

# **Diamond Active Target**



## DCS and DAQ in Lecce

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PADME general meeting Frascati, 8-9 th March 2018

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## 1 Diamond Target Hardware

DCS and DAQ setup

## 2 Diamond Target Software

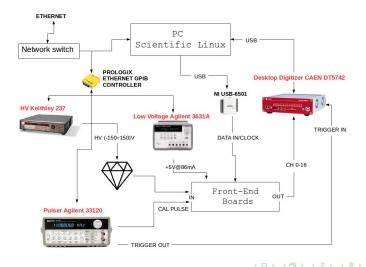
- DCS GUI
- Data Acquisition
- PADME DB LECCE
- Data Monitoring

## 3 Conclusions

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DCS and DAQ setup

# DCS and DAQ setup



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DCS GUI

Data Acquisition PADME DB LECCE Data Monitoring

# DCS GUI

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DIAMON	ID TARGET GUI SOFTW. Wersion II - 6th February 2010 Author: Federica Oliva	ARE 52
COUNTINGE DEV COUNTINGE DE		Note: Park The TURK Of Latter to the one of the solution of th
HV V read back Lesinge current (R)	with the Help button to know how the GUI works!	
Set the Value in the Section Angliation Clase HV-LOOP HV-SEAN LOOP HV-I SEAN	FADME	Arquistion Monitor Antigro

- One menu panel for each instrument: low voltage, pulser, high voltage
- HV scan for V-I measurements
- One menu panel for each operation: initialization, acquisition, monitoring, analysis

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DCS GUI Data Acquisition PADME DB LECCE Data Monitoring

## Data Acquisition

DIA	MOND TARGET GUI SOFTWA Version II - 6th February 2010 Author: Federica 011va	ARE Dat
Orea         LOW VOLTAGE p6V         er           UV veloa(*)         UV 11 lait(#)         er           Out UV         5 (2)         er	$\bigotimes$	Volter Argeston The acquisition can be skine through 2 type of LOD? W/O> When DELAY(s)
Instruction     Instruction       Instruction     Instruction       Instruction     Instruction       Instruction     Instruction       Instruction     Instruction       Instruction     Instruction		Loop on HV         0 ⊕         10 ⊕         10 ⊕         10 ⊕           Loop on Plane         0.05 ⊕         0.07 ⊕         2 ⊕         6 ⊕
Restact VP     O     HIGH VOLTAGE     O		Leop on pulse (id Dr) Loop on MA(id Dr)
MV volue         HV step         HV step(sec)           Bet H/V         0 C         1 C         3 C           HV V read back         Leakage current: (a)         0         0	Please push the Help button to know how the GUE works!	Path of the List of data file: adde.nh.lpnpatpathetorheanpadne-hydroContraDAGAny
Set the Value in the Section Acquisition Class HV-LOOP HV/ISCAN LOOP HV-ISCAN	PADME	Marilor Analpin

- Acquisition through PADME DAQ software
- FE Calibration looping on Pulser and HV
- Run information stored in PADME MySQL DB LECCE

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DCS GUI Data Acquisition PADME DB LECCE Data Monitoring

## PADME DB

We created a DataBase to store data information like the one of PADME. Link available here(ask for usr and pswd):

PADME MySQL LECCE

Example of **run** table like the one of the original PADME DB.

	Г→	number	type	status	time_init	time_start	time_stop	total_events	user	comment_start	comment_end
Modifica	Cancella	1	CAL	3	2018-03-07 15:13:10	2018-03-07 15:13:10	2018-03-07 15:13:13	1	dcs	HV_100V	
Modifica	Cancella	2	CAL	3	2018-03-07 15:13:13	2018-03-07 15:13:13	2018-03-07 15:13:16	1	dcs	HV_200V	
Modifica	Cancella	3	CAL	3	2018-03-07 15:13:16	2018-03-07 15:13:16	2018-03-07 15:13:20	1	dcs	HV_300V	
Modifica	Cancella	4	CAL	3	2018-03-07 15:13:49	2018-03-07 15:13:49	2018-03-07 15:13:52	1	dcs	HV_100V	
Modifica	Cancella	5	CAL	3	2018-03-07 15:13:52	2018-03-07 15:13:52	2018-03-07 15:13:55	1	dcs	HV_200V	
Modifica	Cancella	6	CAL	3	2018-03-07 15:13:55	2018-03-07 15:13:55	2018-03-07 15:13:58	1	dcs	HV_300V	

#### For the final setup

How to integrate our DB in the final one of the experiment.

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DCS GUI Data Acquisition PADME DB LECCE Data Monitoring

## Monitor and Analysis

Inizializa	hizidze
Acquisition	Acquisition
Monitor	Monitor
Montor	Analysis
Push the batton to do LevelT and Monitor	AMALVSE
монтол	Show Carvas
	and a second
Path of the output root file:	
Ariste infn itt project (padmerisoff værelpadmerf v Run Control IDAQ Monitor/	
Analysis	

- The monitoring of data files can be done. The path of the output files is written in the panel
- Also Analysis can be done, launching an external macro

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### What is ready for the Diamond Active Target

- Stand alone DCS and DAQ
- Run informations stored in a PADME like MySQL DB



- Finalize target calibration soon
- How can we integrate DCS and DAQ in the experiment?