Diamond Active Target

DCS and DAQ in Lecce

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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

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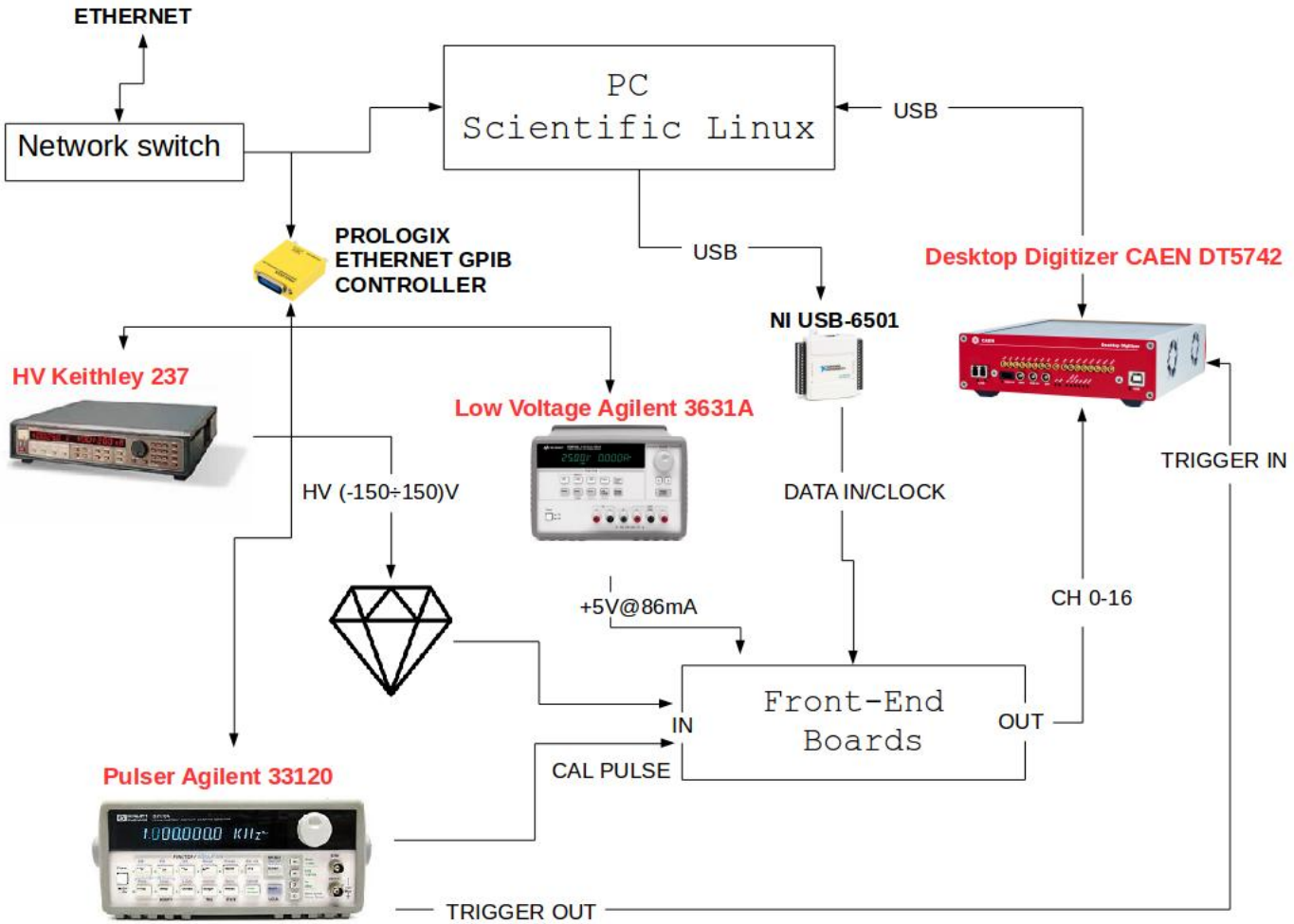
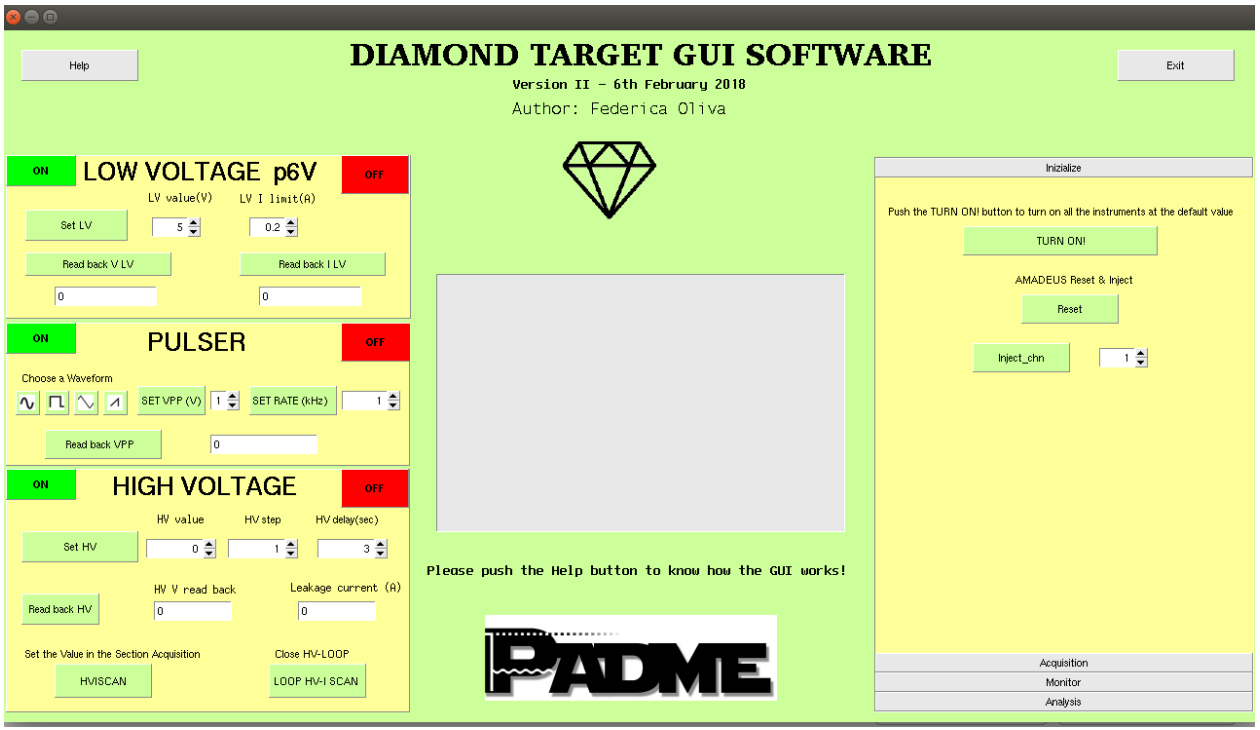
DCS and DAQ setup

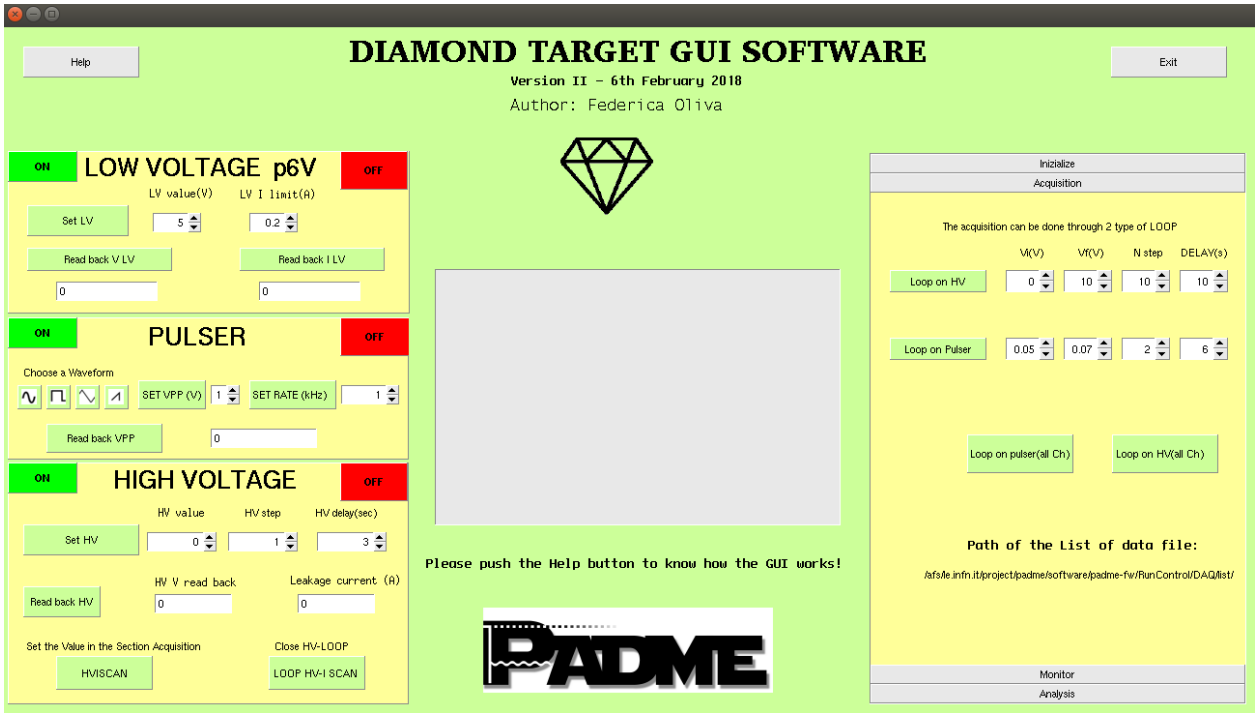


DCS GUI



- 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

Data Acquisition



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

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

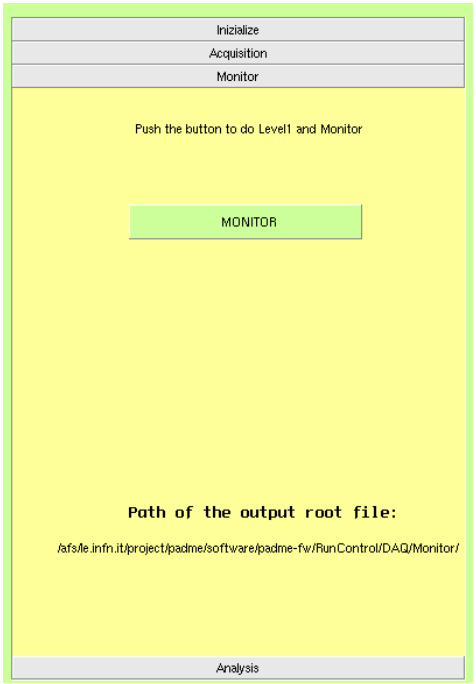
Example of **run** table like the one of the original PADME DB.

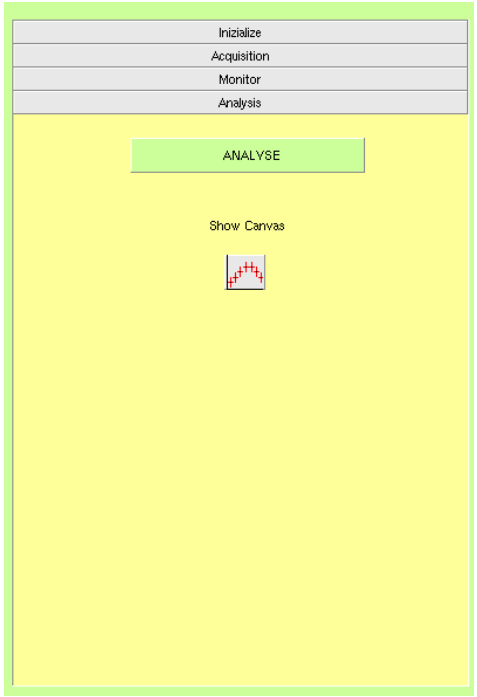
←T→		number	type	status	time_init	time_start	time_stop	total_events	user	comment_start	comment_end
Modifica	Cancella	1	CAL	3	2018-03-07 15:13:10	2018-03-07 15:13:10	2018-03-07 15:13:13	1	dcs	HV_100V	
Modifica	Cancella	2	CAL	3	2018-03-07 15:13:13	2018-03-07 15:13:13	2018-03-07 15:13:16	1	dcs	HV_200V	
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.

Monitor and 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

Conclusions

What is ready for the Diamond Active Target

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

Waiting for PADME

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