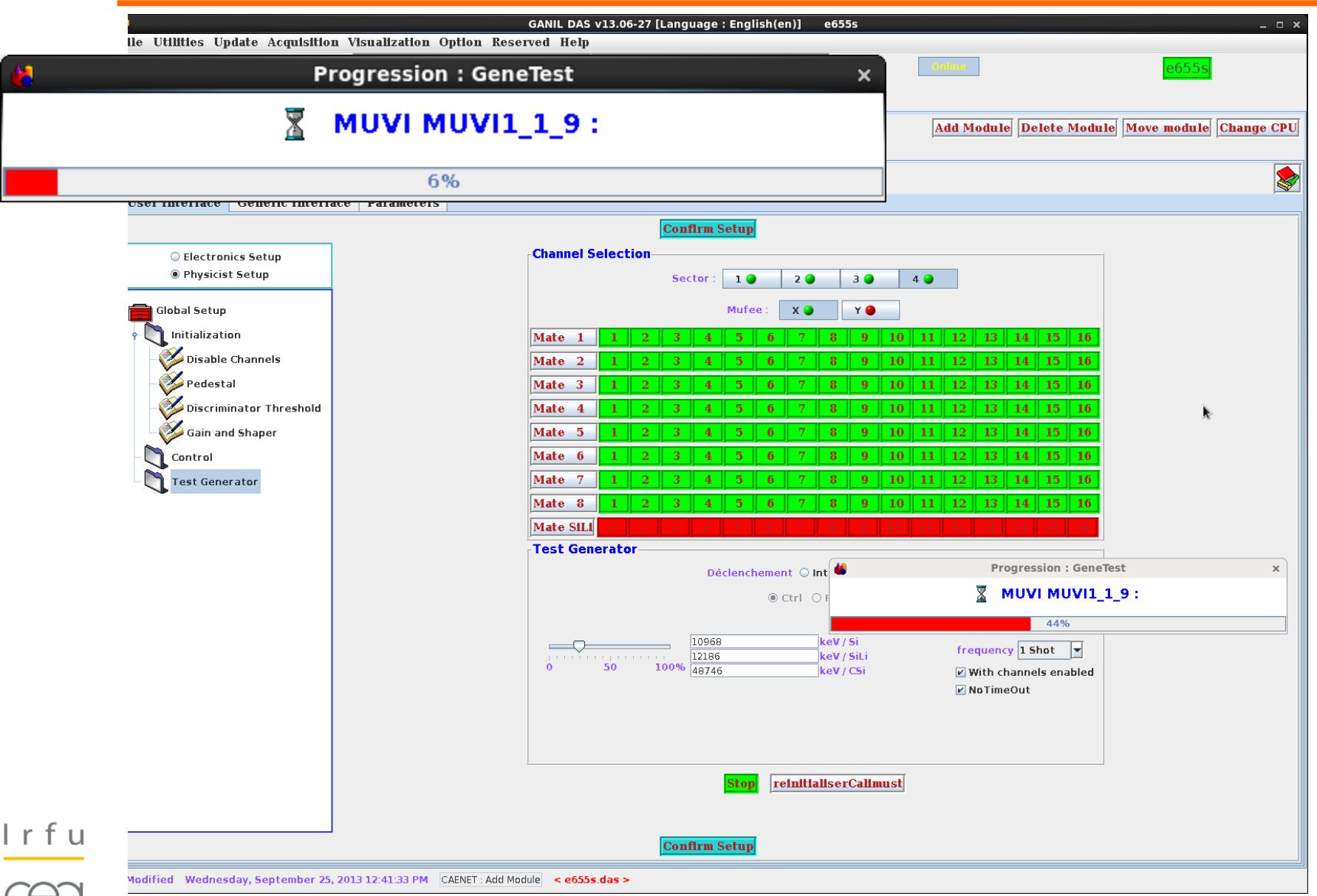
 With channels enabled

Start

reinitialiserCalimust

Confirm Setup

Problem MUVI- Temperature Alarm

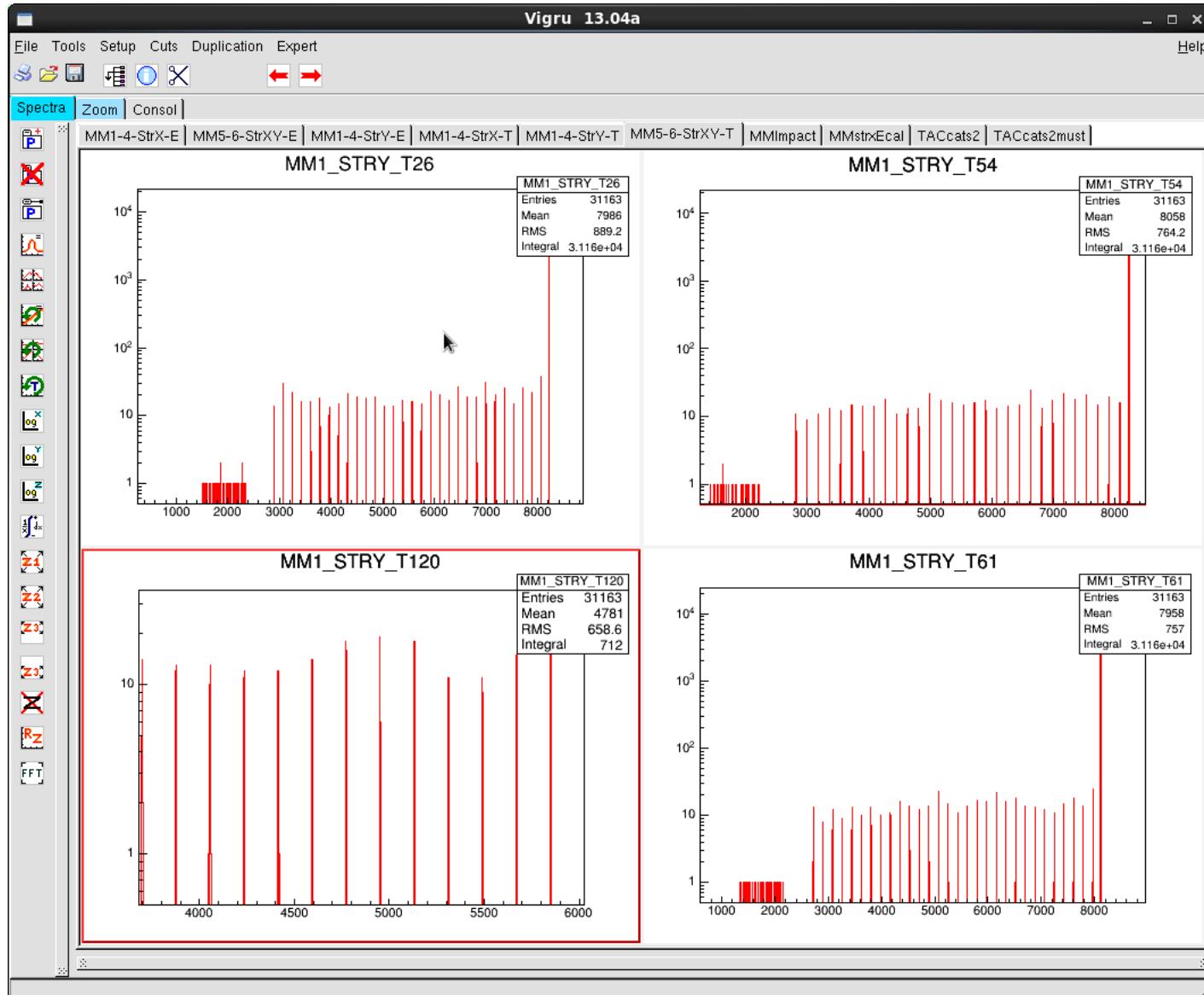


LOAD THE VIGRU configuration (vigru_e6**MM2TCalib.xml) or adapt one
to check the time spectra of MUST2 (both 2D and 1D)
→ specific for MUST2 with the following RAW spectra

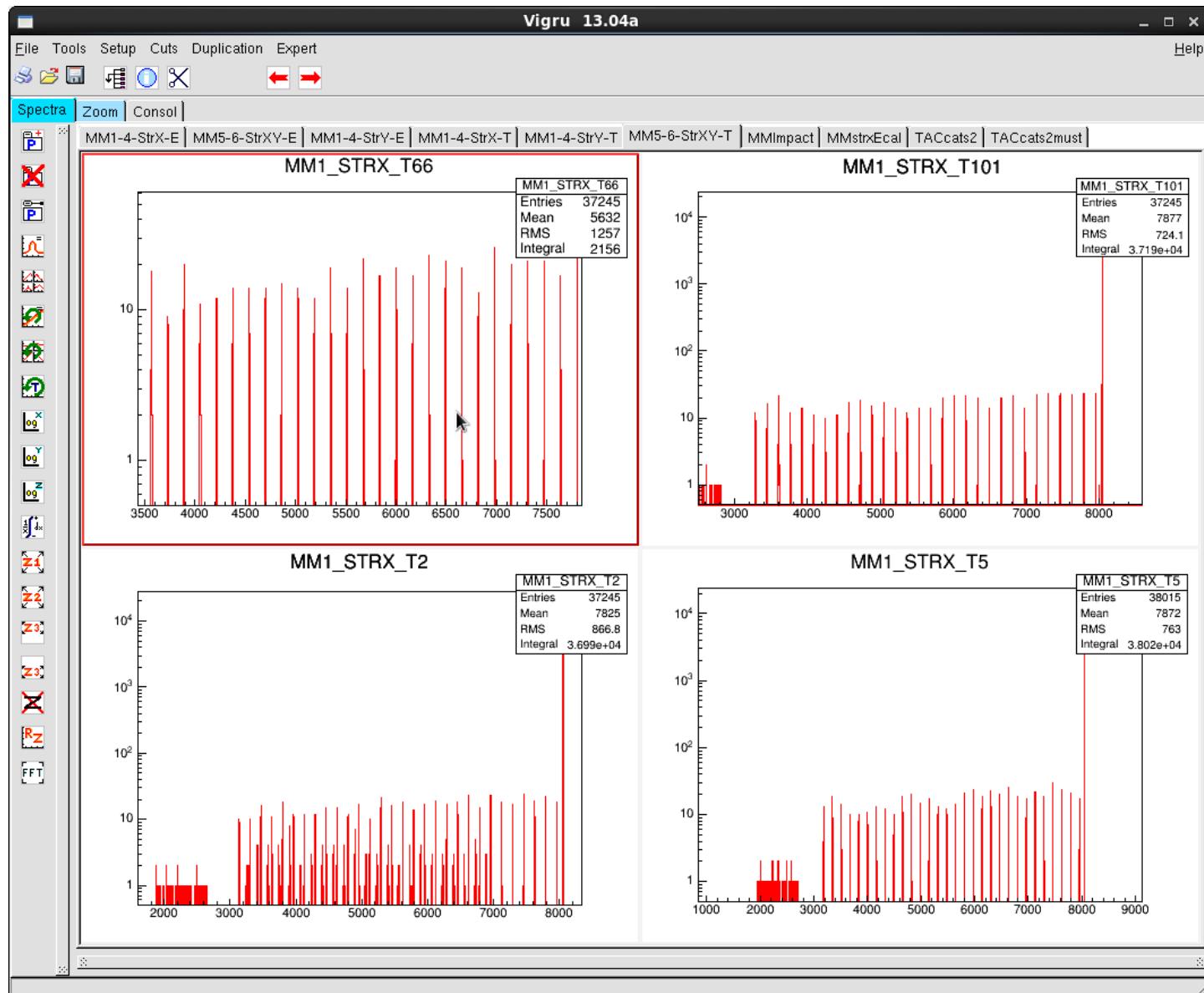
ONE PAGE FOR THE 2D XT: i=1,...4 MMi_STRX_T_BRU
ONE PAGE FOR THE 2D YT: i=1,...4 MMi_STRY_T_BRU
PAGES with selection 1D spectra on each telescope
RAW/MM1/ MM1_STRX_Ti

SEE PLOTS obtained during TESTS E655s experiment in VAMOS (next pages)

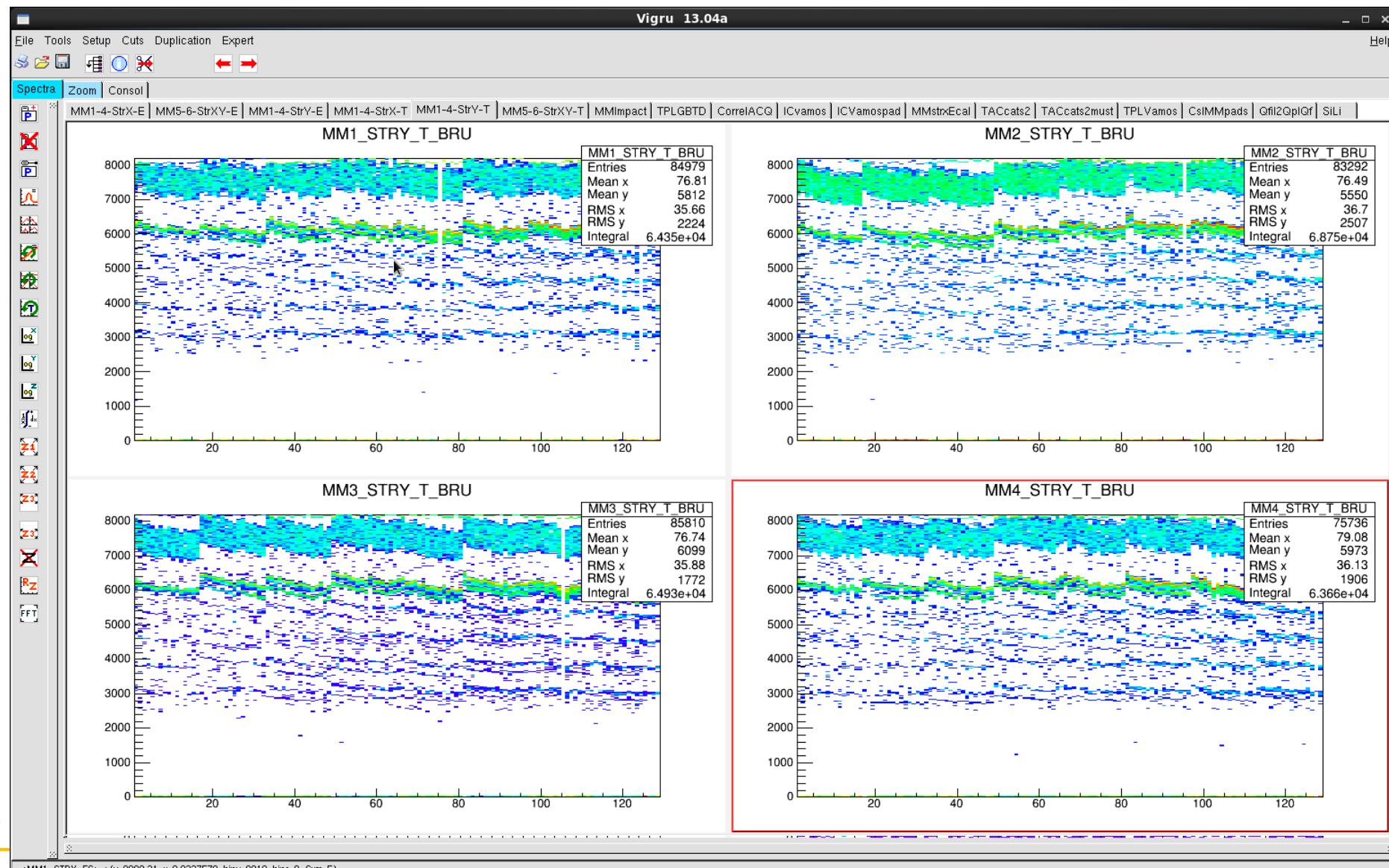
CALIMERO TESTS E655S experiment in VAMOS



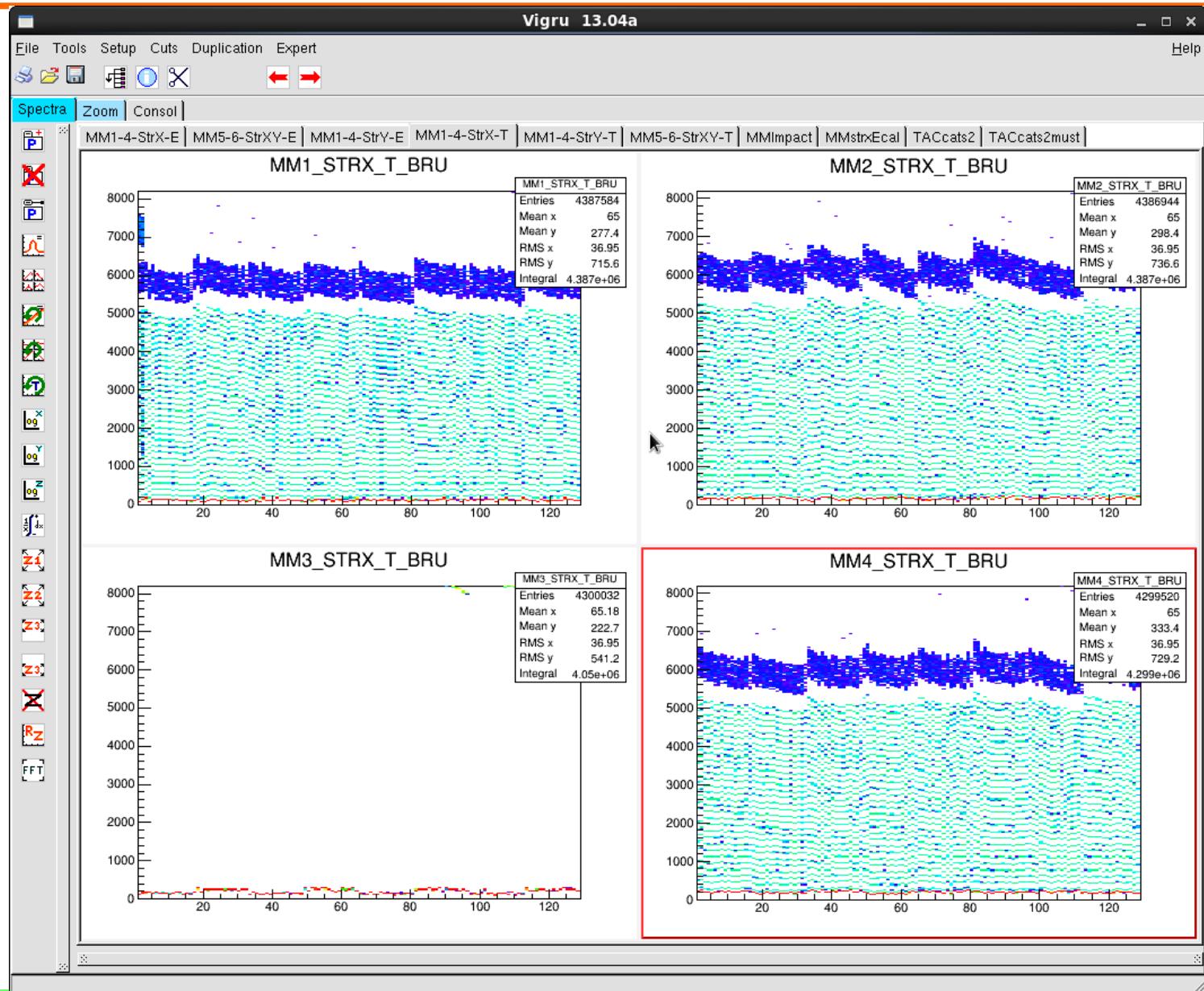
E655S DAQ –MUST2 TESTS



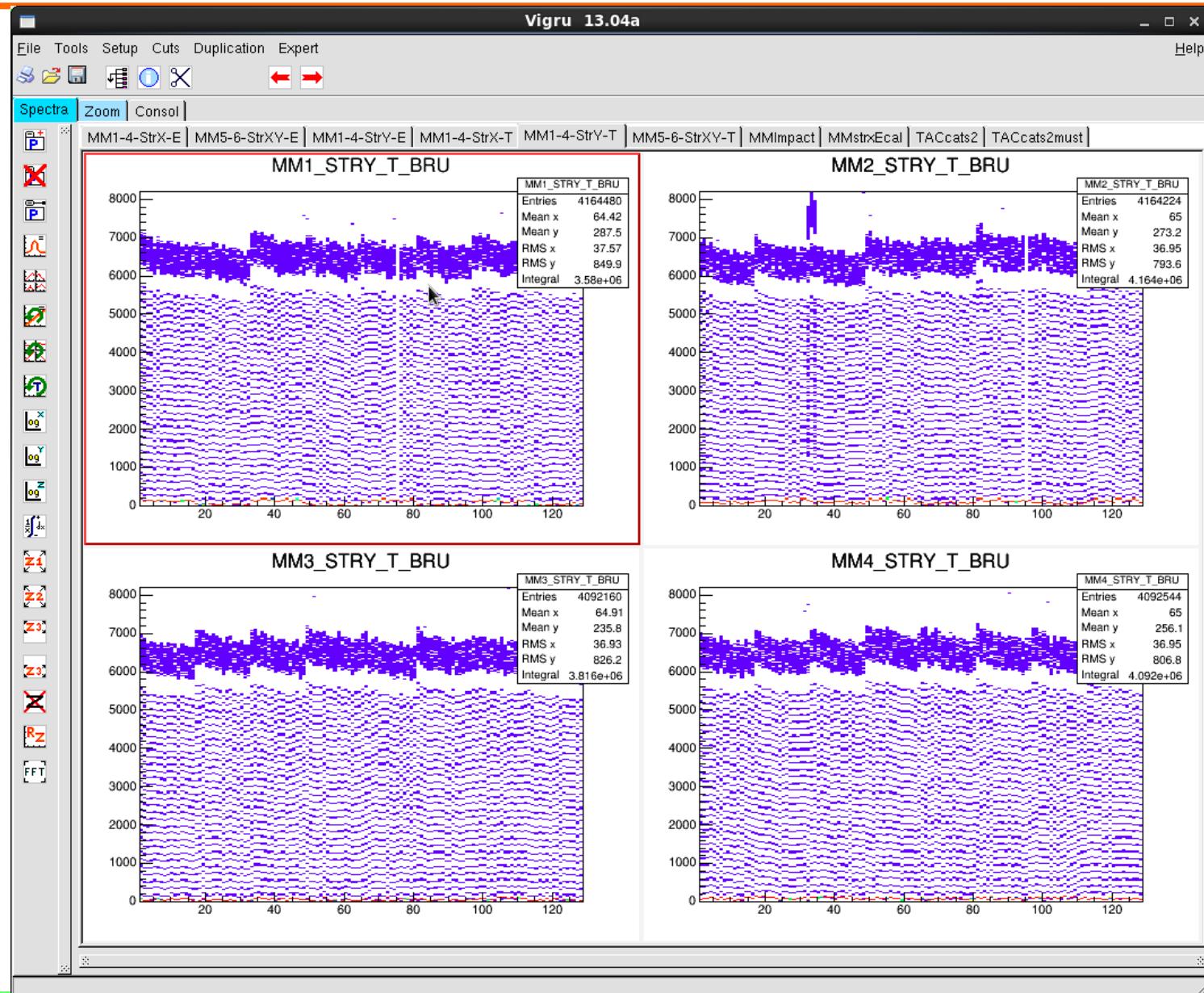
2013-¹⁸Ne+CD₂ 16.5 A.MeV - E655S -VAMOS ---gamme des TAC 600ns



Time
Calibrator
Range 640 ns
Période 20ns



2013 - CALIMERO calib temps E655S – MufeeY Tel 1 à 4 -gamme des TAC 600 ns



TROUBLES...

IN CASE OF TROUBLES, ASK The GIP to fix the following problems:

-- In case of Muvi problems communication :

Be sure that the GRU version is correctly set to the location of the Calimero program

In a Terminal, the execution of the Calimero program is checked (event rate) by typing:

Calimero.exe -q cali.C



-- In case of hardware problems (no trigger) ask the GIP to check with the SYN_tst and to check buffers

TROUBLES WITH CALIMERO

VXI Crate : 1 Cpu : ganlx14

INSPECTION **GMT** **CENTRUM** **MUVI** **ADC** **U2M**

Add Module **Delete Module** **Move module**

[MUVI Slot(6), Type(MUVI)]

User Interface Generic Interface Parameters

Global Setup

- Initialization
- Disable Channels
- Pedestal
- Discriminator Threshold
- Gain and Shaper
- Control
- Test Generator

Mufee : X Y

Mate 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mate SiLi	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

MUVI Interrupted Communication with Calimero ! x

MUVI Interrupted Communication with Calimero !!!

OK

Test Generator

Déclenchement Interne Externe

Ctrl Rampe

Statistics : 1000

frequency **1 Shot**

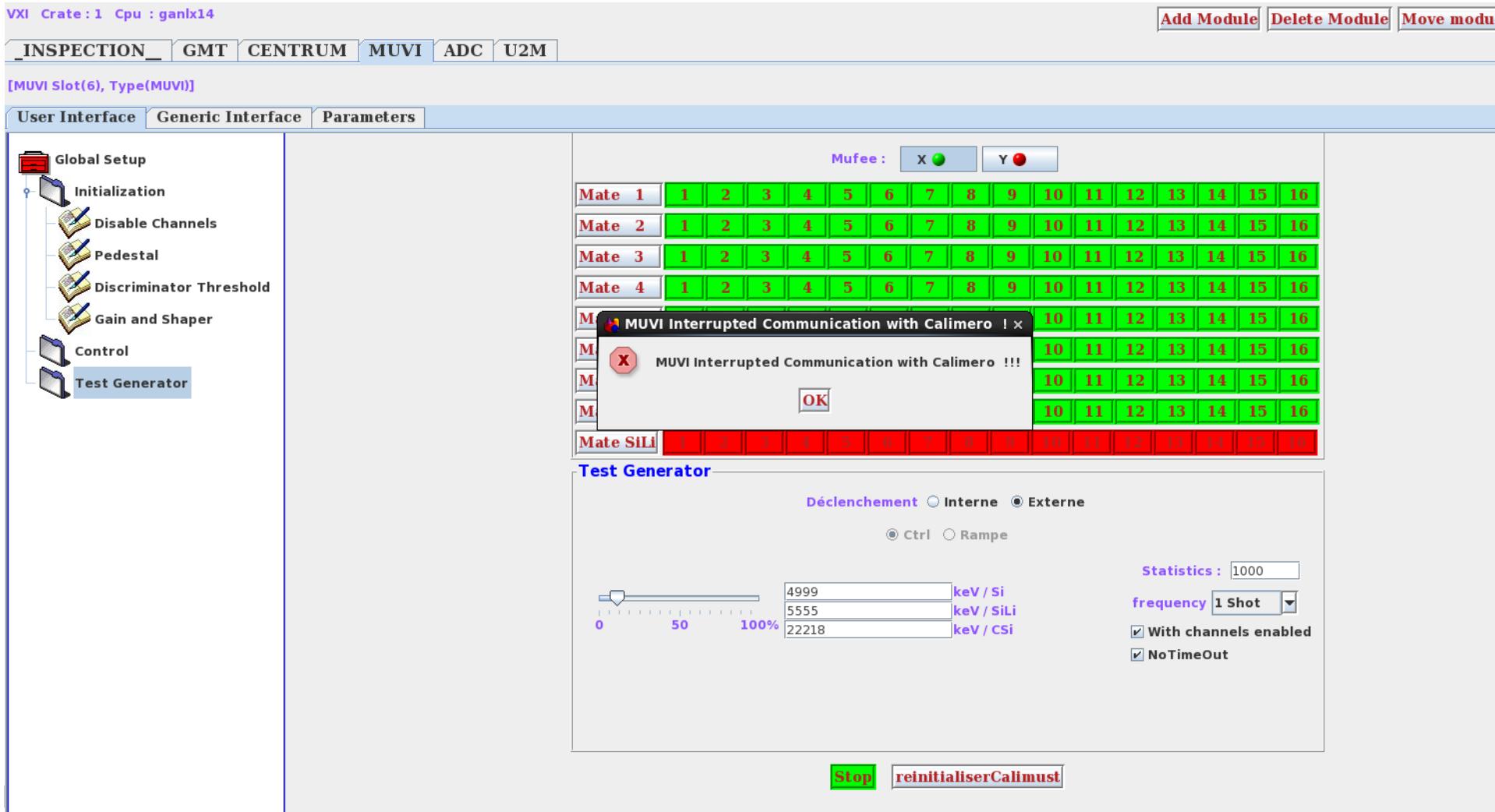
With channels enabled

NoTimeOut

0 50 100%

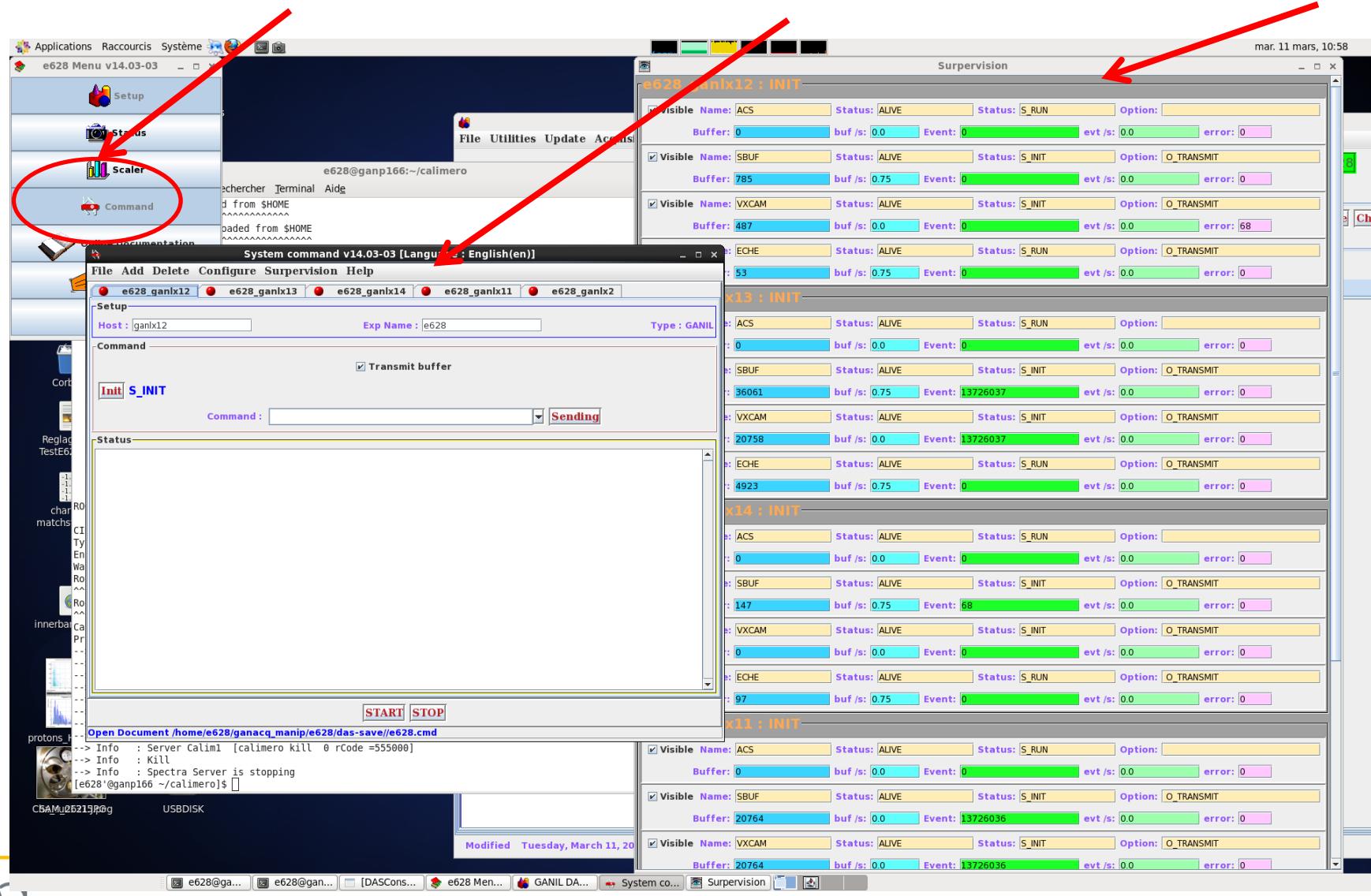
4999 keV / Si
5555 keV / SiLi
22218 keV / CSI

Stop **reinitialiserCalimust**



CHECK THAT ALL CRATES ARE INVALID (0) DURING THE RUN SEQUENCE OF CALIMERO

Click on COMMAND to obtain this window in which the Menu Supervision gives:



Mode Expert Alarme Température

