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

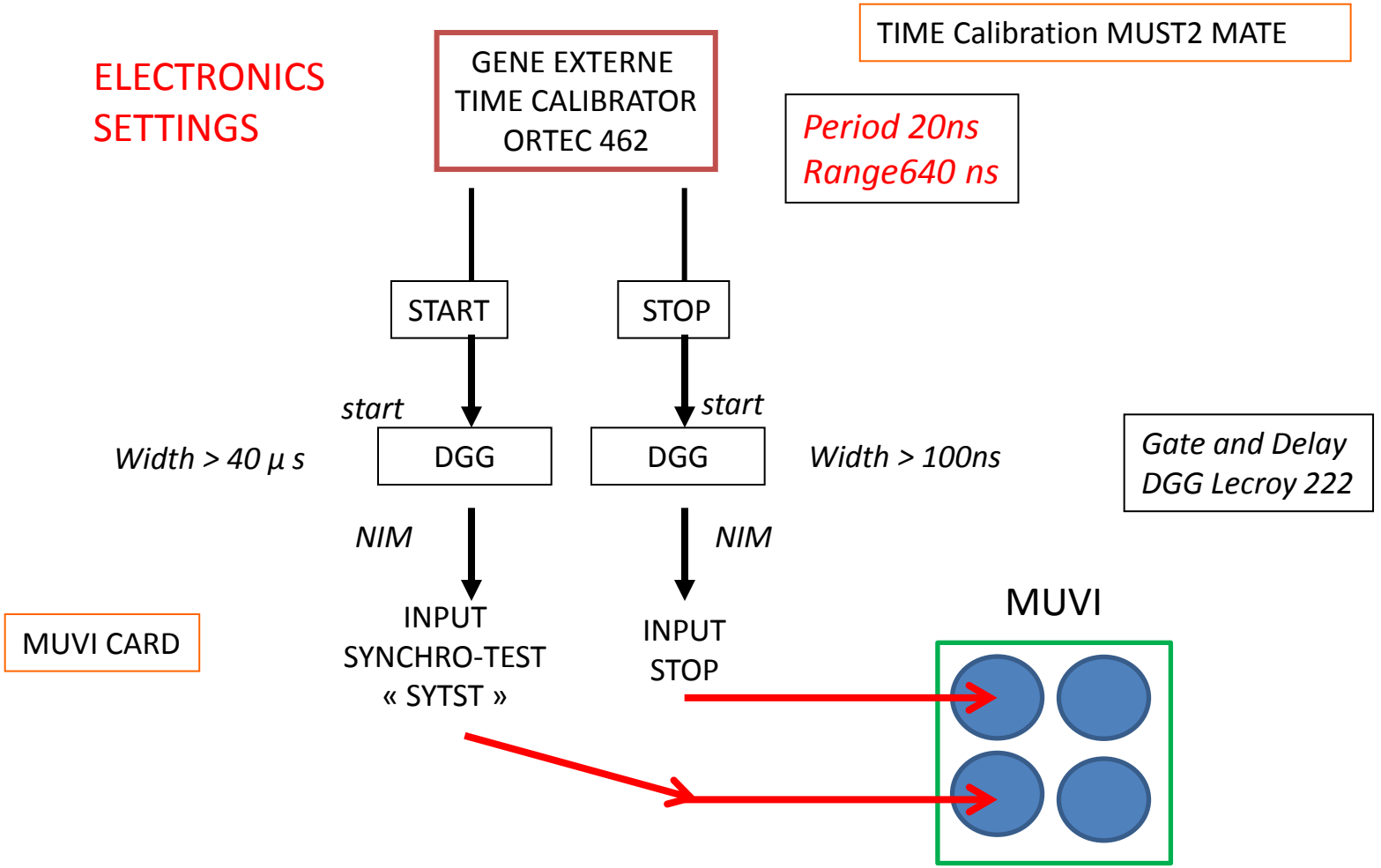
II Connect the Time Calibrator (slide 2)

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 MUVI configuration is correct, see reference pages.

BT ON , HT ON telescopes DSSD

Check that the Time calibrator is ON !!

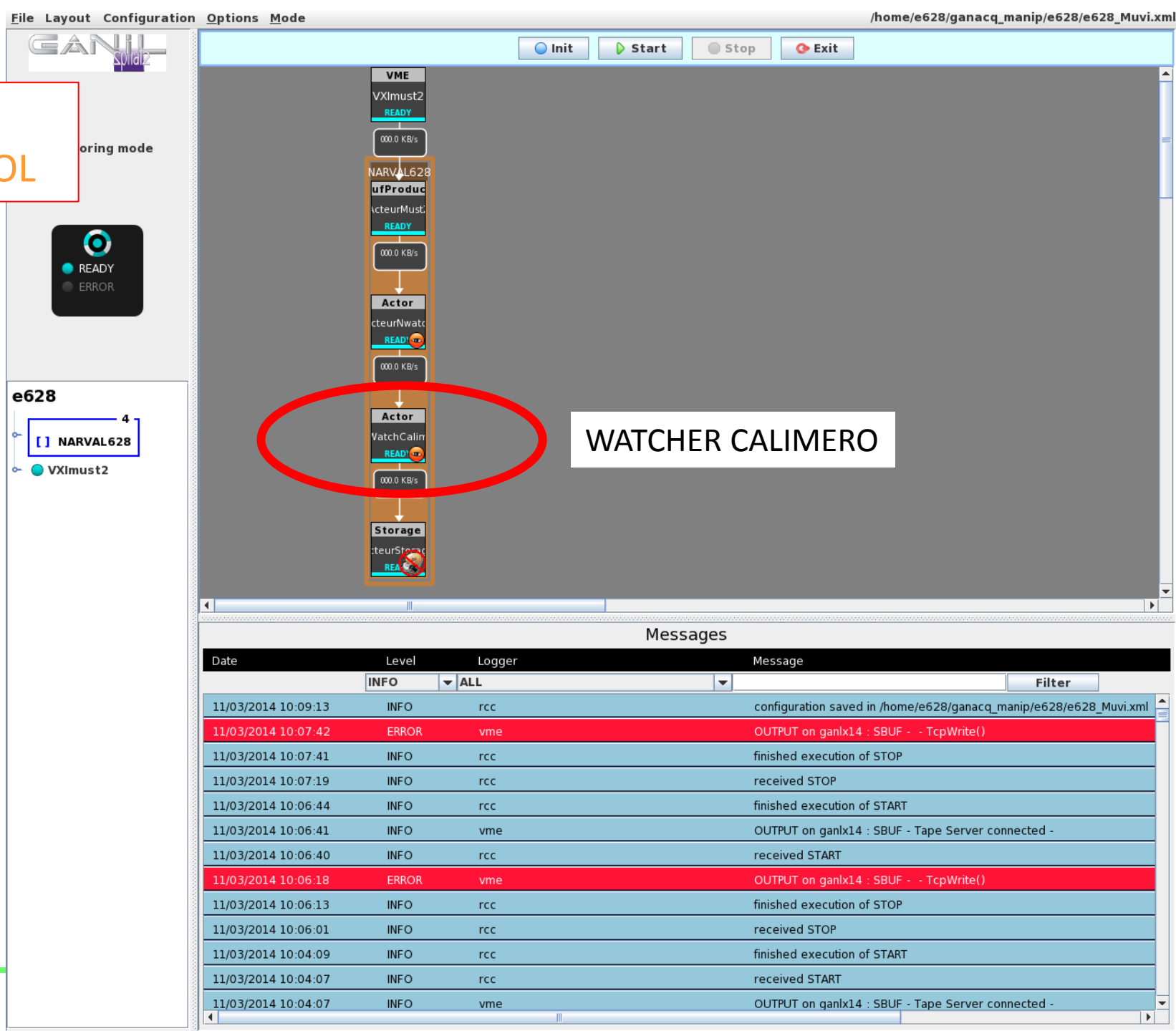


RUN CONTROL

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



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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**)
Sélectionner 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,

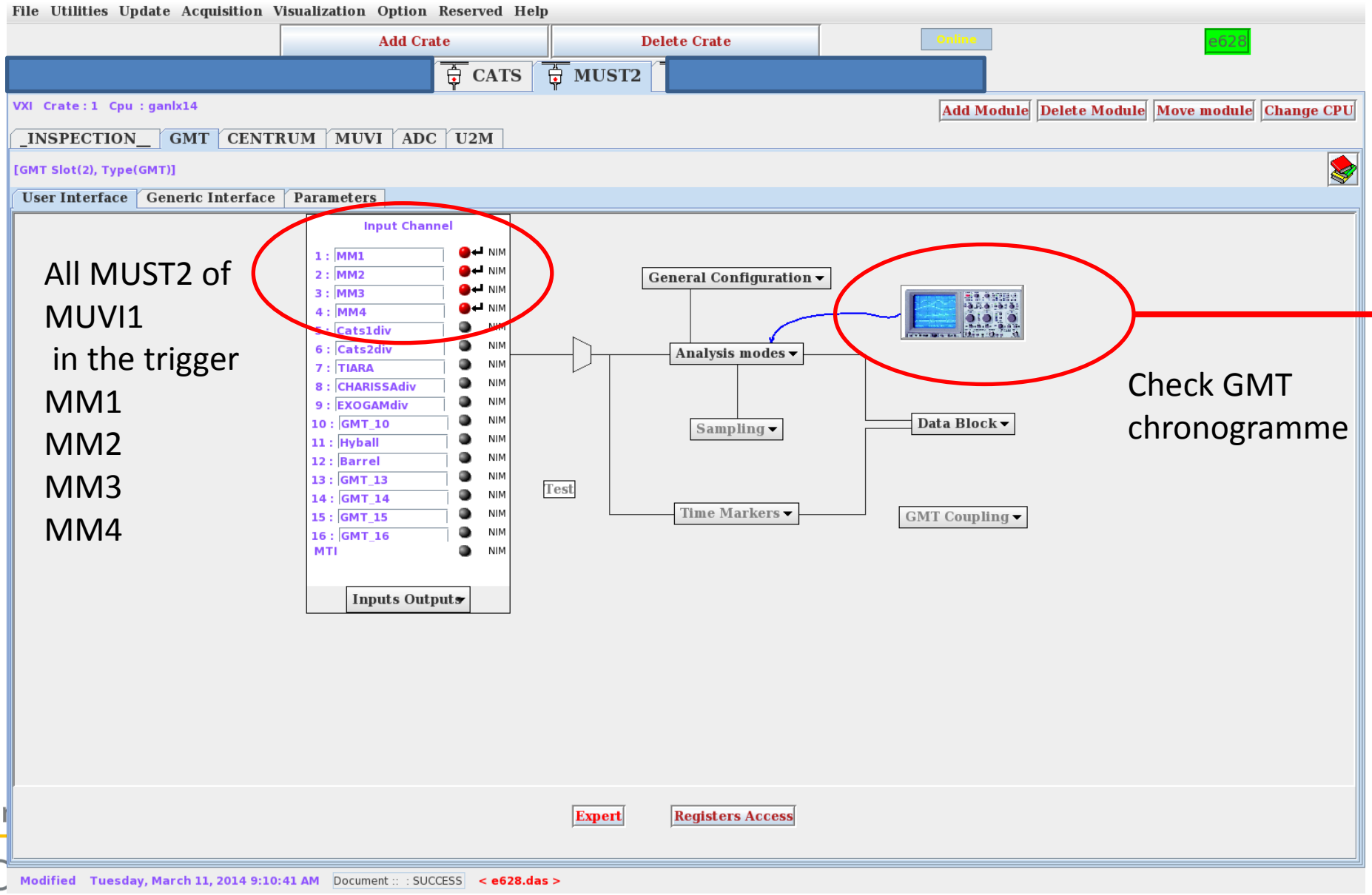
- Vérifier les signaux de déclenchement sur chaque carte CAS de Muvi → ORDi
- Vérifier la configuration des Mates :
  → gamme des TAC, seuils à 402 keV, polarité des Mates X +, Mates Y -

- Vérifier le GMT : configuration MUVI GMT , IN1 à IN4

- VERIFIER que la seule source de déclenchement physique des CAS est le géné, 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 géné 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 MUVI)
  → synchro test généré par l'horloge CKTST → non (rouge)

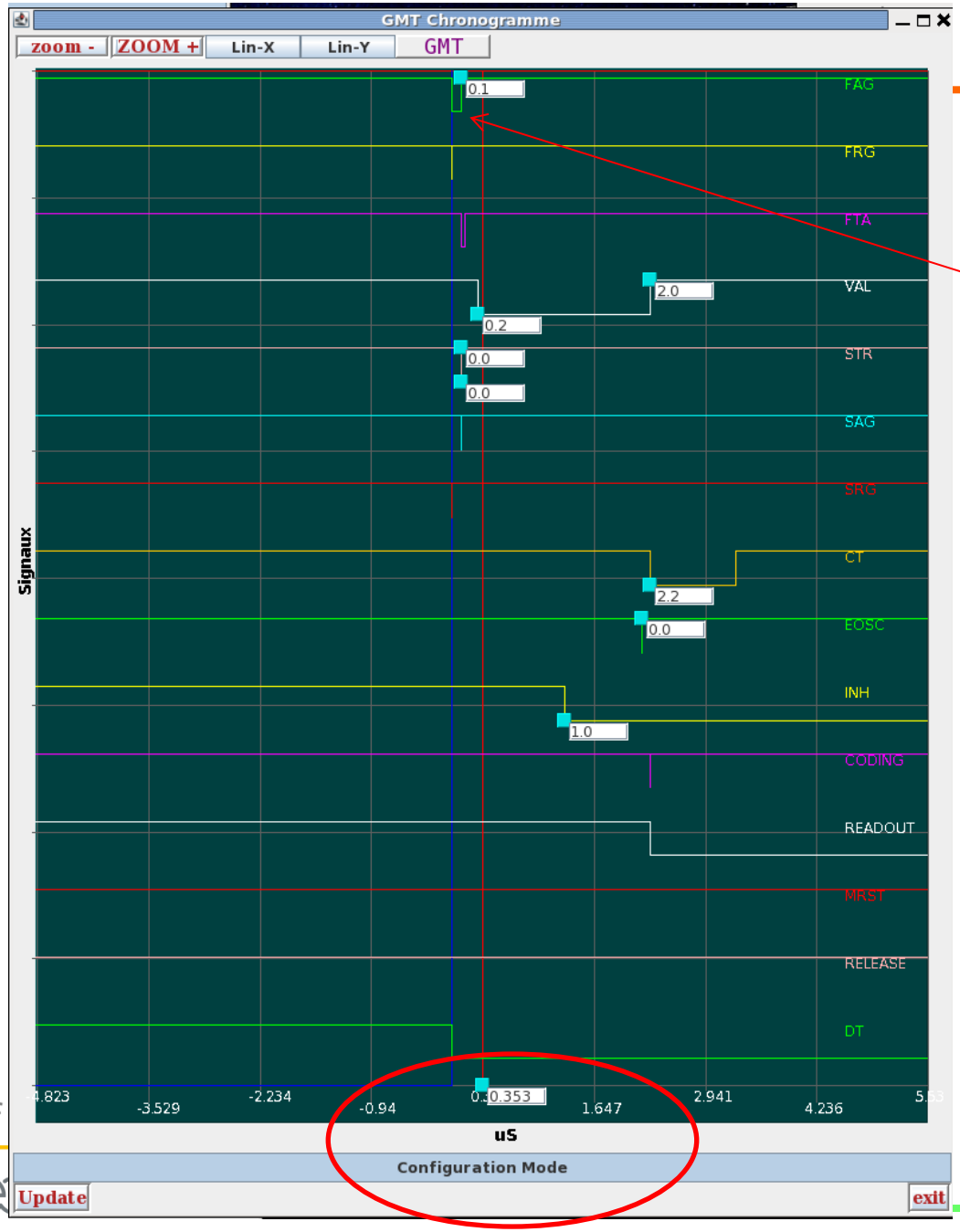
Run Control **RC** se mettre dans une configuration .xml qui correspond au mode « stand alone » deMust2.

GMT TRIGGERS



All MUST2 of MUVI1
in the trigger
MM1
MM2
MM3
MM4

Check GMT chronogramme

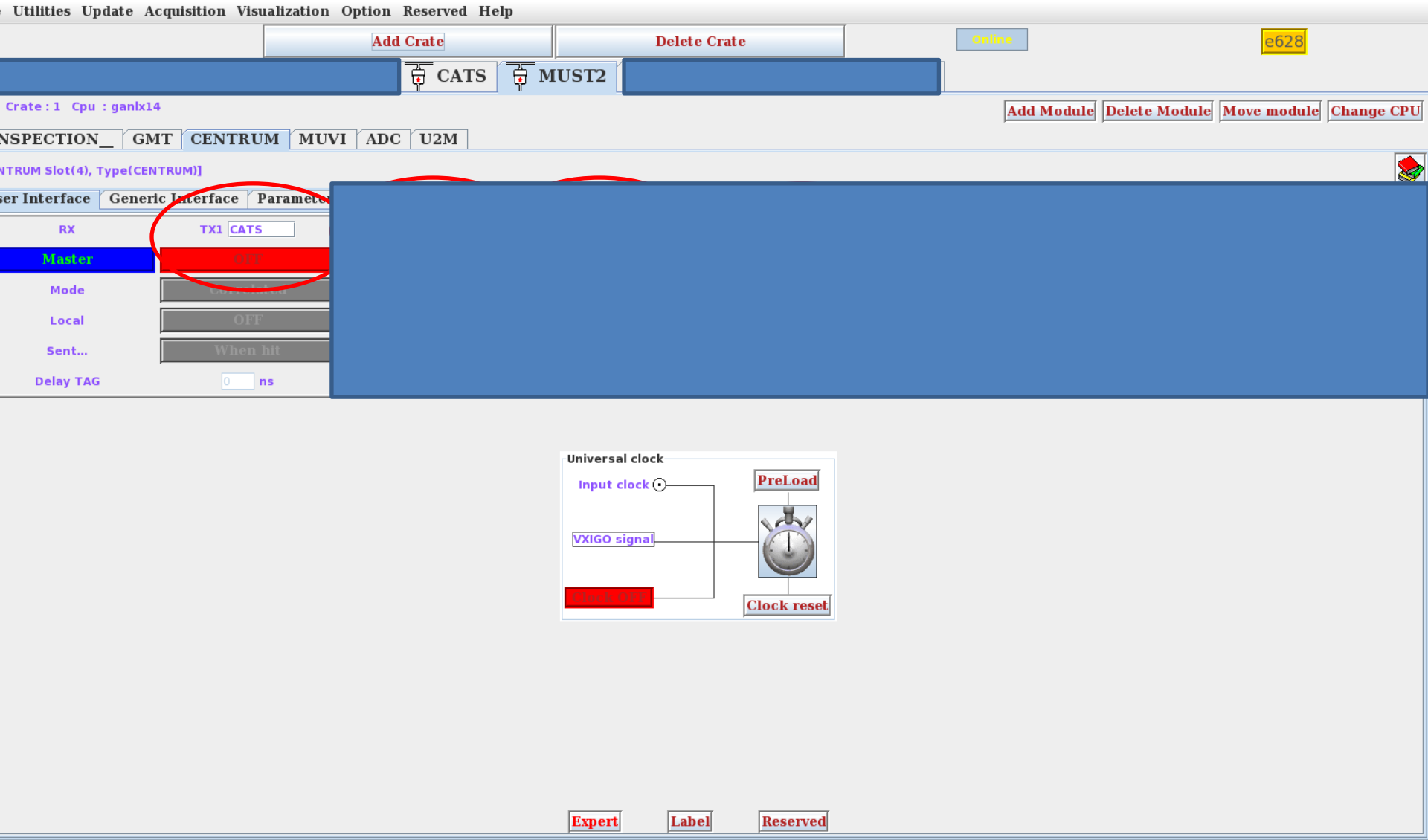


GMT
set the FAG window (100/200ns)
correctly for CALIMERO runs

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

CENTRUM: initial configuration of the CENTRUM for e7**

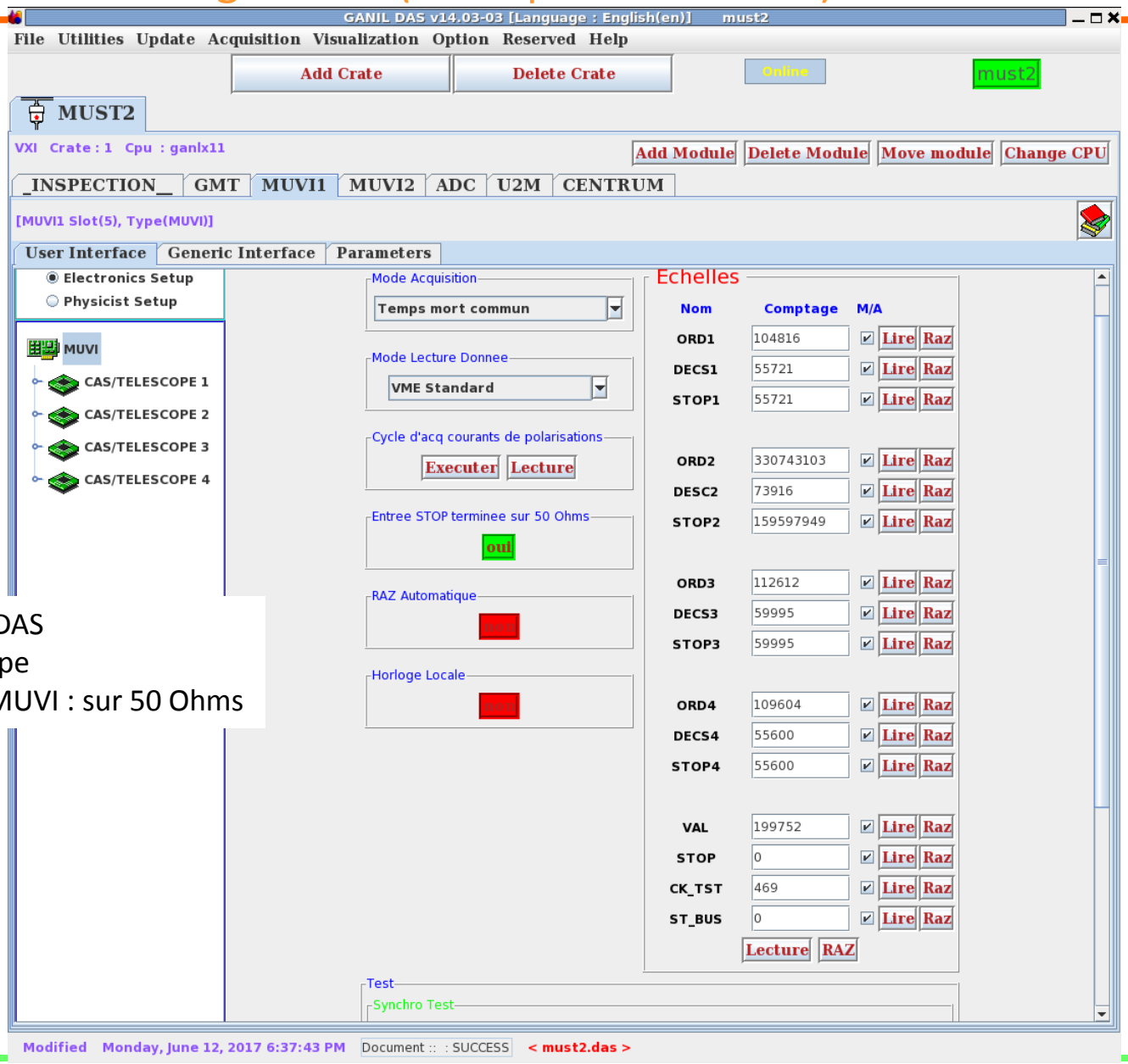
CENTRUM: disconnect the slaves to do the Time Calib



CHECK MUVI CONFIGURATIONS

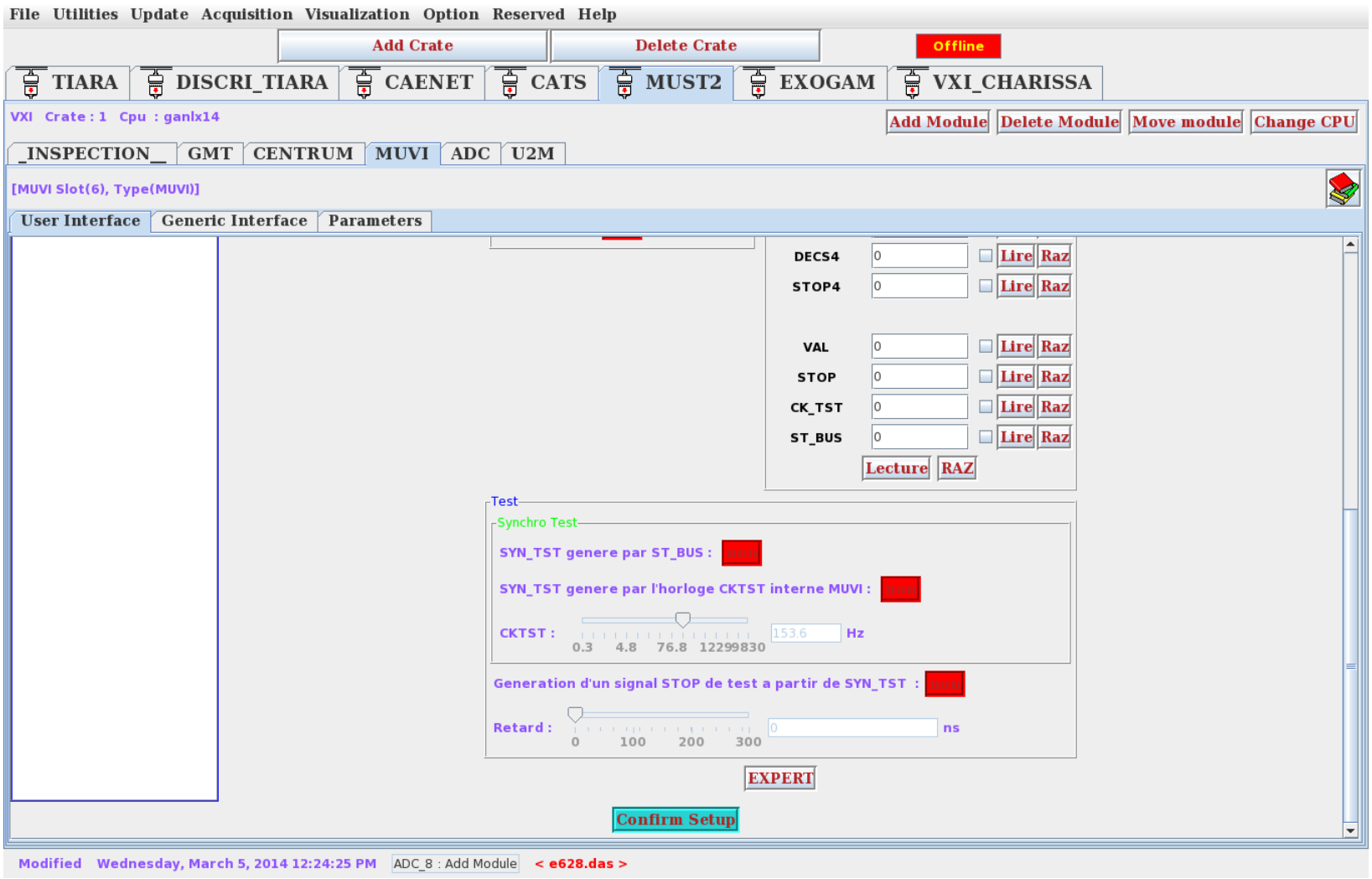
in electronic setup
and
physicist setup

MUVI configuration (for Exp and for Calib)



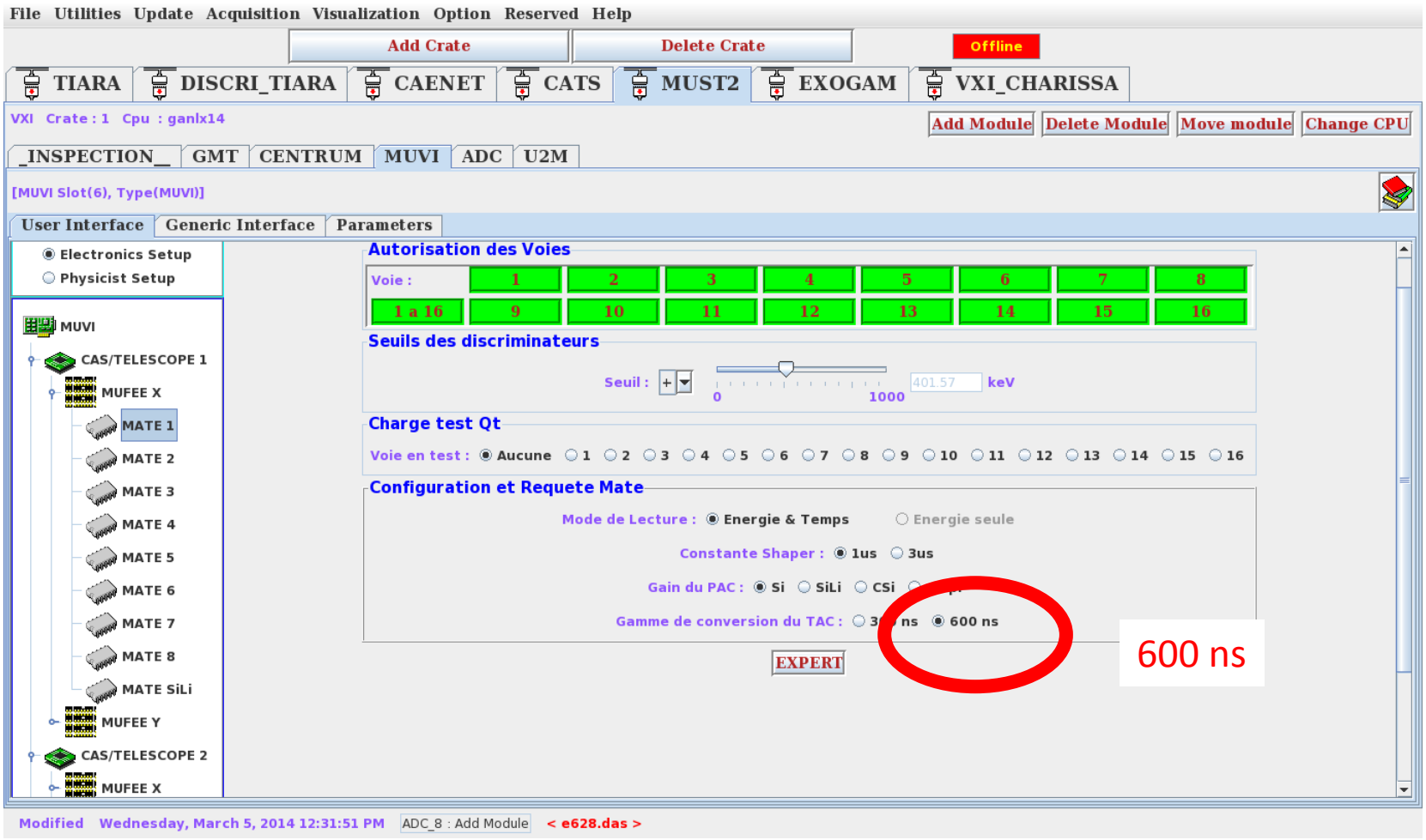
CONFIGURATION DAS
PAGE CAS/Telescope
ENTRÉE STOP de MUVI : sur 50 Ohms

MUVI Configuration (for Exp and Time Calib)

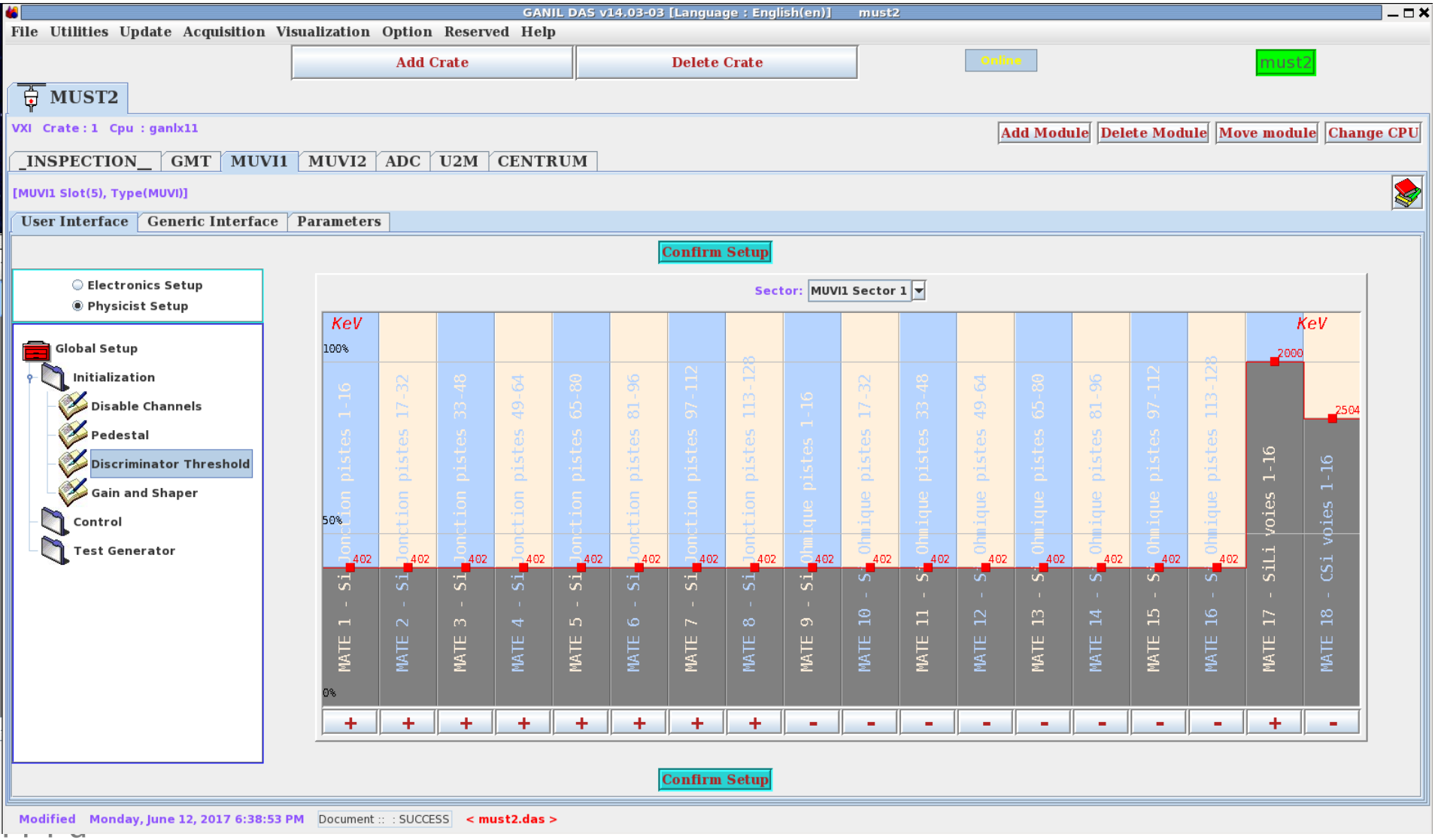


vlapoux@cea.fr

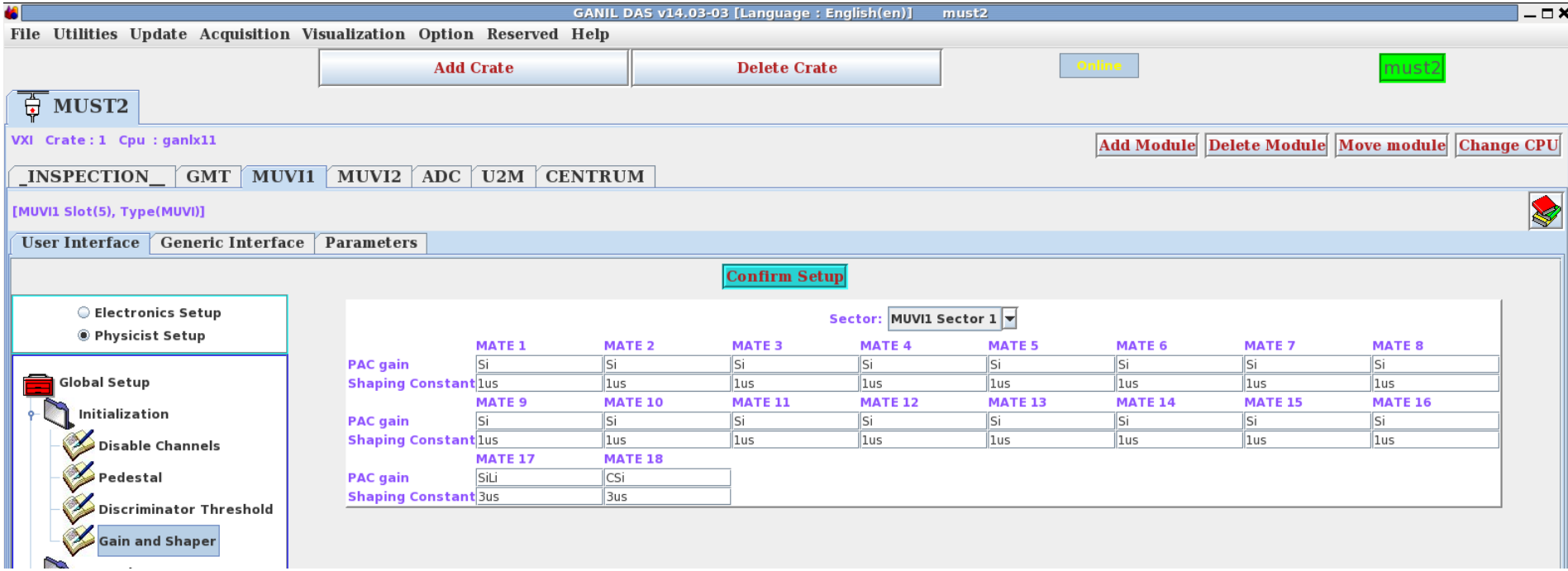
TAC Range on Mate (for Exp and for Calib)



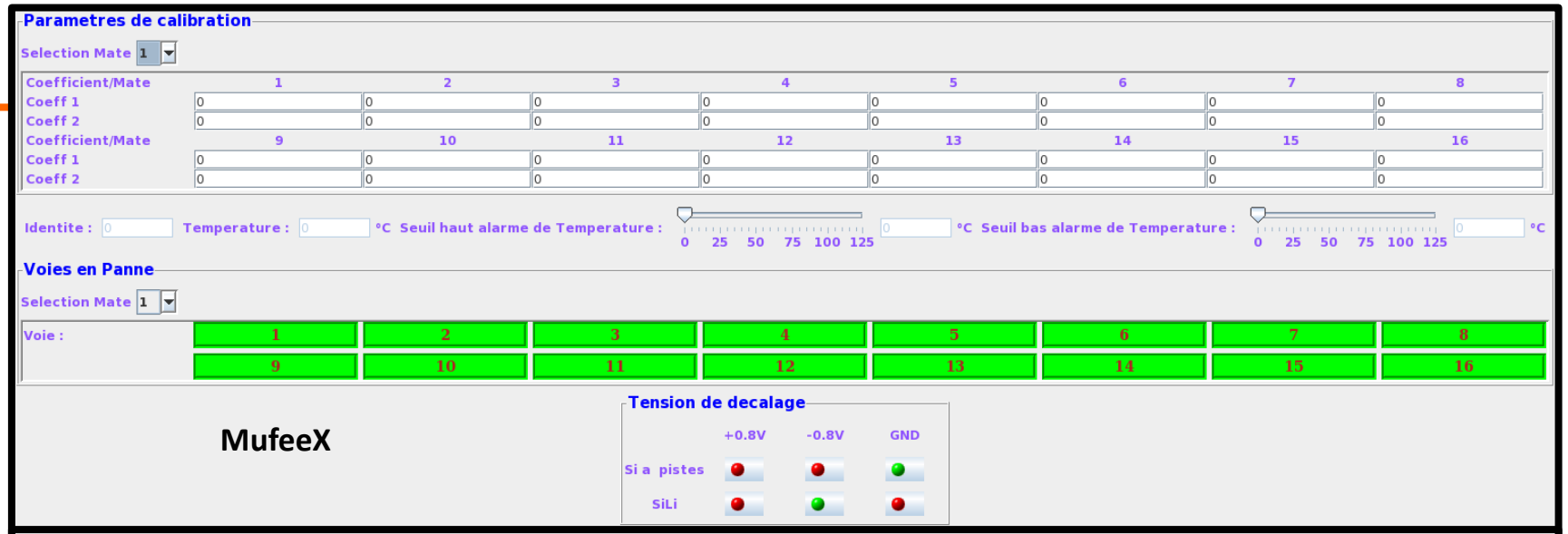
Discriminator thresholds, polarities of the MufeeX/MufeeY

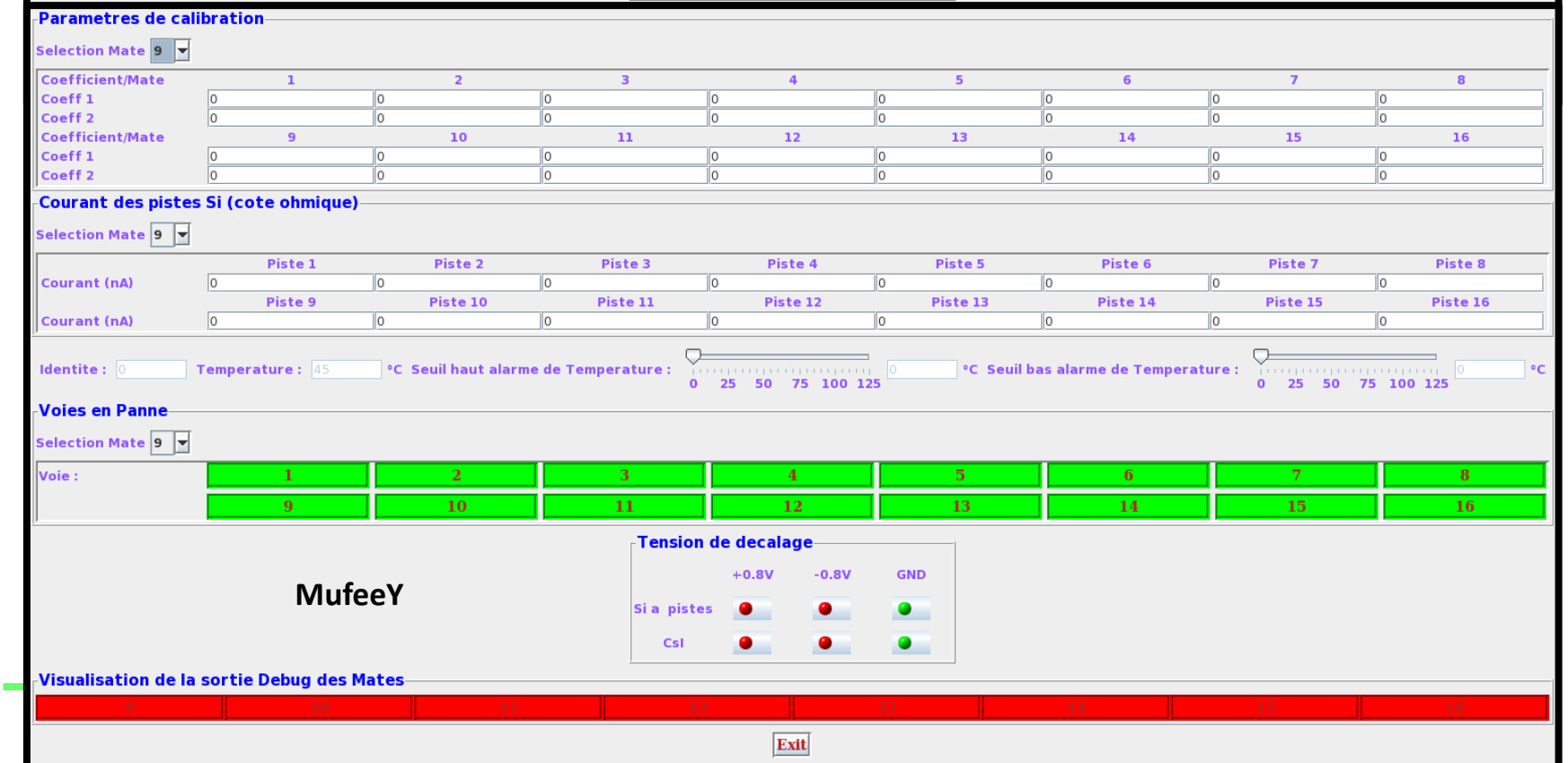


MUVI, MATE gain and shapers



Config MUfeeX Y Mode Expert





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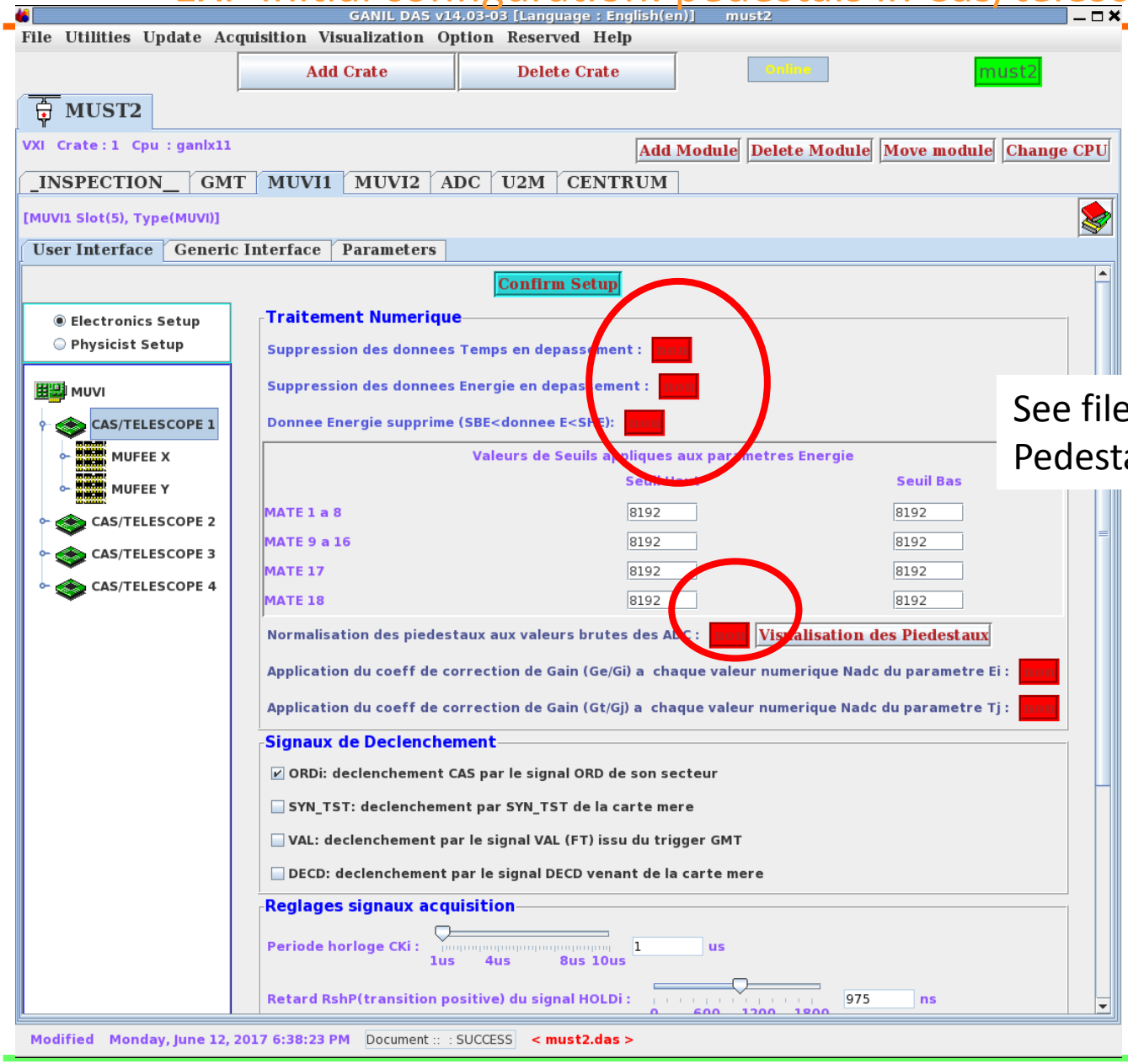
cea

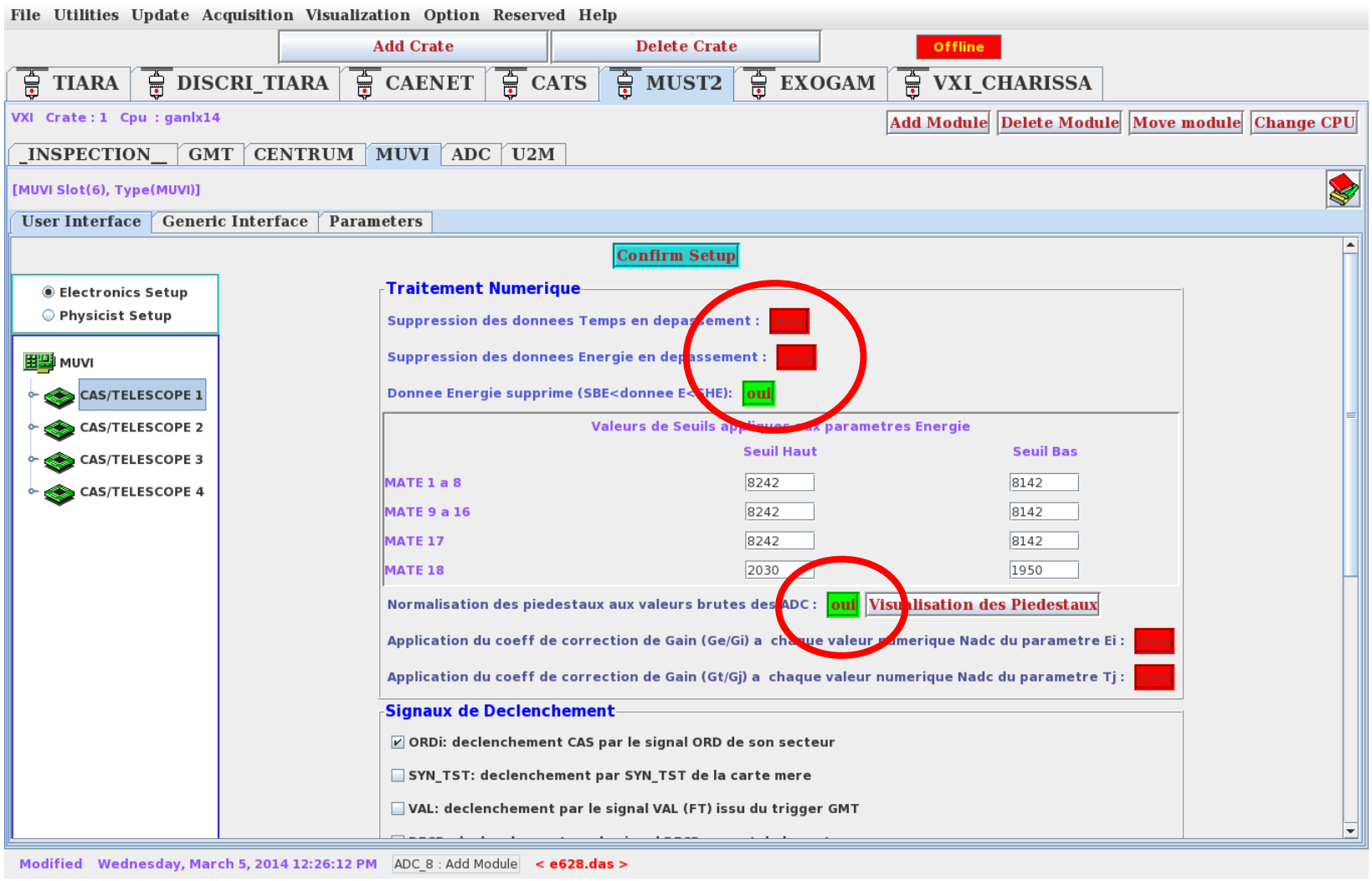
saclay

EXP Initial configuration: pedestals in Cas/telescope

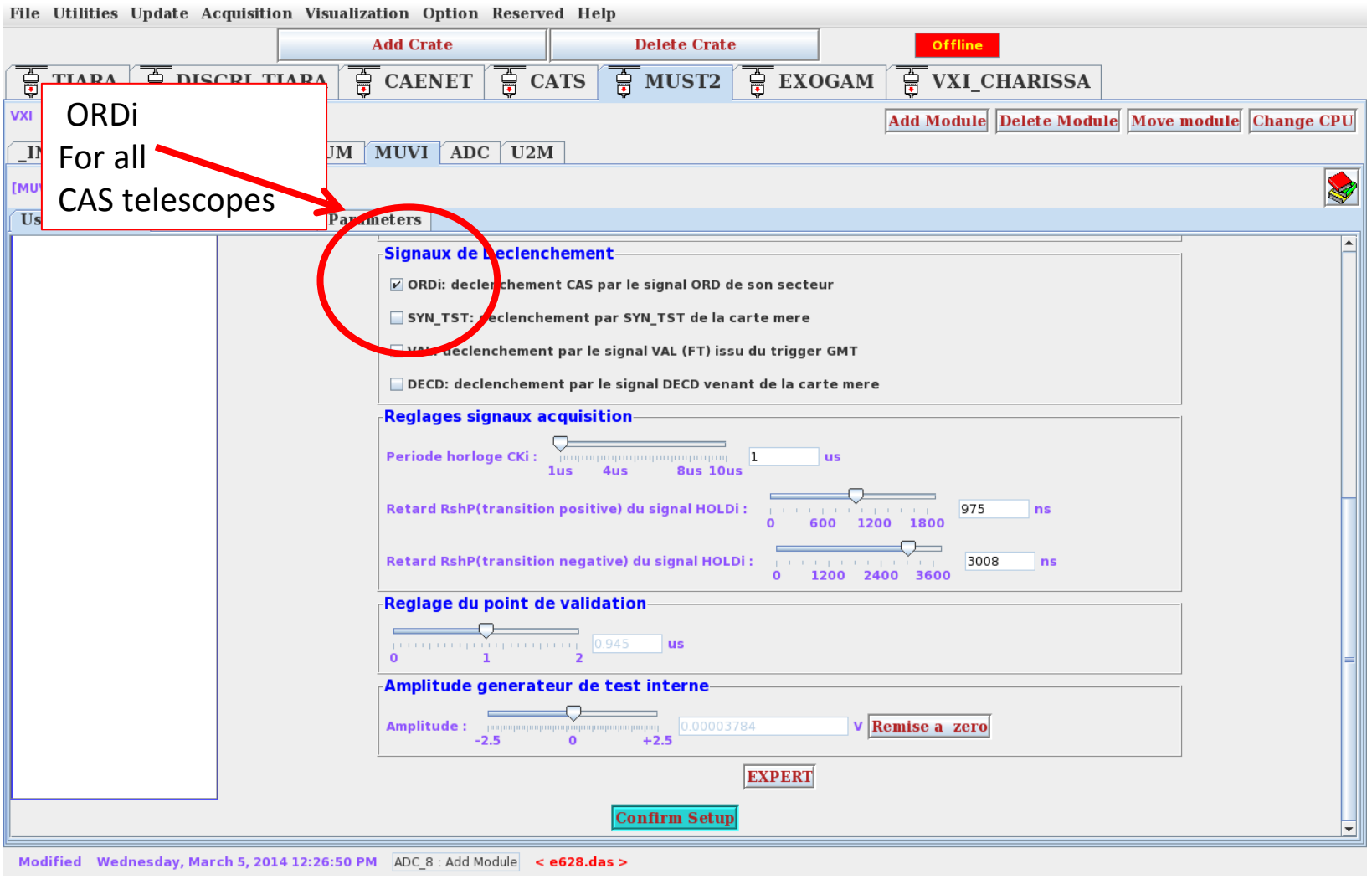


See file to operate the Pedestal suppression

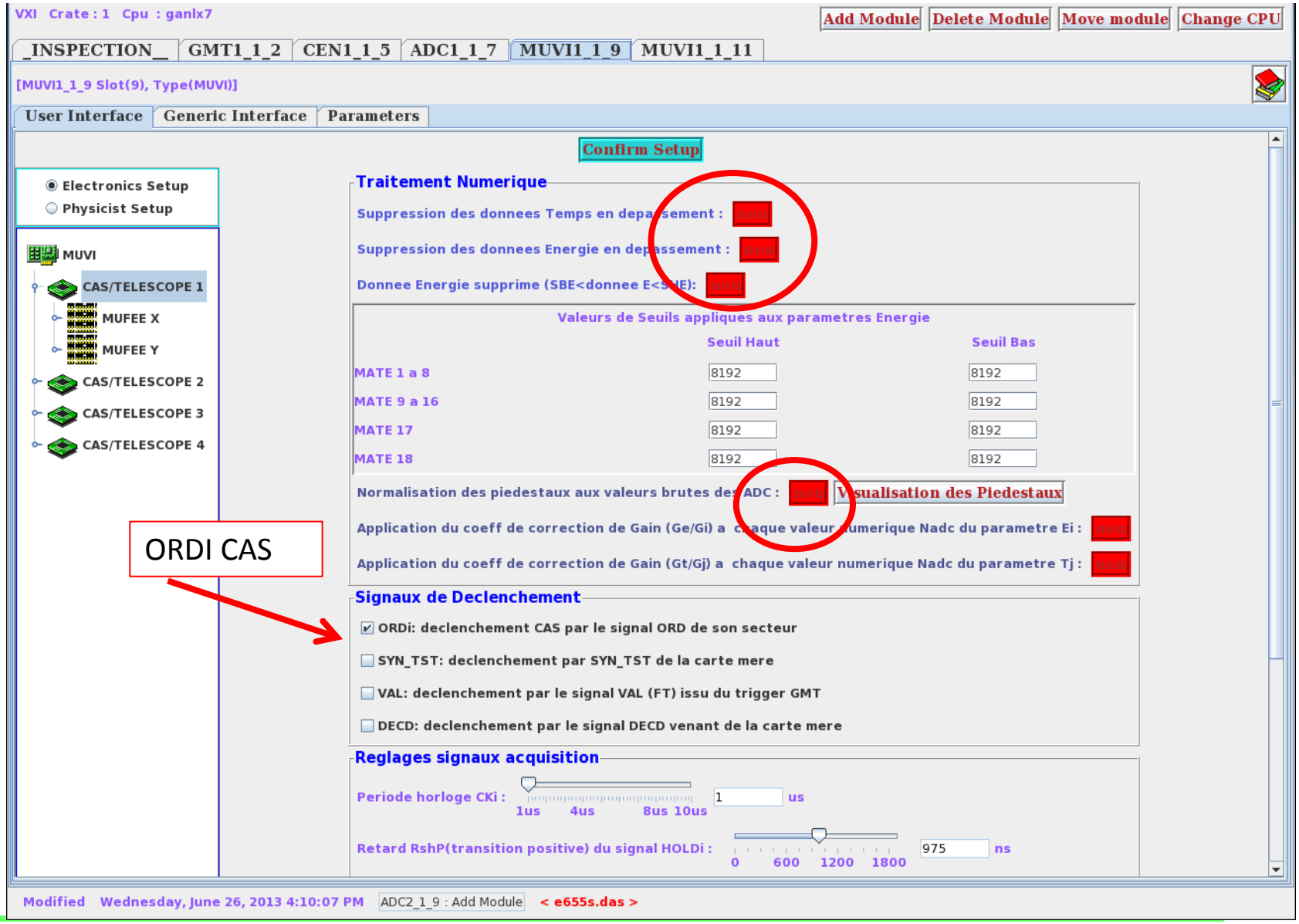
EXP Initial configuration: suppression of pedestals in Cas/telescope



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



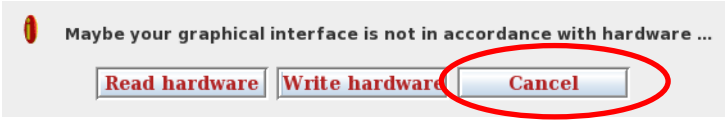
CONFIGURATION OF CAS/TELESCOPE FOR TIME CALIBRATION (for all MM2)



DAS CONFIGURATION

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

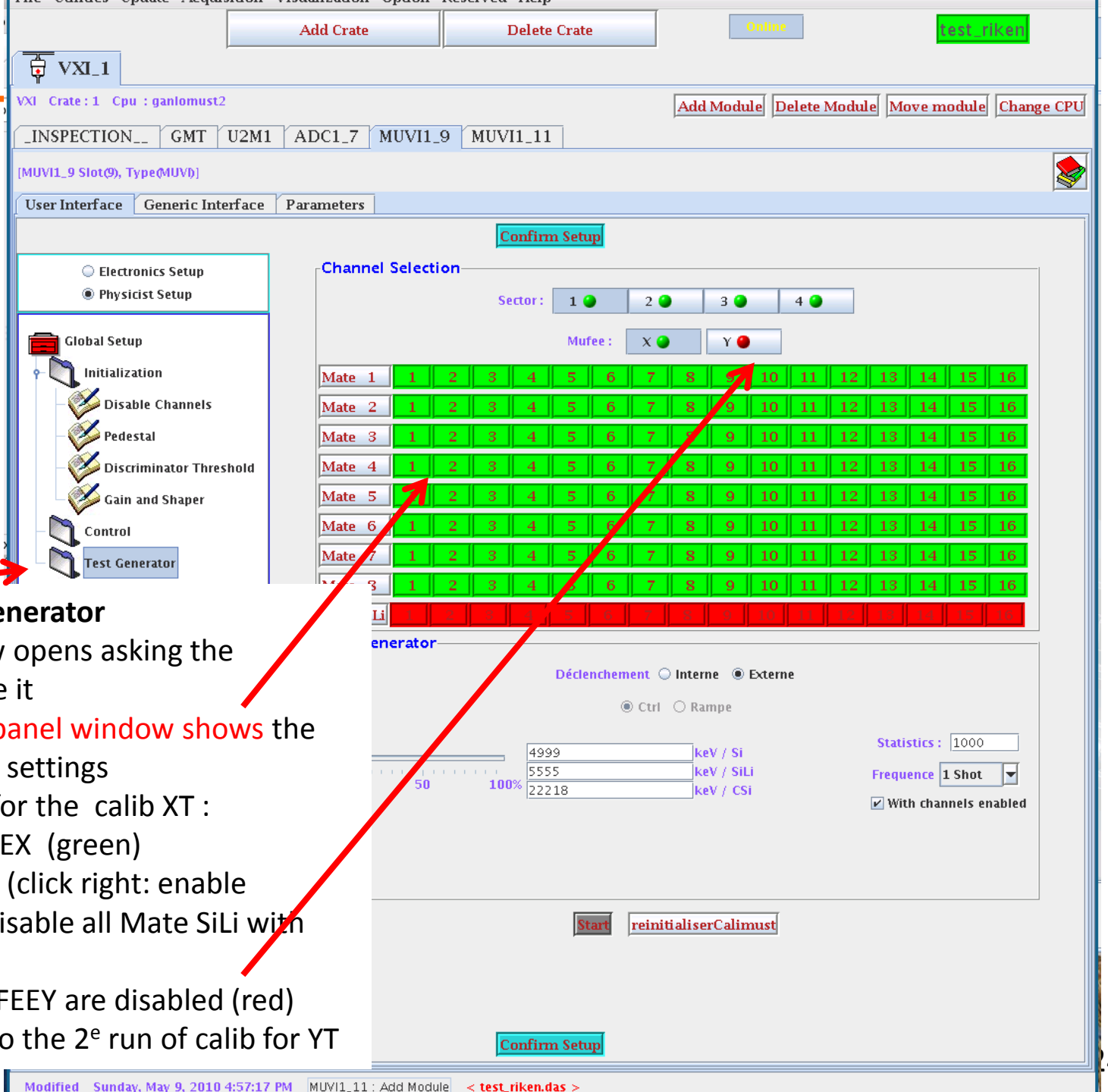
change DAS from OFFLINE TO ONLINE
The window appears:
Click on CANCEL



THEN (staying on MUST2 GMT module)
Go to Menu UPDATE
And select FOR THE CURRENT CRATE

write SOFTWARE TO HARDWARE

LAUNCHING CALIMERO

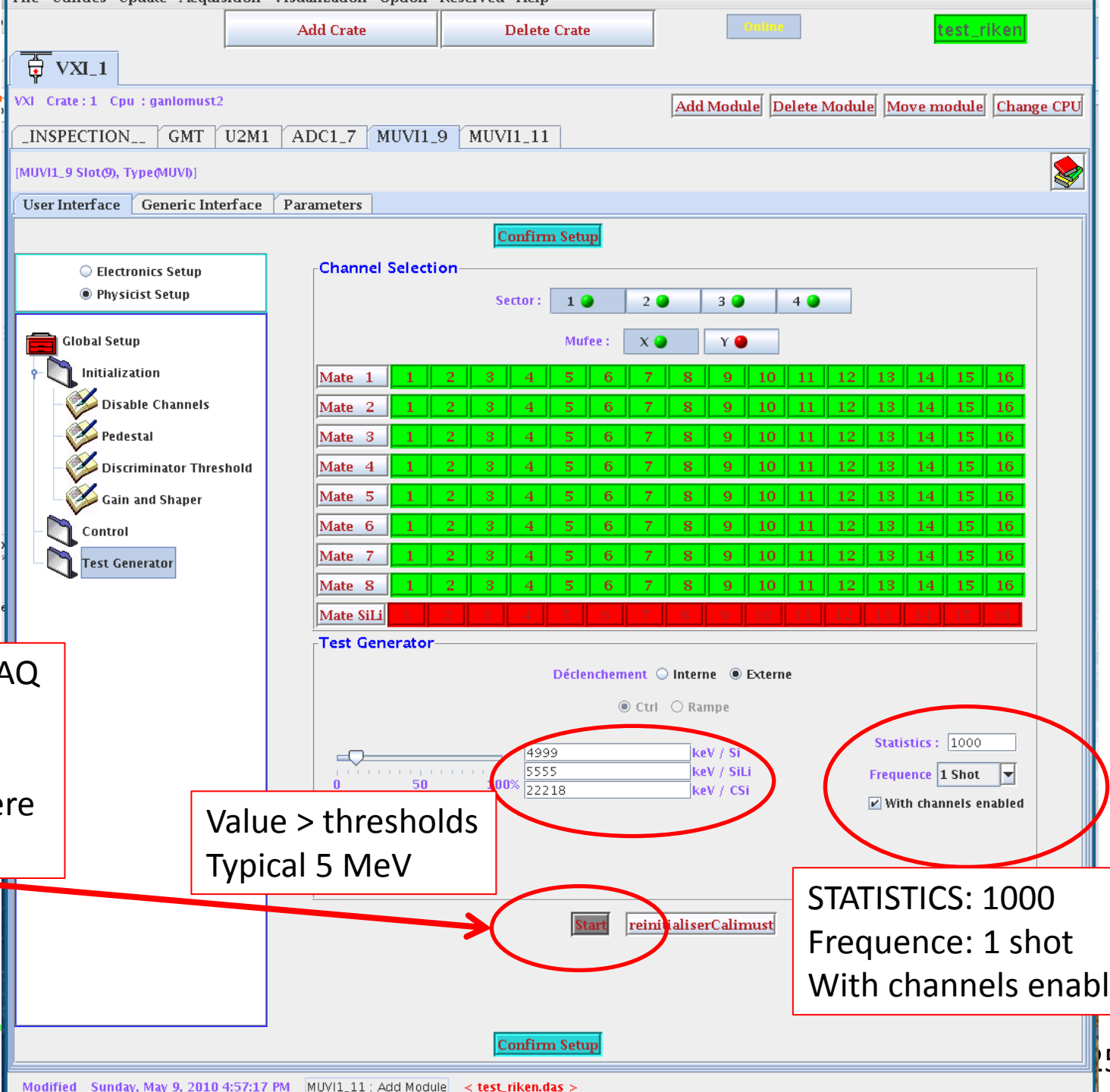


1. Click on **Test generator**
2. Then a window opens asking the password, Type it
3. Wait, and the panel window shows the Test Generator settings

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 MUFEEY are disabled (red) and vice-versa to do the 2e run of calib for YT



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

Value > thresholds
Typical 5 MeV

STATISTICS: 1000
Frequence: 1 shot
With channels enabled

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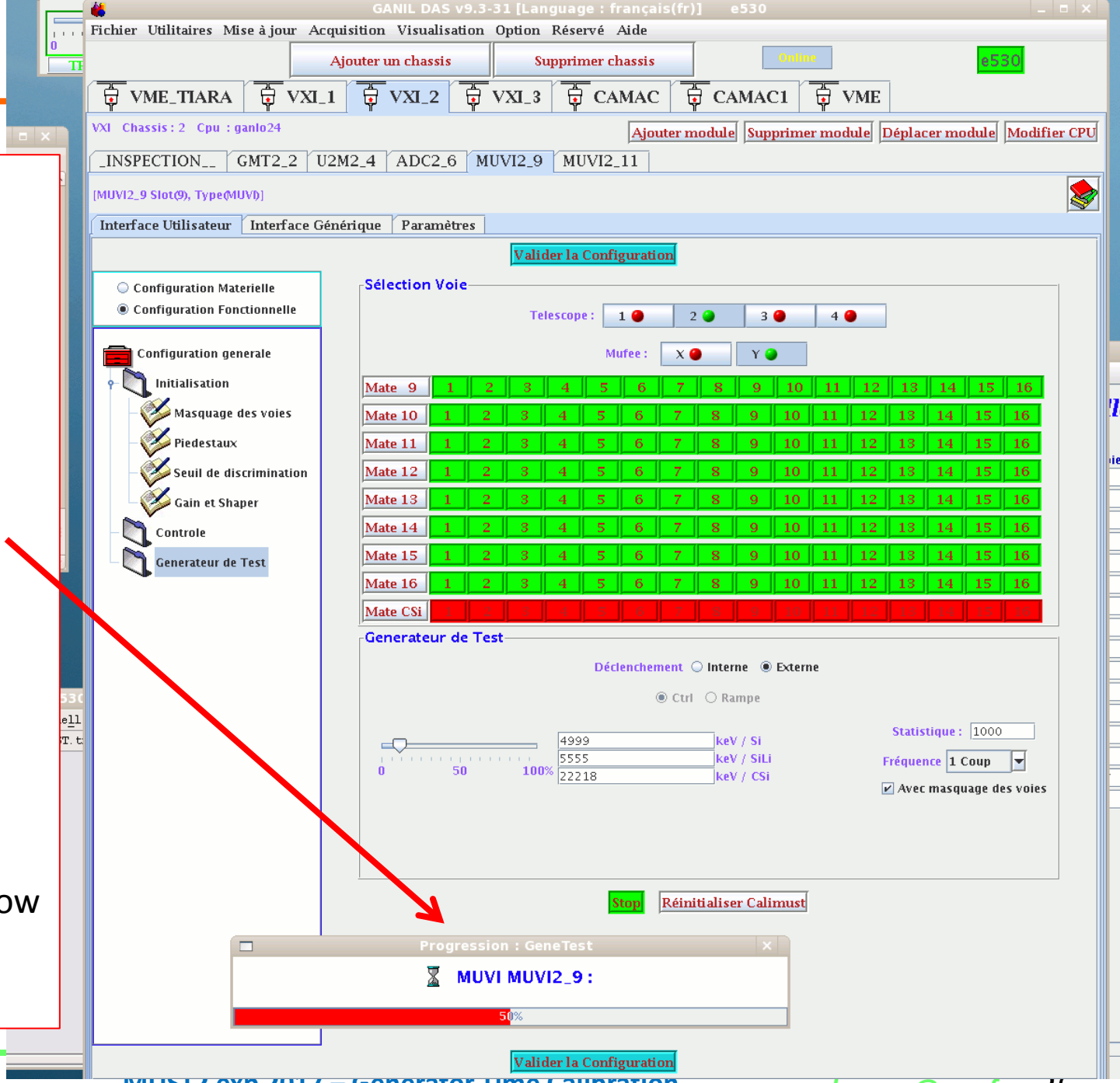
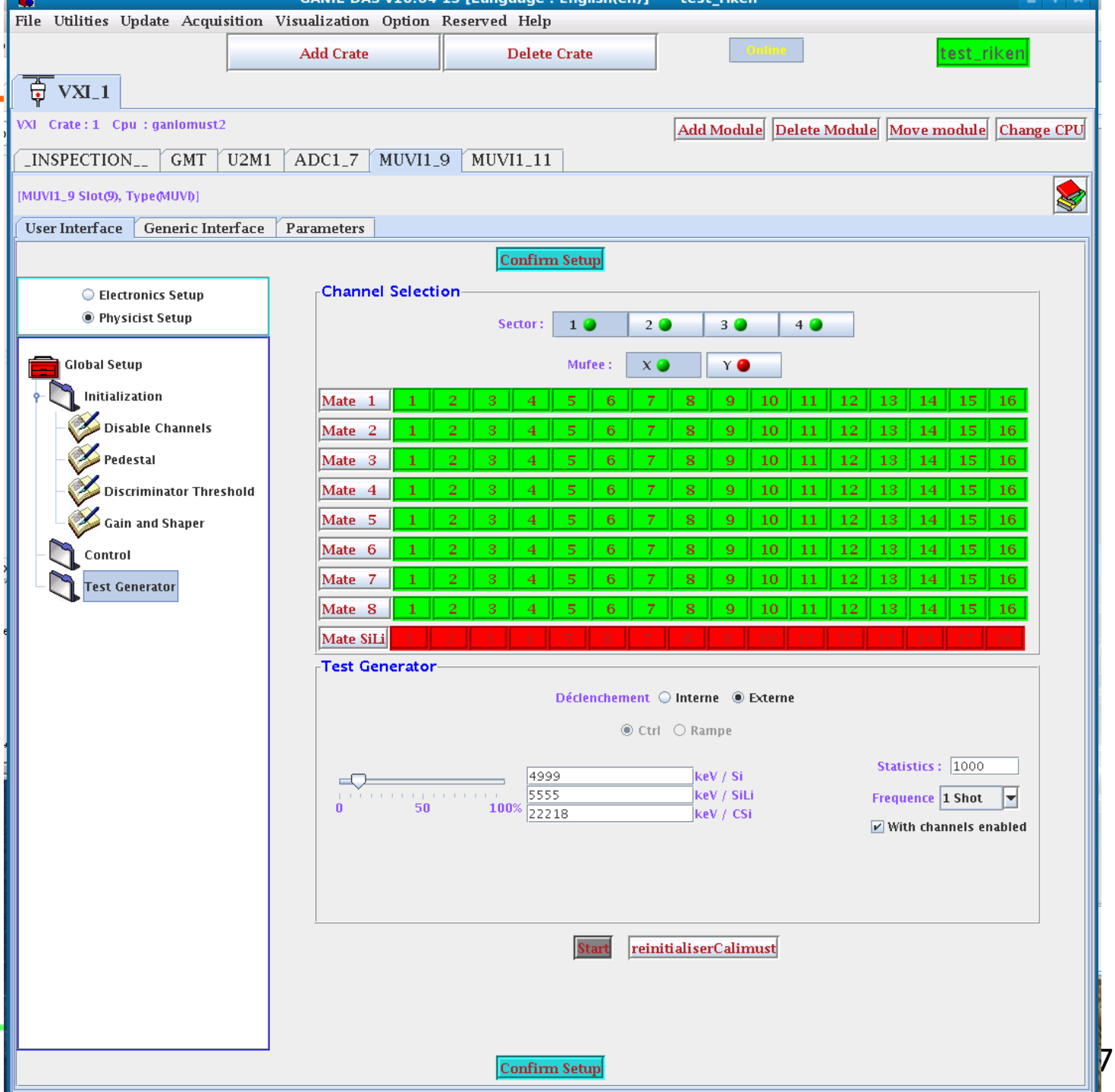
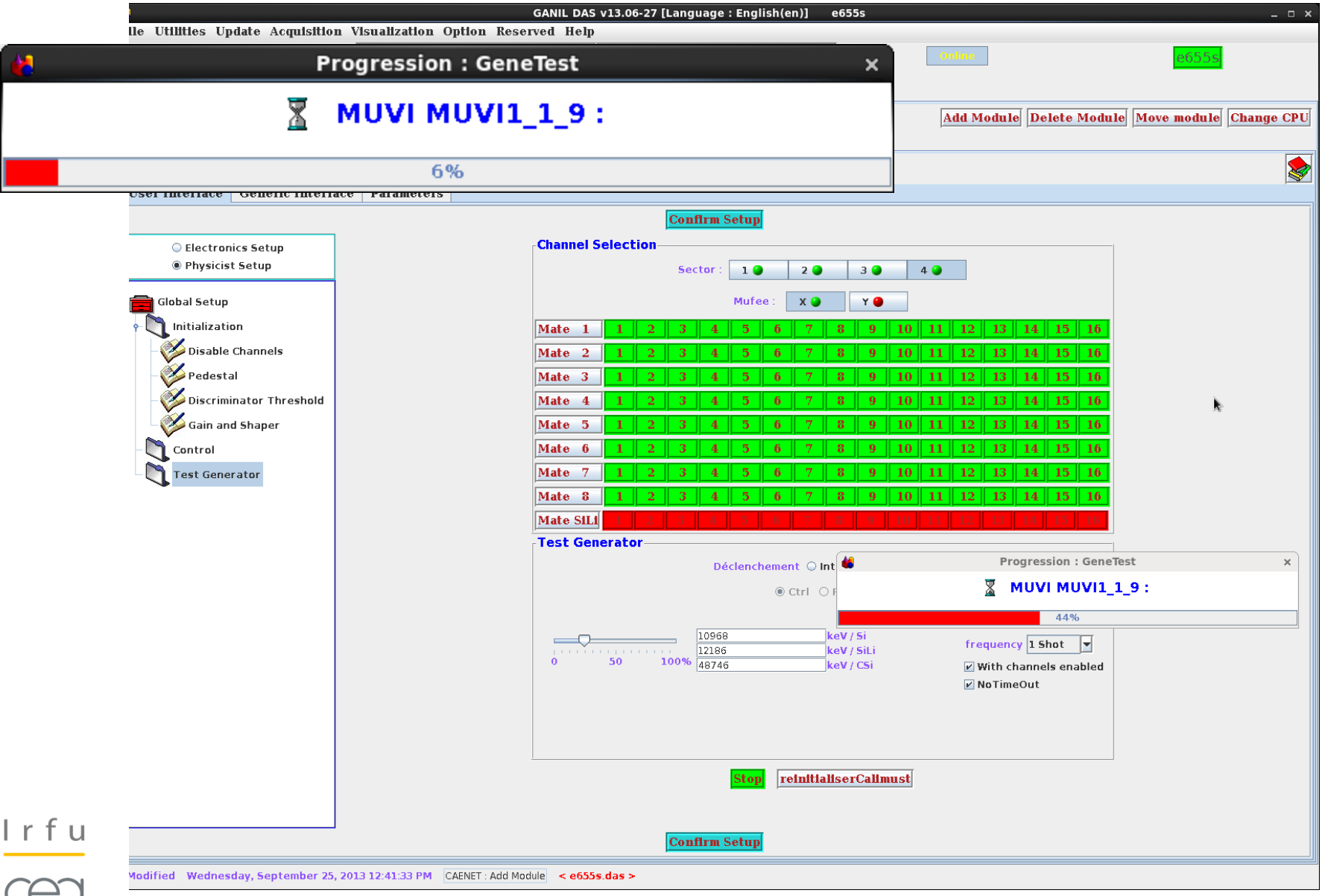
FIRST:
START ACQUISITION
in the Run Control
Then click on « START »
in the
Generator window

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




File Utilities Update Acquisition Visualization Option Reserved Help
Add Crate
Delete Crate
Online
test_riken
VXI_1
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(MUVI)]
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
0 50 100%
4999 keV / Si
5555 keV / SiLi
22218 keV / CSi
Statistics : 1000
Frequence 1 Shot
With channels enabled
Start
reinitialiserCalimust
Confirm Setup

Problem MUVI-
Temperature Alarm

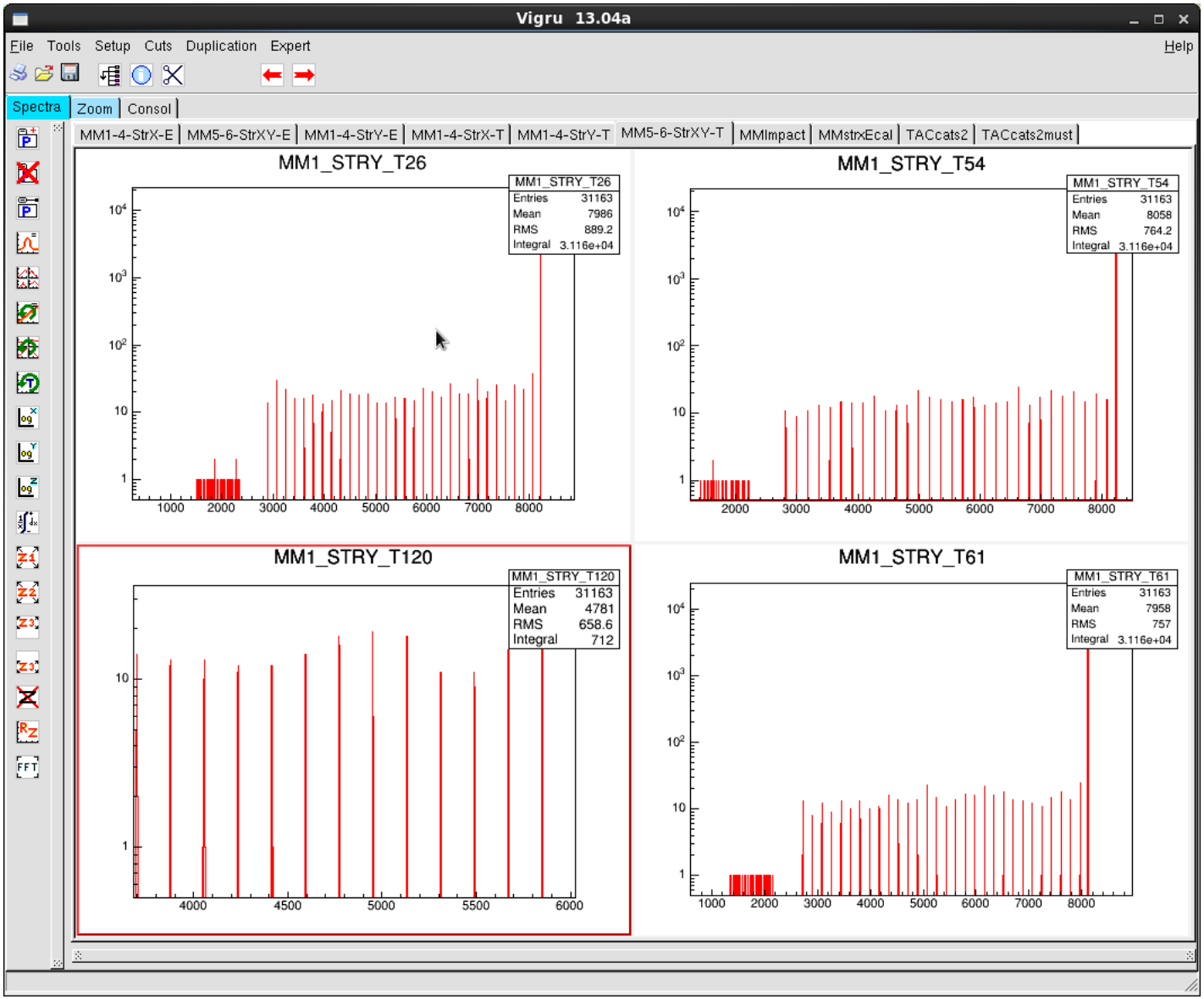


LOAD THE VIGRU configuration (vigru_e6**MM2TCalib.xml) or adapt one to check the time spectra of MUST2 (both 2D and 1D)
→ specific for MUST2 with the following RAW spectra

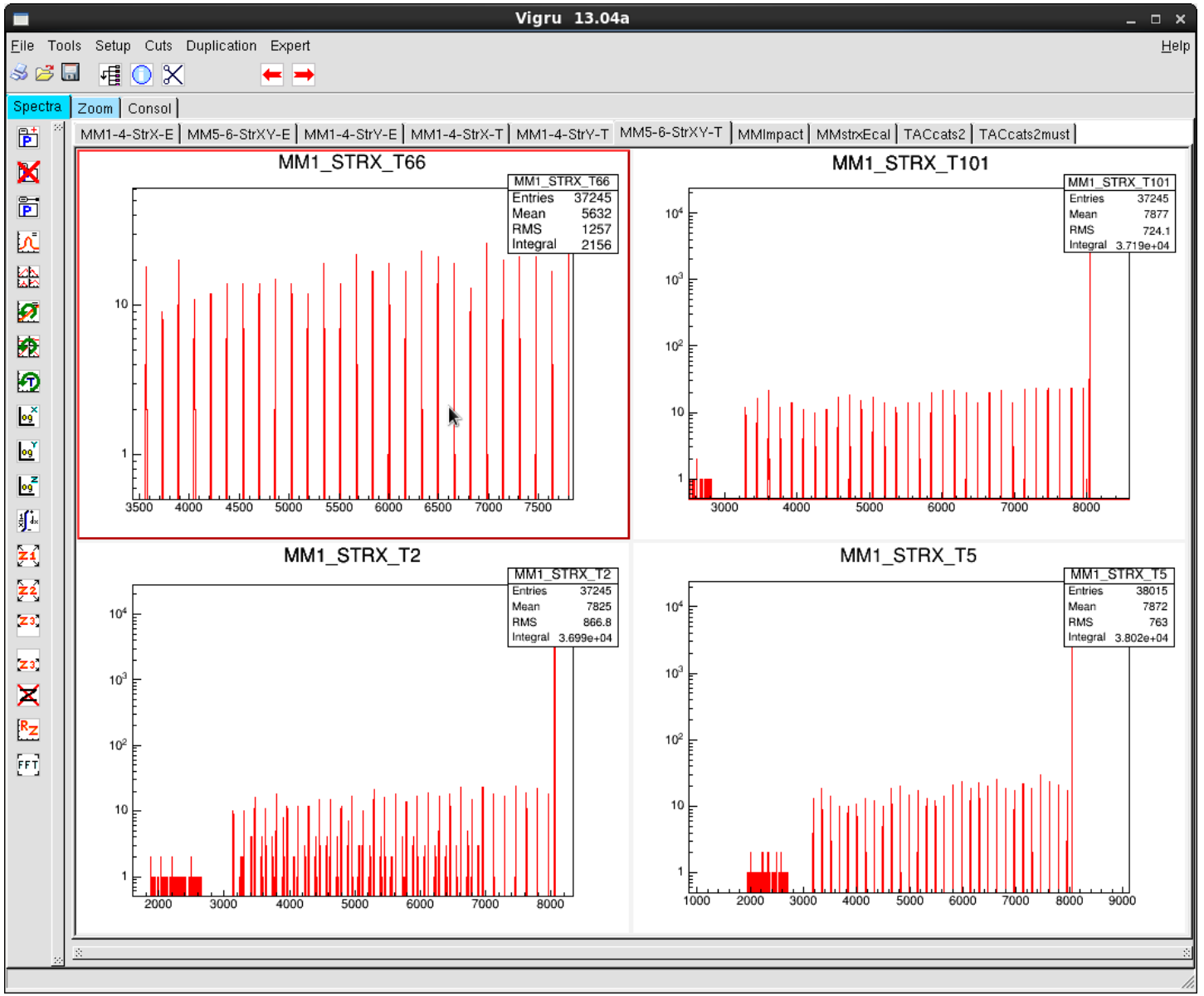
ONE PAGE FOR THE 2D XT: i=1,…4 MMi_STRX_T_BRU
ONE PAGE FOR THE 2D YT: i=1,…4 MMi_STRY_T_BRU
PAGES with selection 1D spectra on each telescope
RAW/MM1/ MM1_STRX_Ti

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

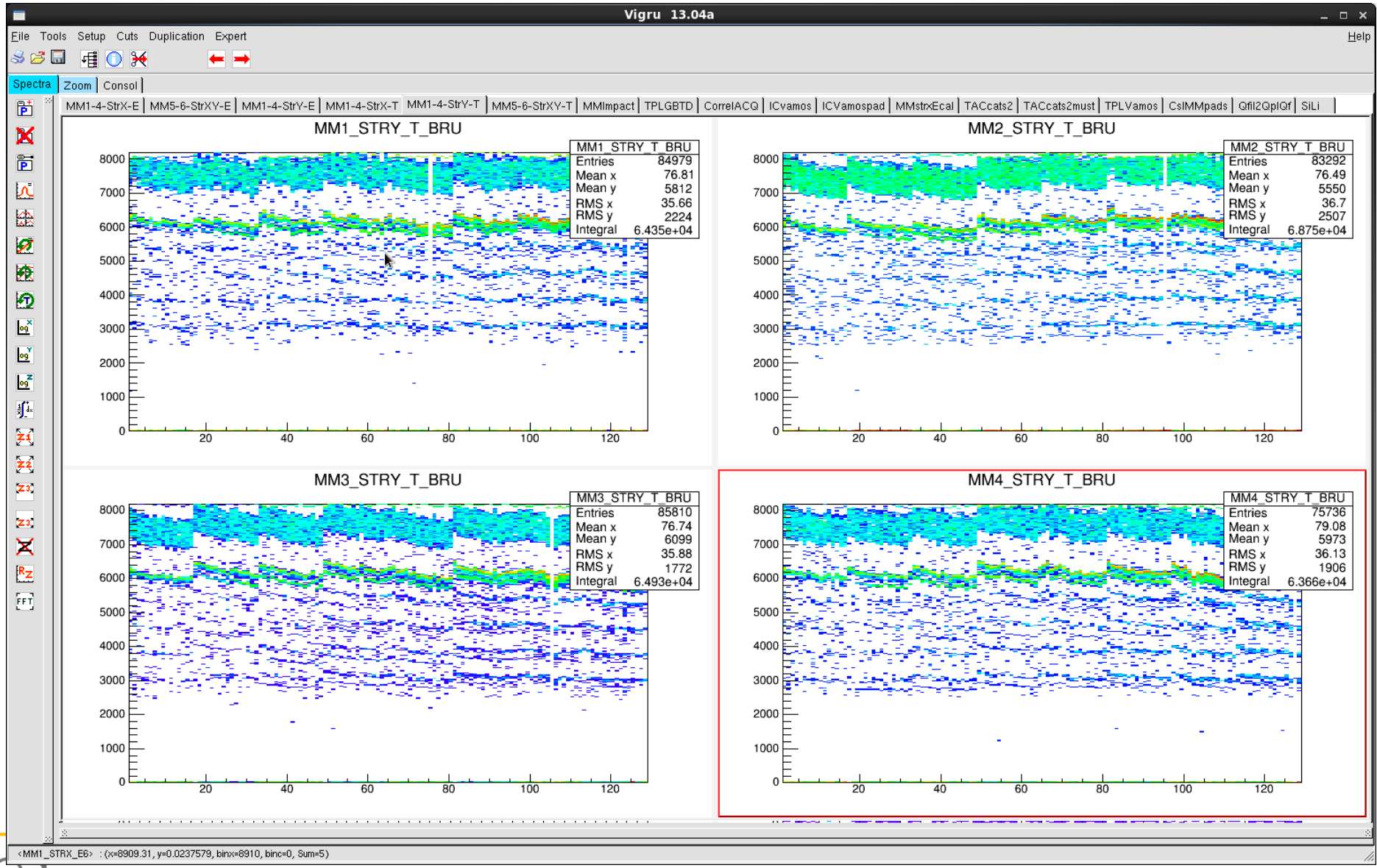
CALIMERO TESTS E655S experiment in VAMOS



E655S DAQ –MUST2 TESTS

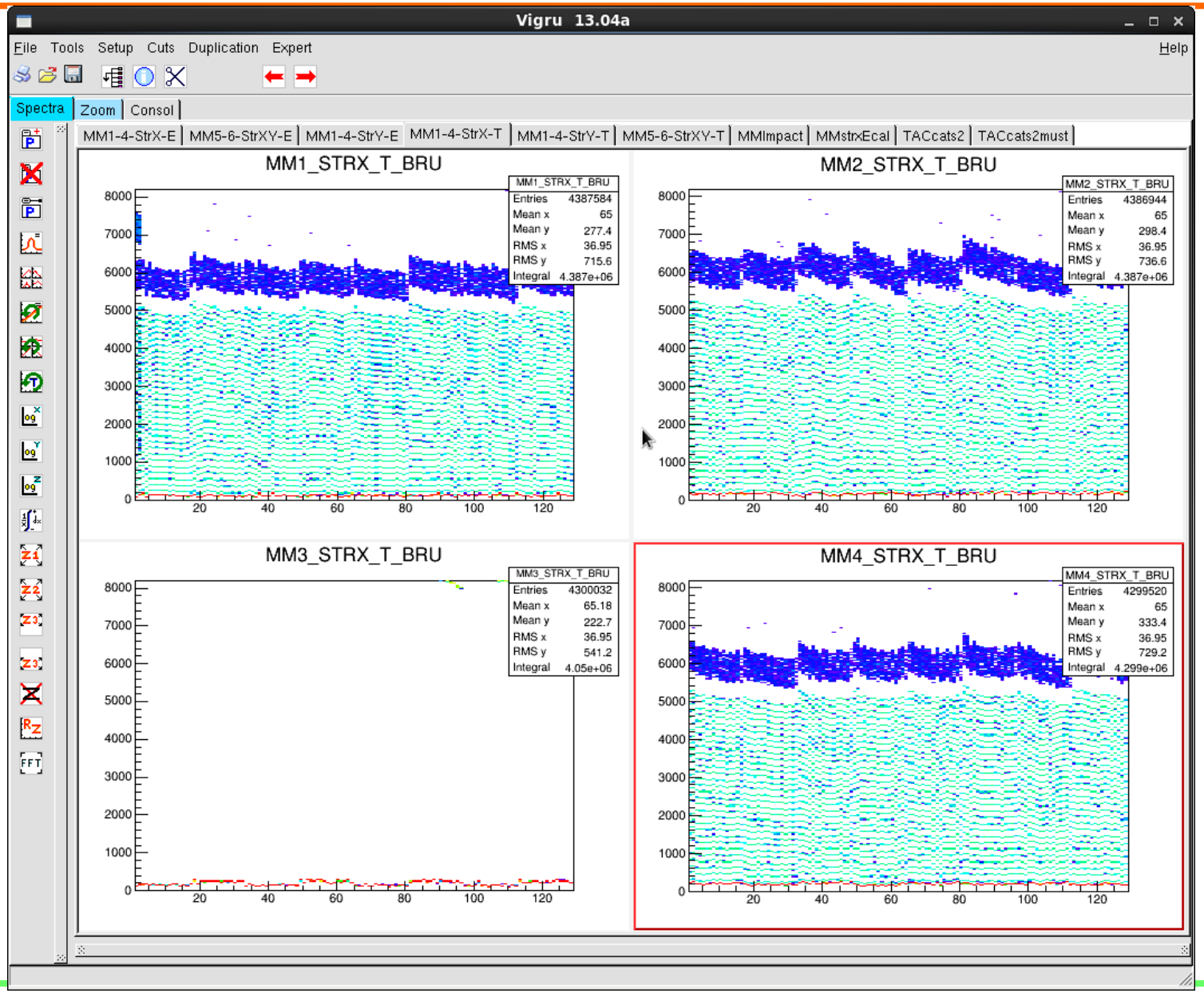


2013- $^{18}Ne+CD_2$ 16.5 A.MeV - E655S -VAMOS ---gamme des TAC **600ns**

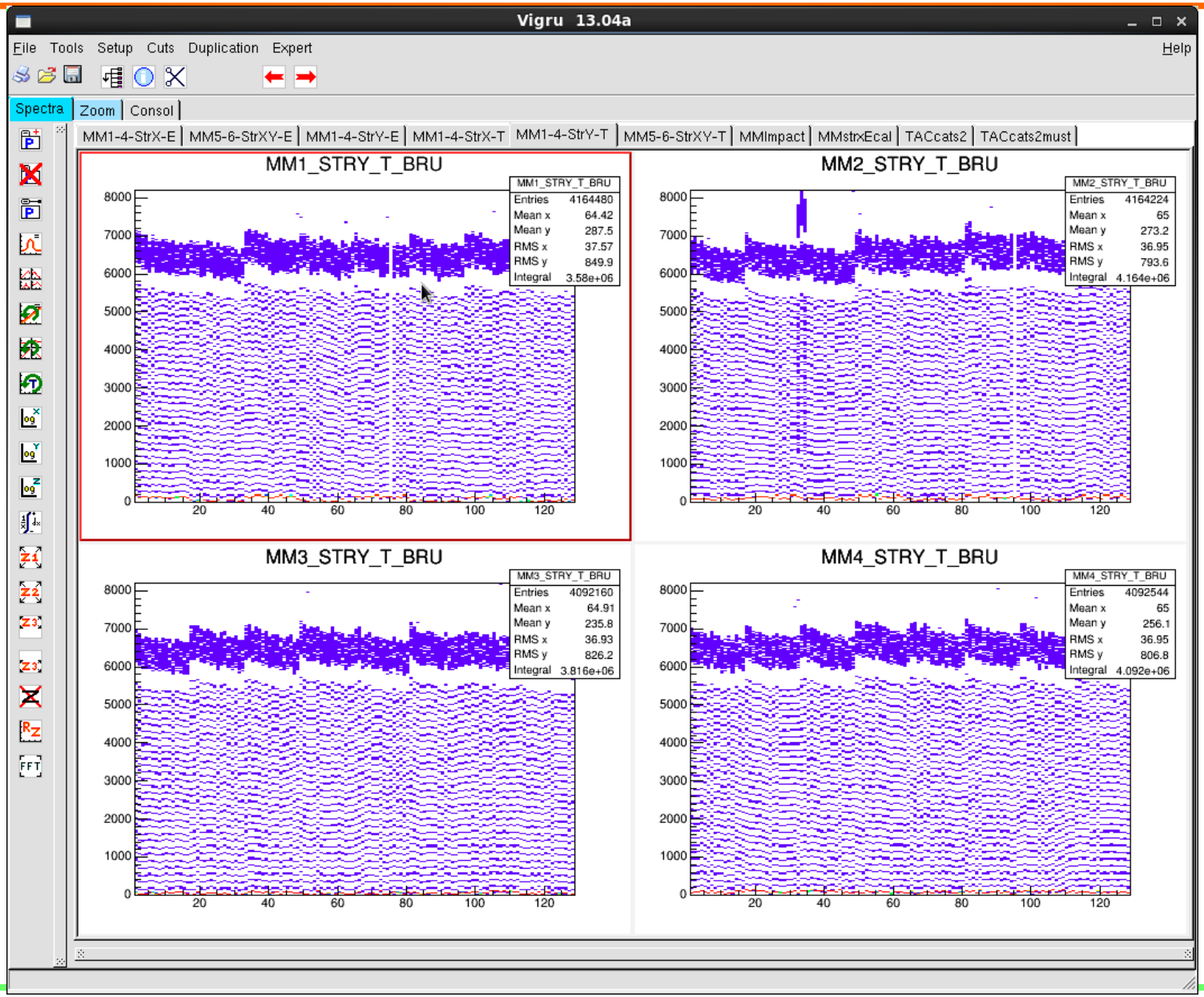


2013 - CALIMERO calib temps E655S – MufeeX Tel 1 à 4 - gamme des TAC **600 ns**

Time Calibrator
Range 640 ns
Période 20ns

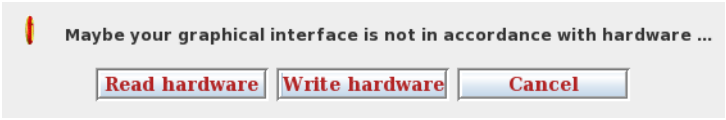


2013 - CALIMERO calib temps E655S – MufeeY Tel 1 à 4 -gamme des TAC **600 ns**



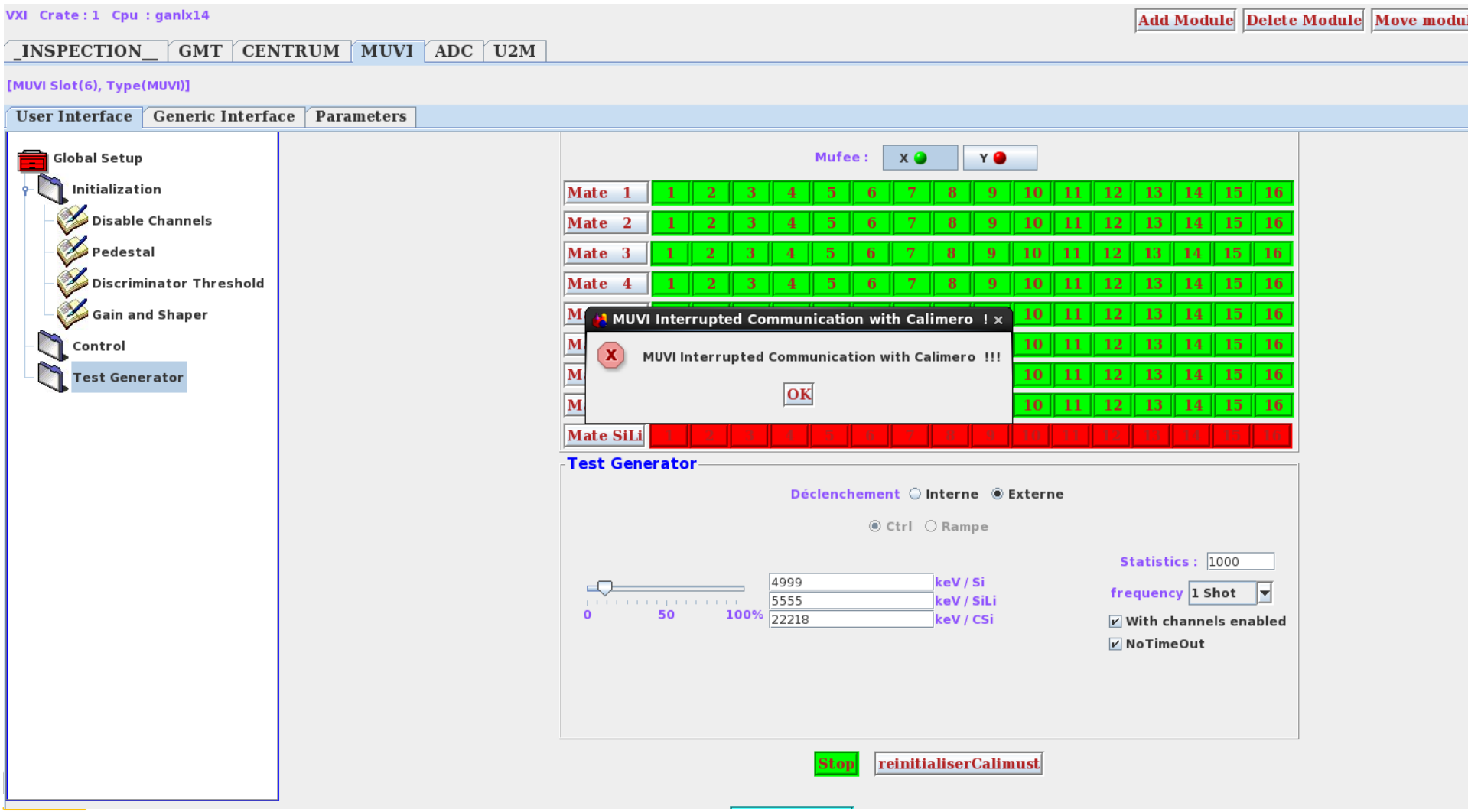
TROUBLES…

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



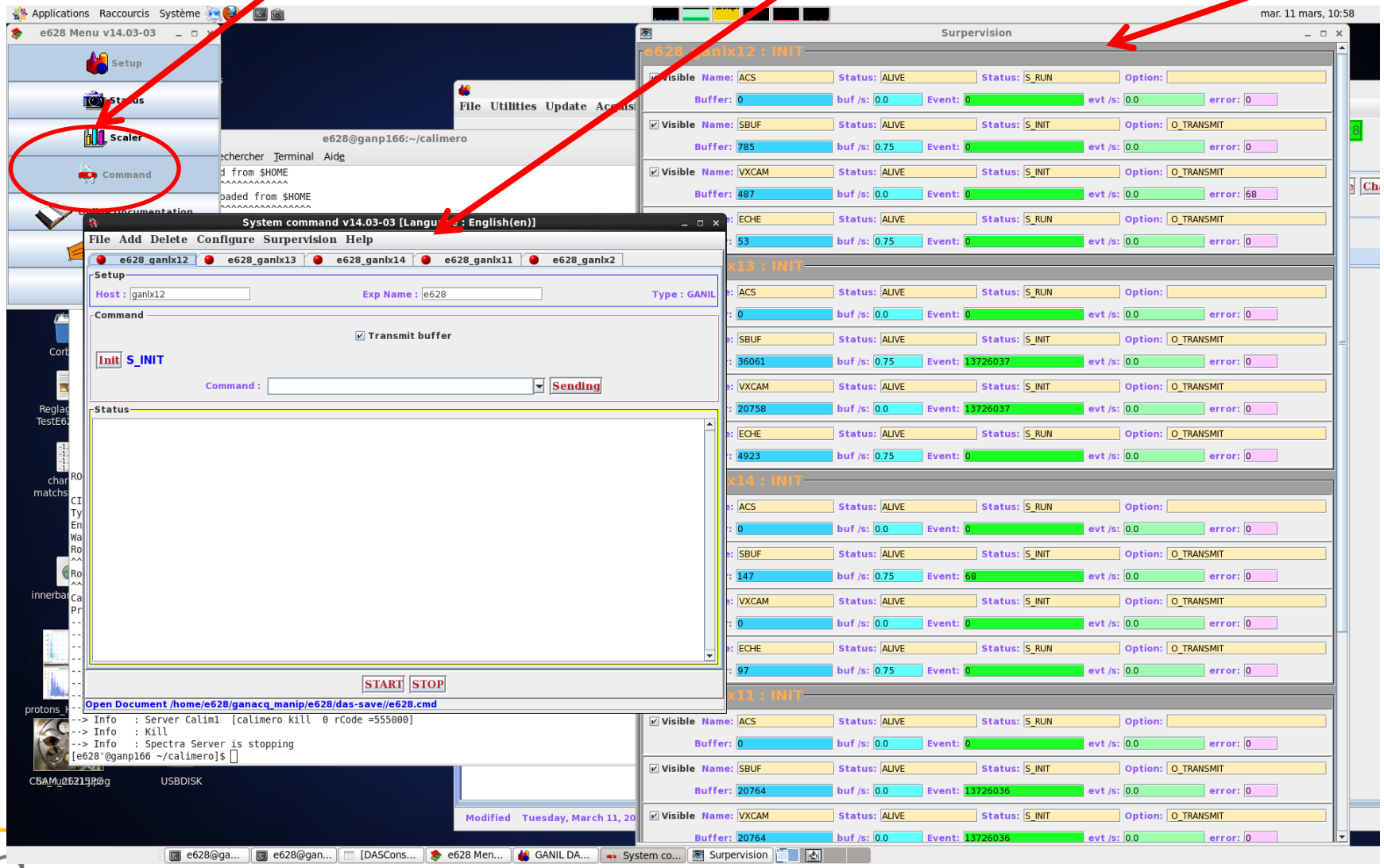
-- In case of hardware problems (no trigger) ask the GIP to check with the SYN_tst and to check buffers

TROUBLES WITH CALIMERO



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