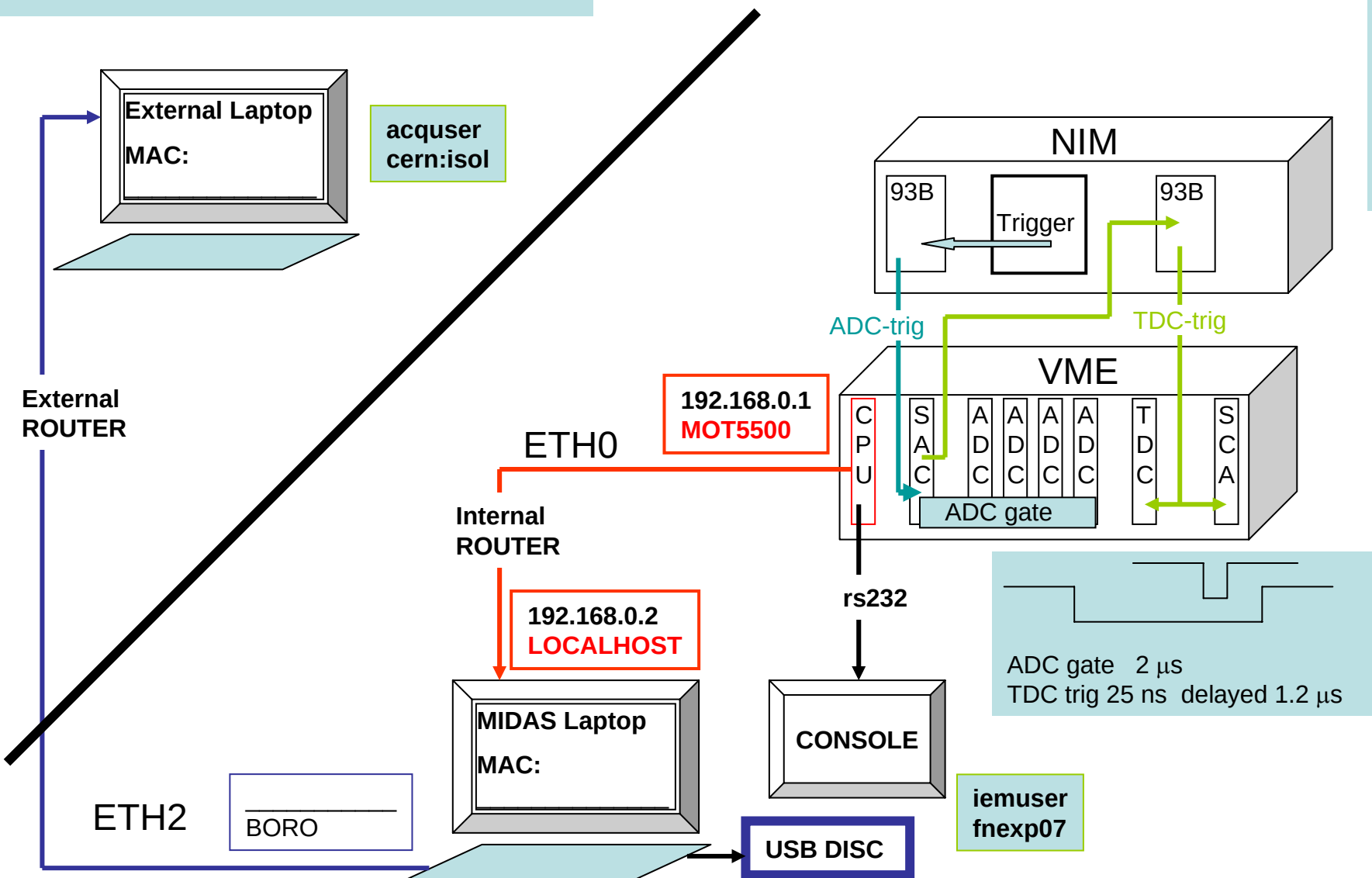


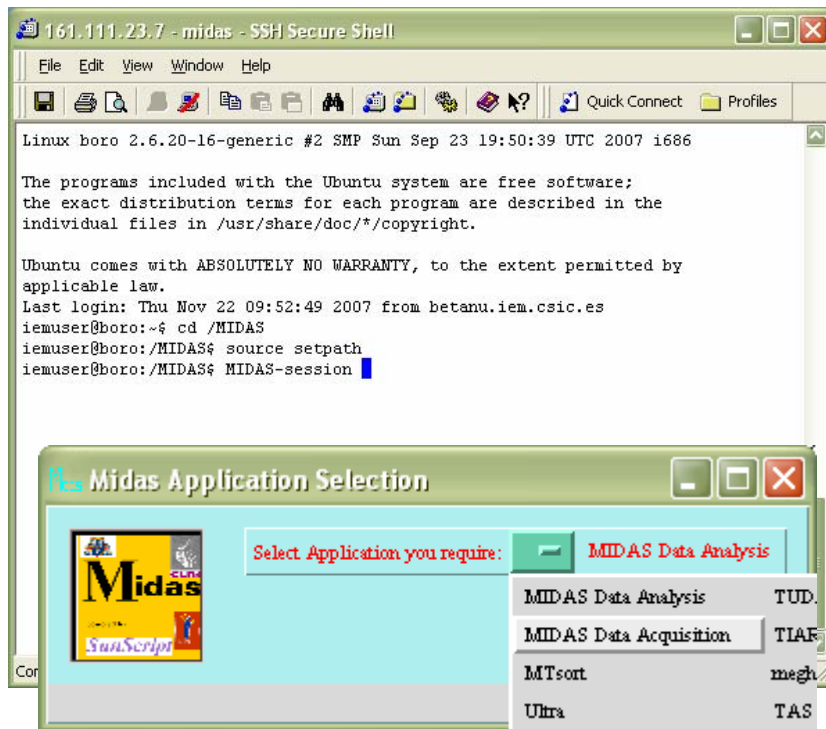
Madrid DAQ set-up



Start up connections



Start Midas on laptop



```
161.111.23.7 - midas - SSH Secure Shell
File Edit View Window Help
Linux boro 2.6.20-16-generic #2 SMP Sun Sep 23 19:50:39 UTC 2007 i686

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

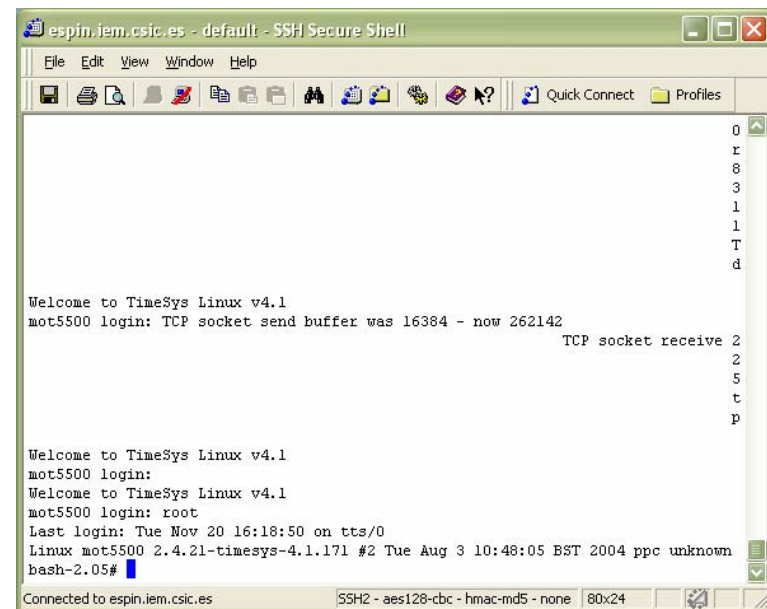
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
Last login: Thu Nov 22 09:52:49 2007 from betanu.iem.csic.es
iemuser@boro:~$ cd /MIDAS
iemuser@boro:/MIDAS$ source setpath
iemuser@boro:/MIDAS$ MIDAS-session
```

Midas Application Selection

Select Application you require: **MIDAS Data Analysis**

MIDAS Data Analysis	TUD
MIDAS Data Acquisition	TIAF
MTsort	megh
Ultra	TAS

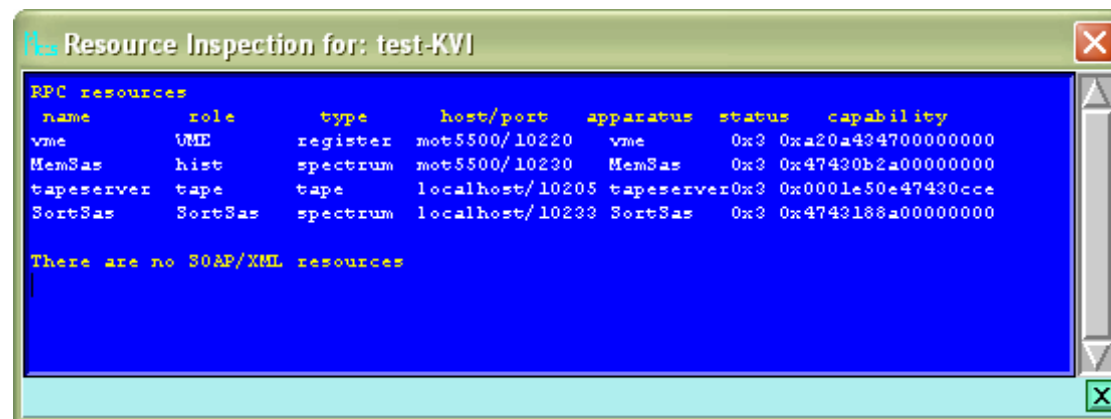
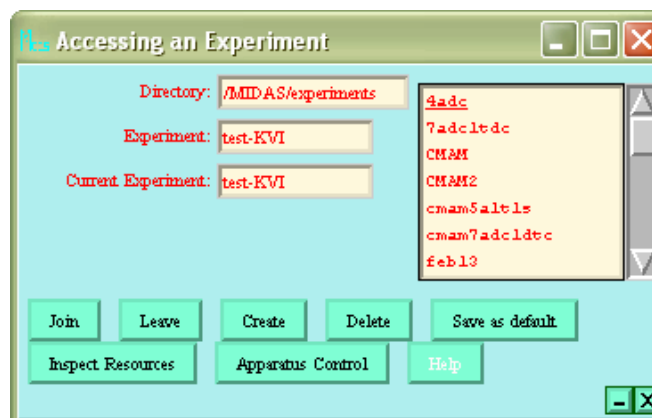
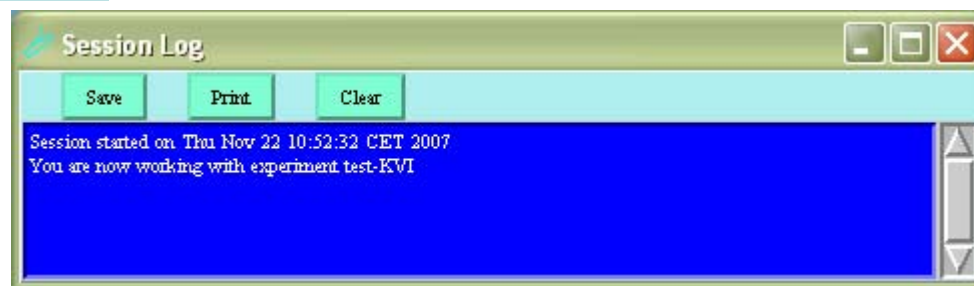
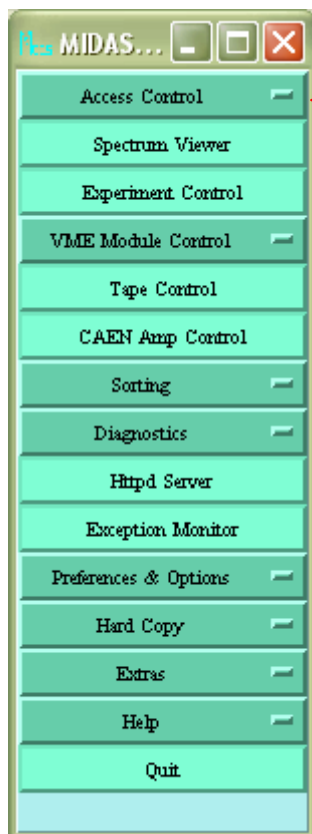
Minicom: VME console



```
espin.iem.csic.es - default - SSH Secure Shell
File Edit View Window Help
Welcome to TimeSys Linux v4.1
mot5500 login: TCP socket send buffer was 16384 - now 262142
TCP socket receive 2
2
5
t
p

Welcome to TimeSys Linux v4.1
mot5500 login:
Welcome to TimeSys Linux v4.1
mot5500 login: root
Last login: Tue Nov 20 16:18:50 on tts/0
Linux mot5500 2.4.21-timesys-4.1.171 #2 Tue Aug 3 10:48:05 BST 2004 ppc unknown
bash-2.05#
```

Access to VME



VME module control



ion & Control Frame

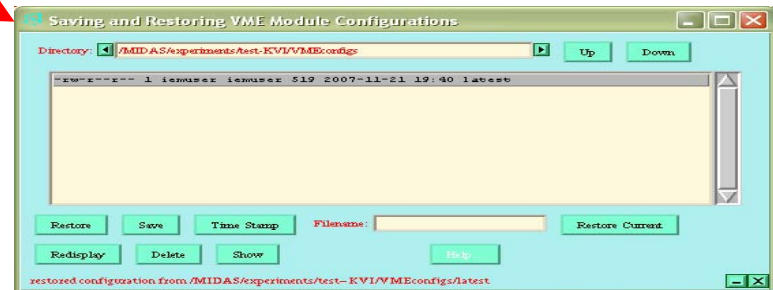
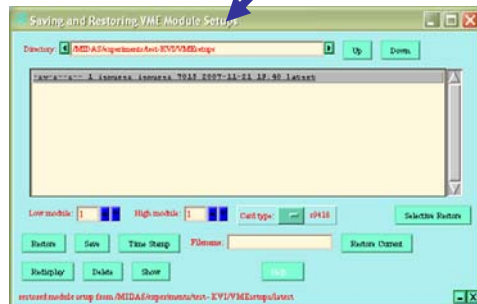


VME Server

Module Type	Module Name	Address Information	Module ID	Comment
SAC	sac#1	0x0400:0x000000:0x00000000:0:0	1	SAC
CAEN V785	v785#1	0x0000:0x000000:0x00200000:0:0	1	ADC0
CAEN V785	v785#2	0x0000:0x000000:0x00210000:0:0	2	ADC1
CAEN V785	v785#3	0x0000:0x000000:0x00220000:0:0	3	ADC2
CAEN V785	v785#4	0x0000:0x000000:0x00230000:0:0	4	ADC3
CAEN V1190	v1190#1	0x0000:0x000000:0x00300000:0:0	5	TDC0
CAEN V820	v820#1	0x0000:0x000000:0x00400000:0:0	6	Scaler

Module Type: Index: Module ID: Comment:

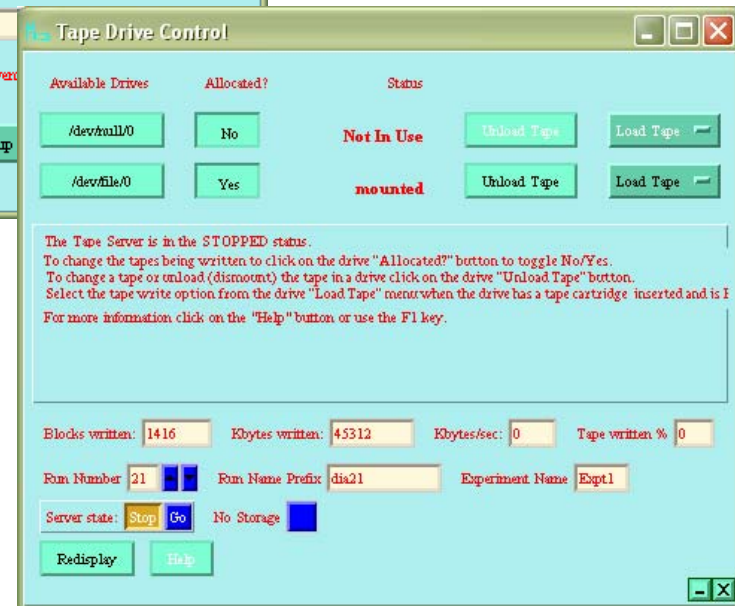
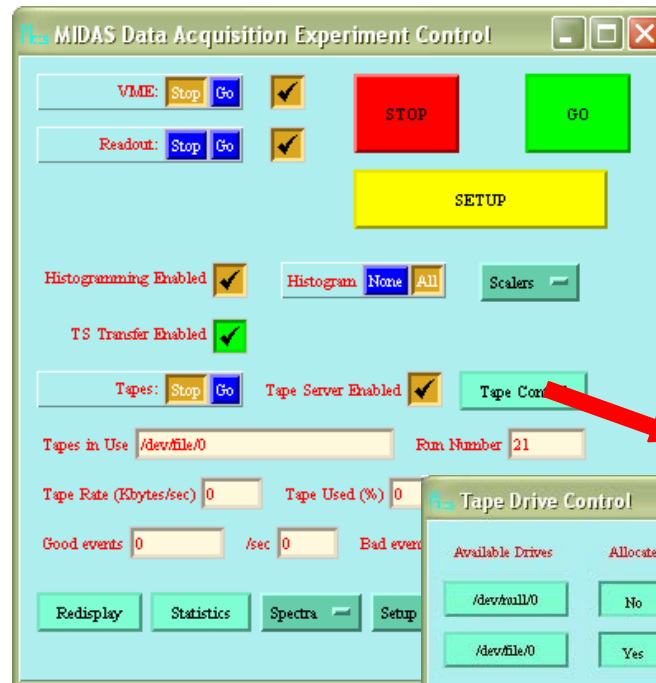
VME address: A16 A24 A32 VME Interrupt level vector



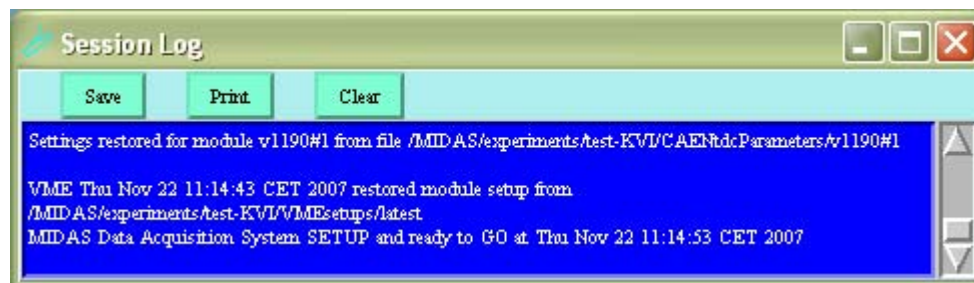
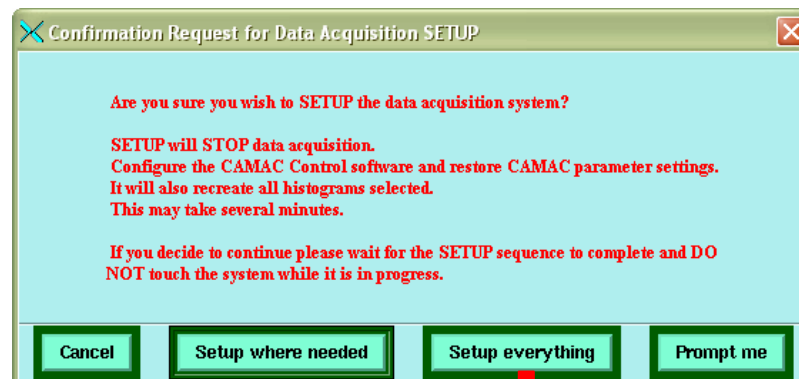
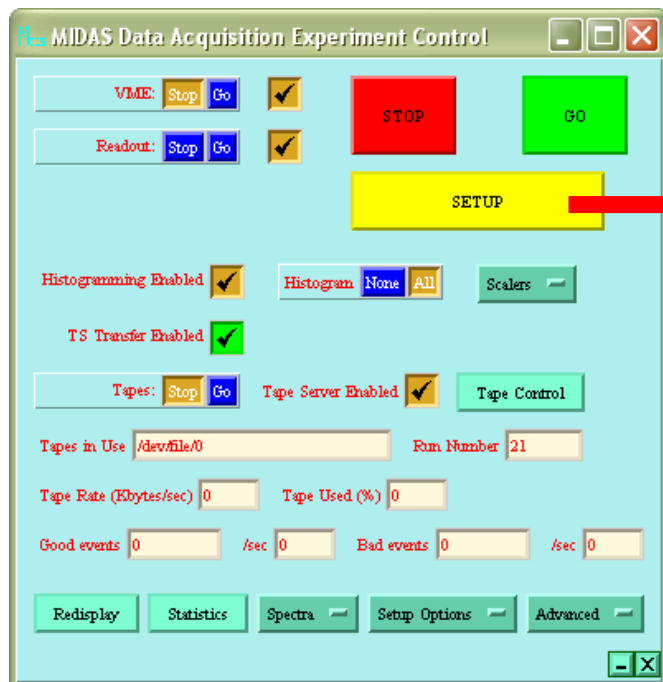
Nov. 2007

O. Tengblad IEM-CSIC

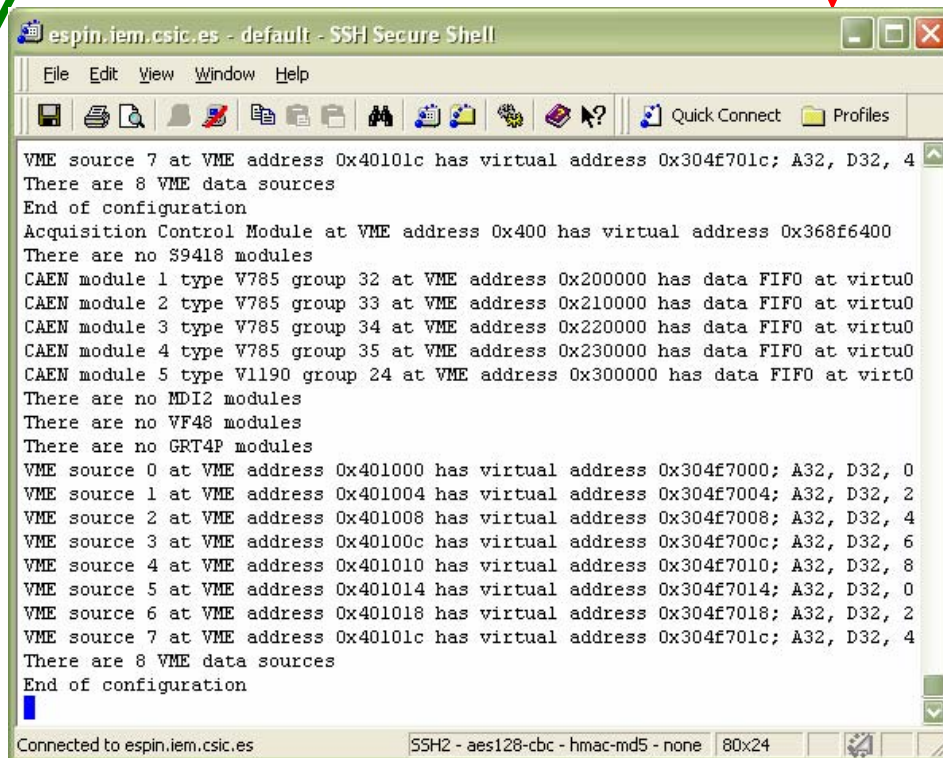
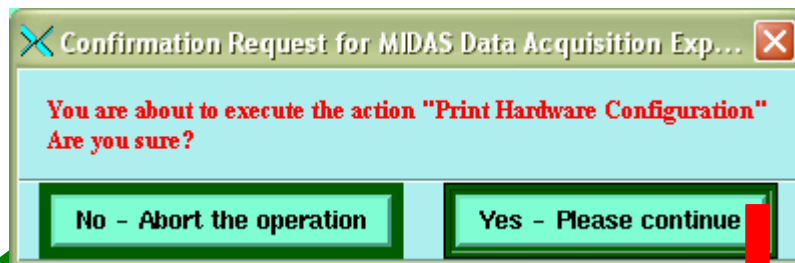
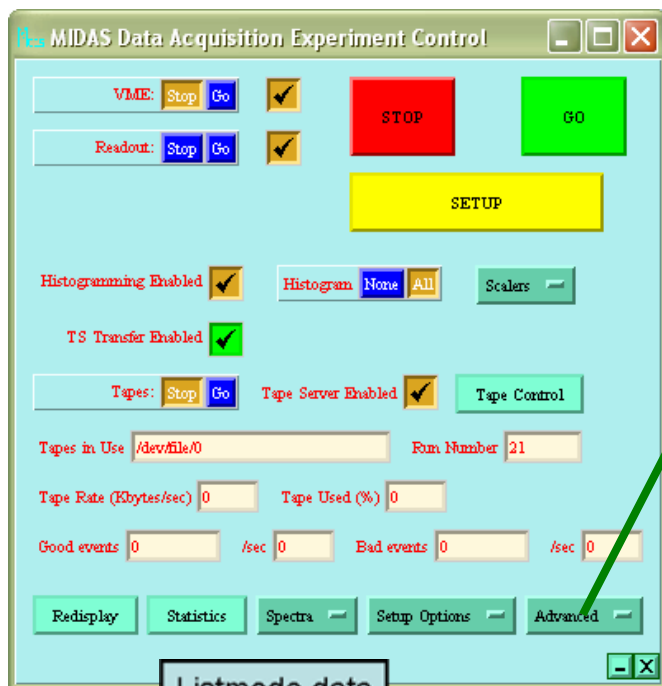
Experiment control



Set-up the VME-electronic (make it known to the system)



Check that the modules are there



Listmode data

group	Module type
2	scaler
24	TDC V1190 ch 0-63
25	TDC V1190 ch 64-127
32	ADC0
33	ADC1
34	ADC2
35	ADC3



TDC set-up

MIDAS...

- Access Control
- Spectrum Viewer
- Experiment Control
- VME Module Control
- Tape Control
- CAEN Amp Control
- Sorting
- Diagnostics

CAEN V1190 Acq...

- Set Trigger Matching ☒
- Set Continuous Storage ☐
- Set keep token
- Clear keep token
- Load default configuration
- Save user configuration
- Load user configuration
- Set auto load user configuration
- set auto load default configuration
- Update

CAEN V1190 TDC Setup & Monitor

Module number: 1 select: Trigger Counter 279597 Events Stored 0 Act on ALL modules? ☐

Enable all channels Disable all channels Channel Enable Options Version A GEO Address 0x01

Acquisition Mode Options Trigger Options Edge Detection Options Readout Options Channel Adjust

Redisplay Save Setup Restore Setup Engineering read output buffer

CAEN V1190 Triggering Options

Window Width (25ns) 84 1 4095

Window Offset (25ns) -60 -2048 +40

Extra Search Margin (25ns) 0 0 4095

Reject Margin (25ns) 0 0 4095

Enable Subtraction of Trigger Time ☒

Disable Subtraction of Trigger Time ☐

Update

CAEN V1190 Edge Detection Options

Edge Detection Configuration: pair mode only leading only trailing trailing and leading

Set LSB of leading/trailing edge 800 ps 200 ps 100 ps

Resolution of leading edge arrival time 100 ps 200 ps 800 ps 1.6 ns 3.12 ns 6.25 ns 12.5 ns

Resolution of pulse width (pair detection) 100 ps 200 ps 800 ps 1.6 ns 3.12 ns 6.25 ns 12.5 ns 25 ns 50 ns 100 ns 200 ns 400 ns 800 ns

Channel dead time 5 ns 10 ns 30 ns 100 ns

Update

CAEN V1190 Readout Options

Enable TDC Header and EOB ☐

Disable TDC Header and EOB ☒

Maximum hits per event 0 1 2 4 8 16 32 64 128 no limit

Enable TDC error mark ☐

Disable TDC error mark ☐

Enable bypass TDC if error ☐

Disable bypass TDC if error ☐

Set readout FIFO size 32 64 96 128 160 192 224 256

BERR enable ☒

Write Empty Event ☒

Update

ADC set-up

CAEN V785 ADC Setup & Monitor

Module number: GEO Address Event Counter Act on ALL modules? ☒

Module Setup

ADC controller Overflow suppression Zero suppression

Fast Clear Window Zero Suppression Threshold Resolution

ADC Enables and Thresholds Act on ALL ADCs? ☒

0	☒	8	0	0	255	1	☒	8	0	0	255	2	☒	8	0	0	255	3	☒	8	0	0	255
4	☒	8	0	0	255	5	☒	8	0	0	255	6	☒	8	0	0	255	7	☒	8	0	0	255
8	☒	8	0	0	255	9	☒	8	0	0	255	10	☒	8	0	0	255	11	☒	8	0	0	255
12	☒	8	0	0	255	13	☒	8	0	0	255	14	☒	8	0	0	255	15	☒	8	0	0	255
16	☒	8	0	0	255	17	☒	8	0	0	255	18	☒	8	0	0	255	19	☒	8	0	0	255
20	☒	8	0	0	255	21	☒	8	0	0	255	22	☒	8	0	0	255	23	☒	8	0	0	255
24	☒	8	0	0	255	25	☒	8	0	0	255	26	☒	8	0	0	255	27	☒	8	0	0	255
28	☒	8	0	0	255	29	☒	8	0	0	255	30	☒	8	0	0	255	31	☒	8	0	0	255

Scaler set-up for listmode data

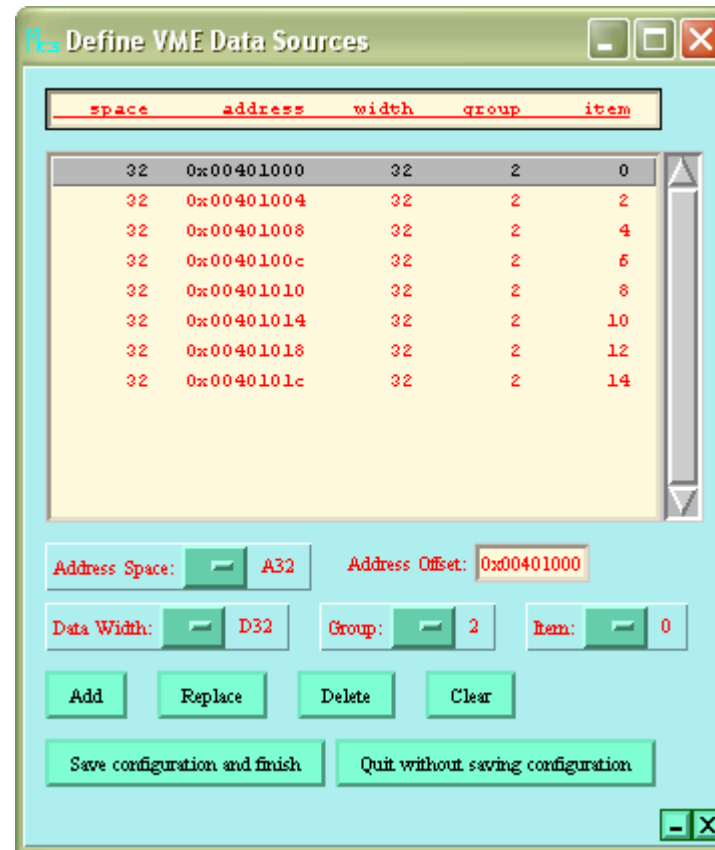
The **scaler** works in tow separate ways simultaneously!!

1) **On-line**

all channels having input are directly seen on the screen without start/stop controll

1) **Listmode**

To get the scaler data in the listmode datafile, one have to set-up the VME Data Sources :
The scaler is 64 bit while evrything else is 32 bit so one need 2x32 bit for every channel in use.



CAEN VB20 Scaler Setup & Monitor

Counter Values

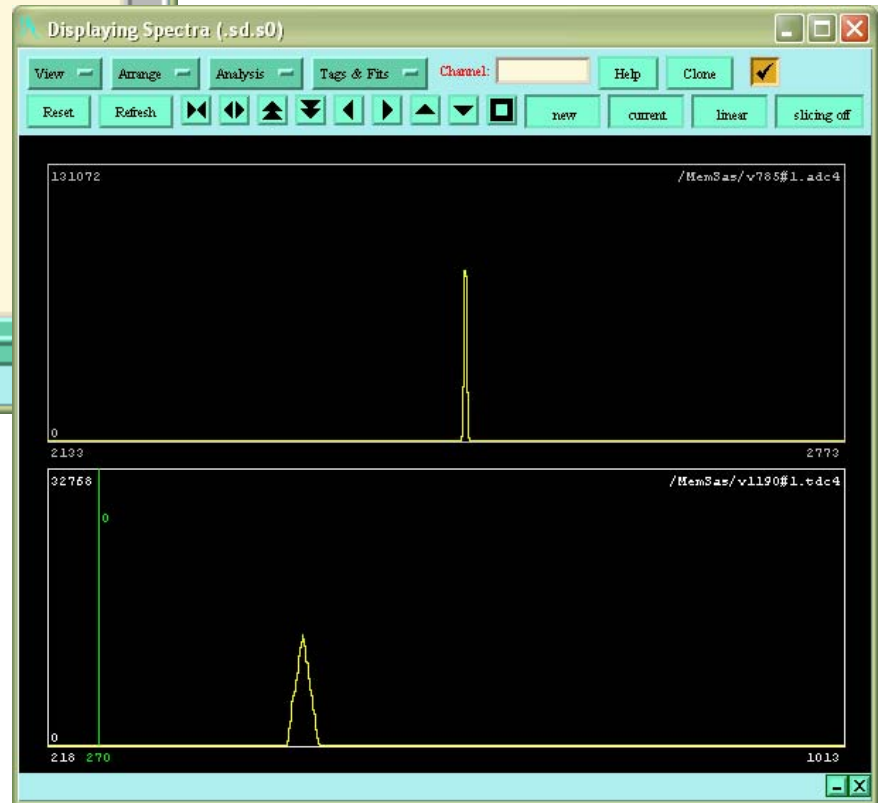
0: 660534	1: 656096	2: 0	3: 0	4: 0	5: 0	6: 0	7: 0
8: 0	9: 0	10: 0	11: 0	12: 0	13: 0	14: 0	15: 0
16: 0	17: 0	18: 0	19: 0	20: 0	21: 0	22: 0	23: 0
24: 0	25: 0	26: 0	27: 0	28: 0	29: 0	30: 0	31: 0

Rate Values

0: 947	1: 939	2: 0	3: 0	4: 0	5: 0	6: 0	7: 0
8: 0	9: 0	10: 0	11: 0	12: 0	13: 0	14: 0	15: 0
16: 0	17: 0	18: 0	19: 0	20: 0	21: 0	22: 0	23: 0
24: 0	25: 0	26: 0	27: 0	28: 0	29: 0	30: 0	31: 0

Update Counters Clear All Counters Enable Rates ☒

Rates last updated Thu Nov 22 11:35:00 CET 2007



Files are being stored

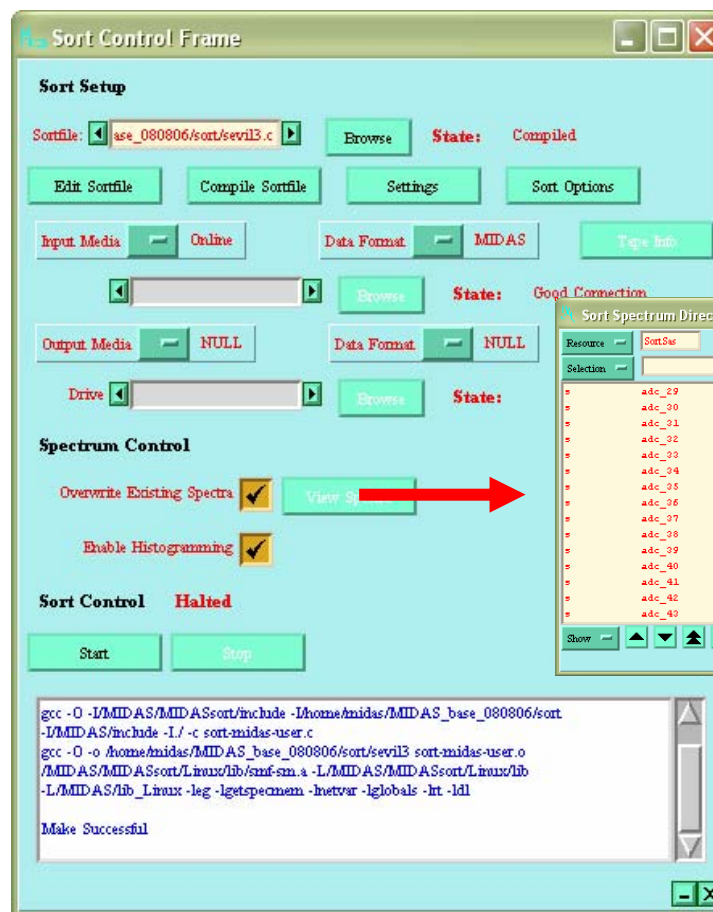
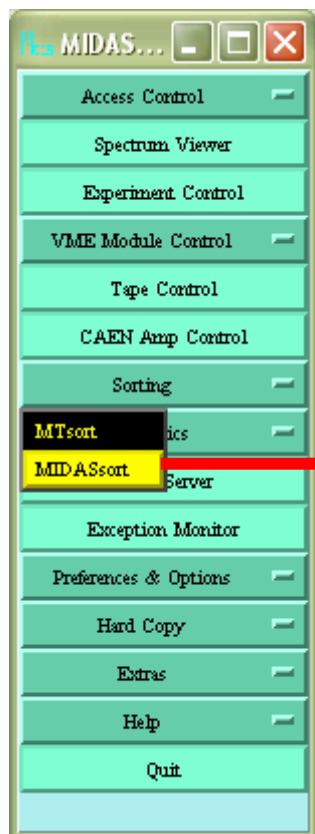


```
2:161.111.23.7 - midas* - SSH Secure Shell
File Edit View Window Help
[Icons] Quick Connect Profiles

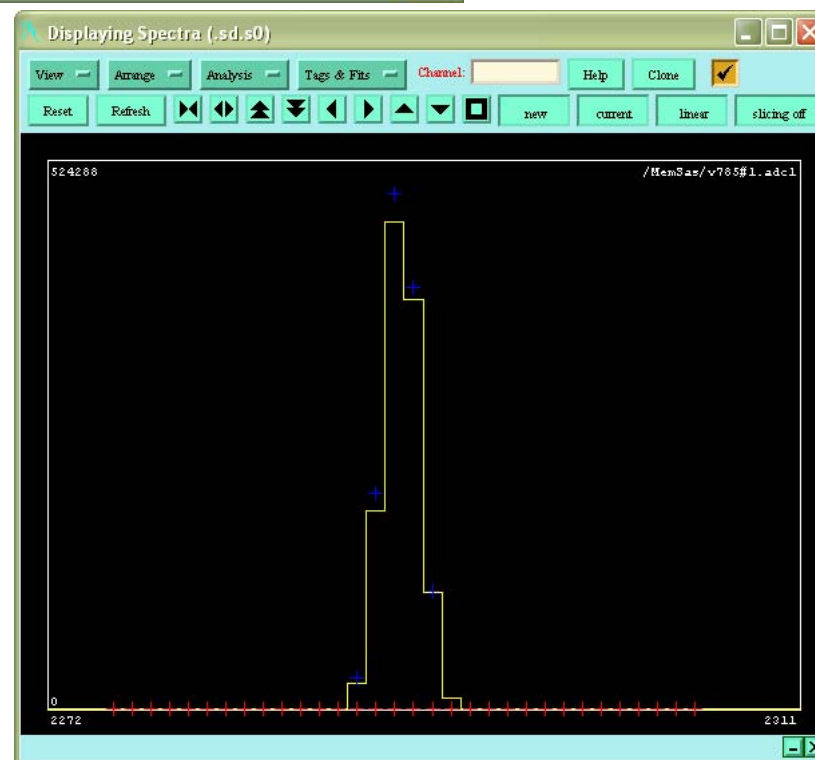
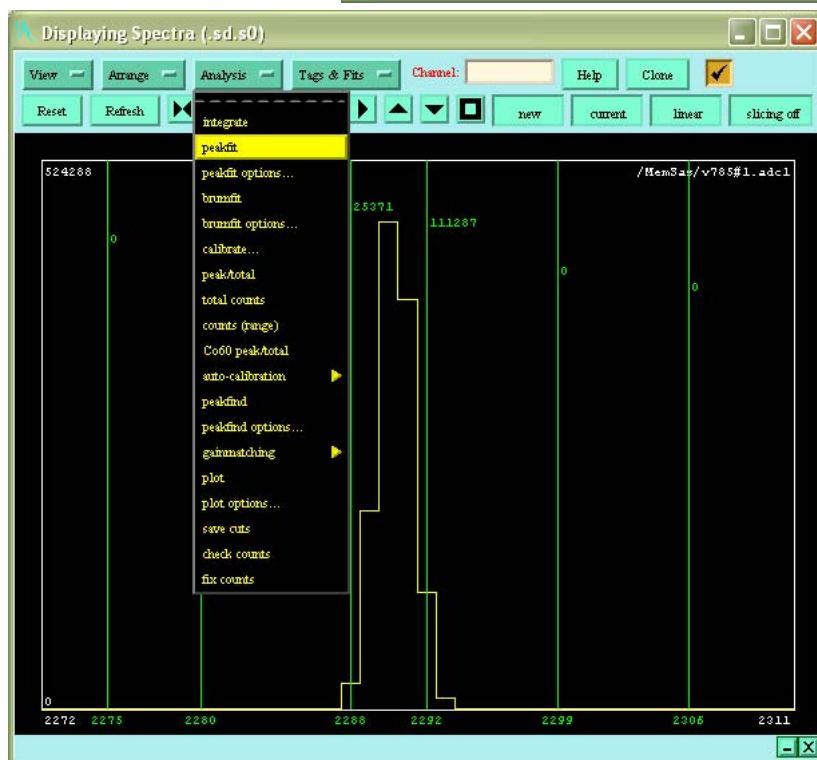
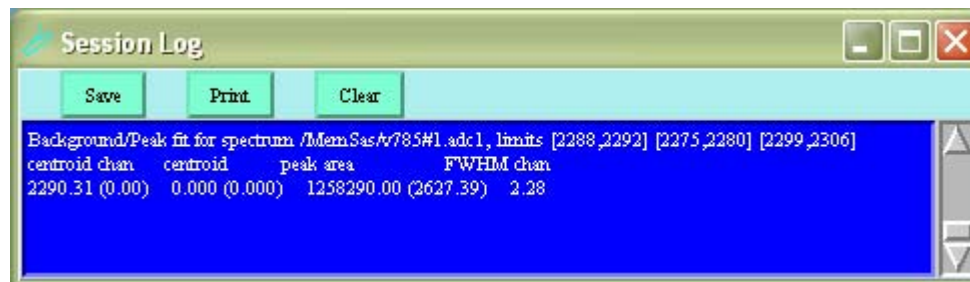
dia2020_0.gz dia205_0.gz dia2115_0.gz dia217_0.gz
iemuser@boro:/MIDAS/TapeData/NOV07$ ls -ahl
total 47M
drwxr-xr-x 2 root root 4.0K 2007-11-22 11:23 .
drwxr-xr-x 6 root root 4.0K 2007-11-20 14:49 ..
-rw-r--r-- 1 root root 1.8K 2007-11-20 15:19 dia2013_0.gz
-rw-r--r-- 1 root root 2.1K 2007-11-20 15:19 dia2015_0.gz
-rw-r--r-- 1 root root 171K 2007-11-20 15:28 dia2016_0.gz
-rw-r--r-- 1 root root 35K 2007-11-20 15:35 dia2020_0.gz
-rw-r--r-- 1 root root 238K 2007-11-20 15:43 dia2022_0.gz
-rw-r--r-- 1 root root 517K 2007-11-20 16:03 dia2024_0.gz
-rw-r--r-- 1 root root 64K 2007-11-20 17:53 dia203_0.gz
-rw-r--r-- 1 root root 959K 2007-11-20 18:27 dia205_0.gz
-rw-r--r-- 1 root root 135K 2007-11-21 12:21 dia2110_0.gz
-rw-r--r-- 1 root root 185K 2007-11-21 12:32 dia2111_0.gz
-rw-r--r-- 1 root root 58K 2007-11-21 12:36 dia2113_0.gz
-rw-r--r-- 1 root root 42K 2007-11-21 12:39 dia2115_0.gz
-rw-r--r-- 1 root root 162K 2007-11-21 12:45 dia2117_0.gz
-rw-r--r-- 1 root root 484K 2007-11-21 13:04 dia2120_0.gz
-rw-r--r-- 1 root root 43M 2007-11-22 11:37 dia2123_0.gz
-rw-r--r-- 1 root root 393K 2007-11-21 11:39 dia217_0.gz
-rw-r--r-- 1 root root 73K 2007-11-21 11:42 dia218_0.gz
-rw-r--r-- 1 root root 724K 2007-11-21 12:07 dia219_0.gz
iemuser@boro:/MIDAS/TapeData/NOV07$
```

Connected to 161.111.23.7 SSH2 - aes128-cbc - hmac-md5 - none 80x24

On-line sorting



Display and fit peak



Quit MIDAS

