

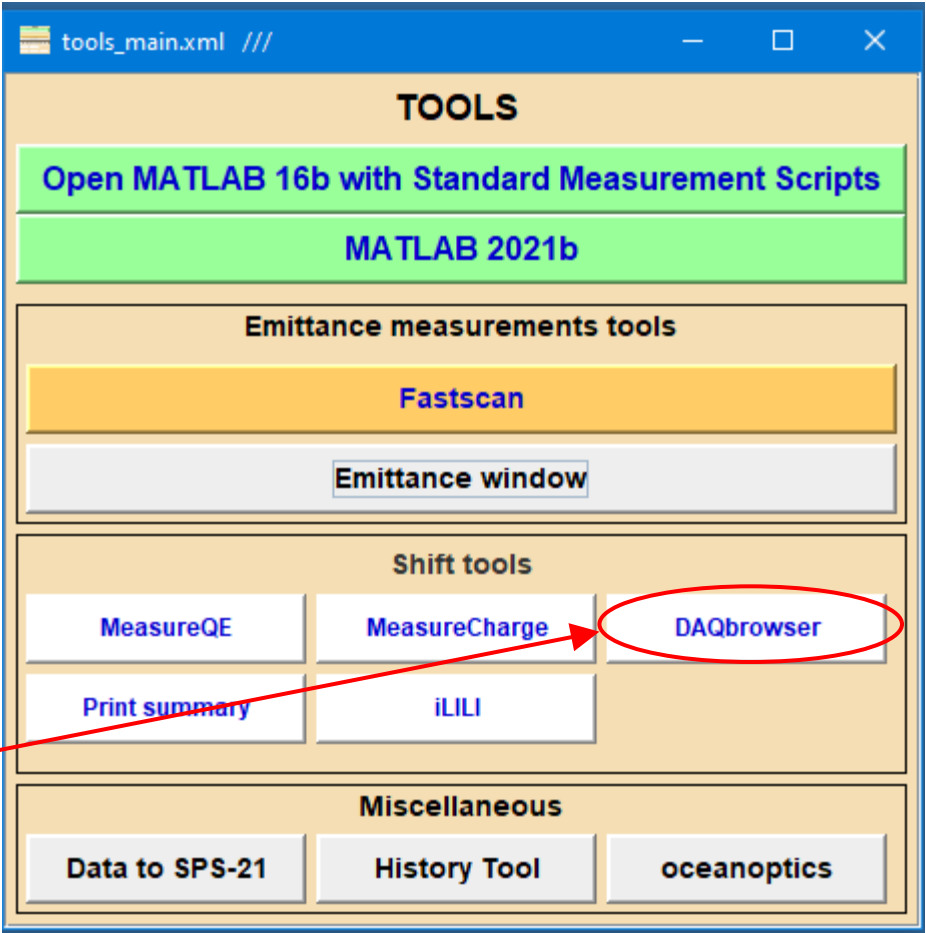
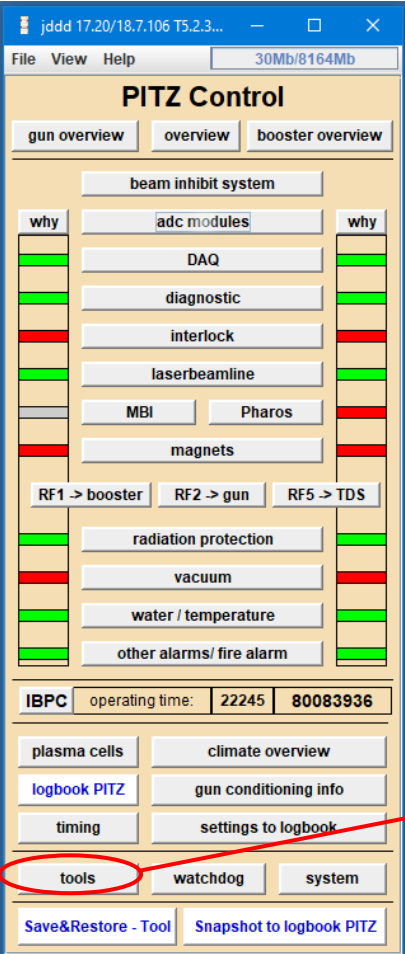
# DAQ browser

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# Introduction

DAQbrowser is a tool to get and plot/save data from the DAQ system. The tool can be started from PITZ JDDD GUI. At the moment, only Linux is supported.



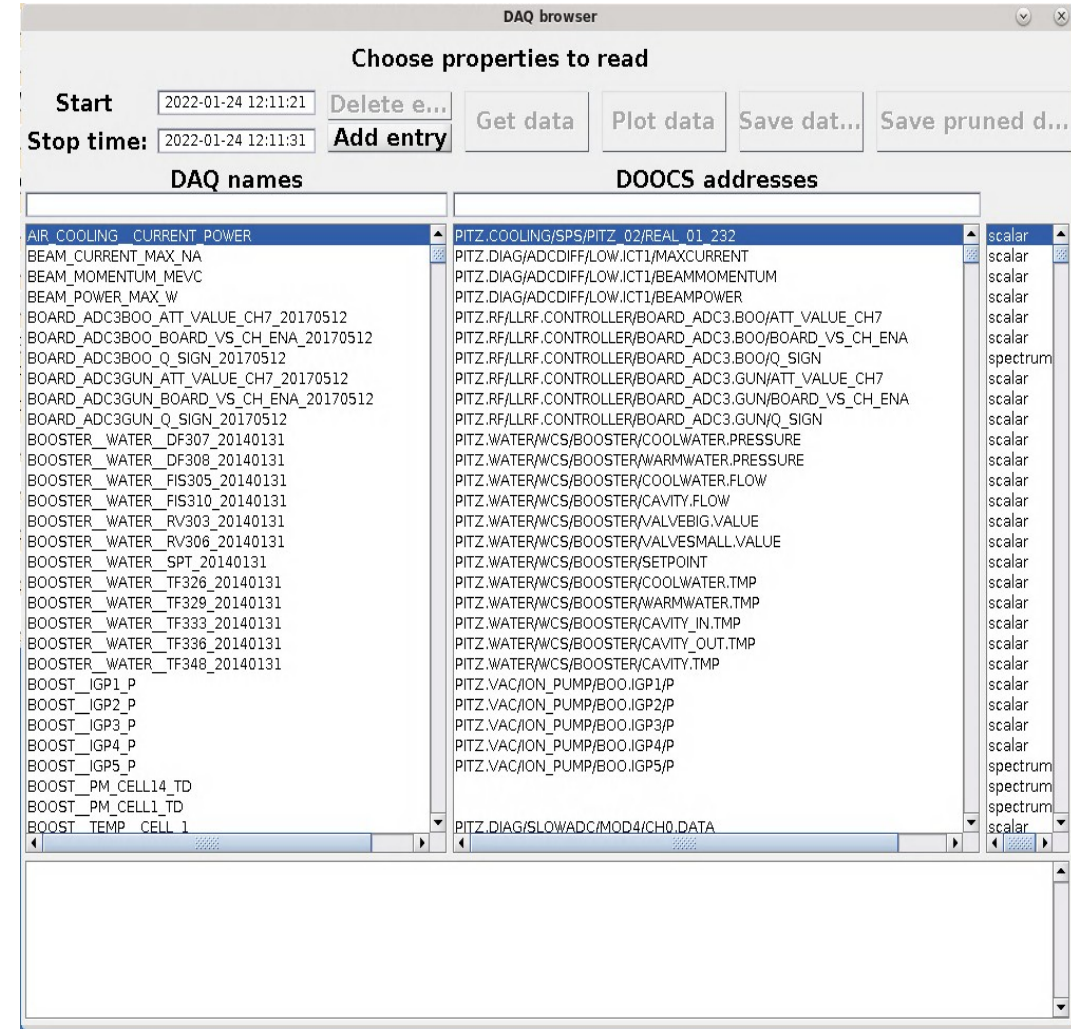
# Main window

In order to get data, start and stop times must be filled and at least one DAQ property must be chosen.

Property can be chosen either by DAQ name (first list) or by DOOCS address (second list). Type of property is shown in the third list.

For the desired property, “Add entry” must be pressed => property will be added in the bottom list. Property can be deleted from the bottom list using the corresponding button. Up to eight properties can be added, data type mix is not allowed.

In order to start data getting, “Get data” button must be pressed



# Processing of the collected data

The collected data can be plotted or saved.

“Save data” button save data as is in “\*.mat” format. “Save pruned data” saves data without repetitions in “\*.mat” format.

“Plot data” output depends on data type (spectrum/scalar), for the details see the next slide

The screenshot shows the DAQ browser software interface. At the top, it displays "Data collected" in green. Below this, there are fields for "Start" (2022-01-23 11:11:21) and "Stop time" (2022-01-23 12:11:31), along with buttons for "Delete e...", "Add entry", "Get data", "Plot data", "Save dat...", and "Save pruned d...".

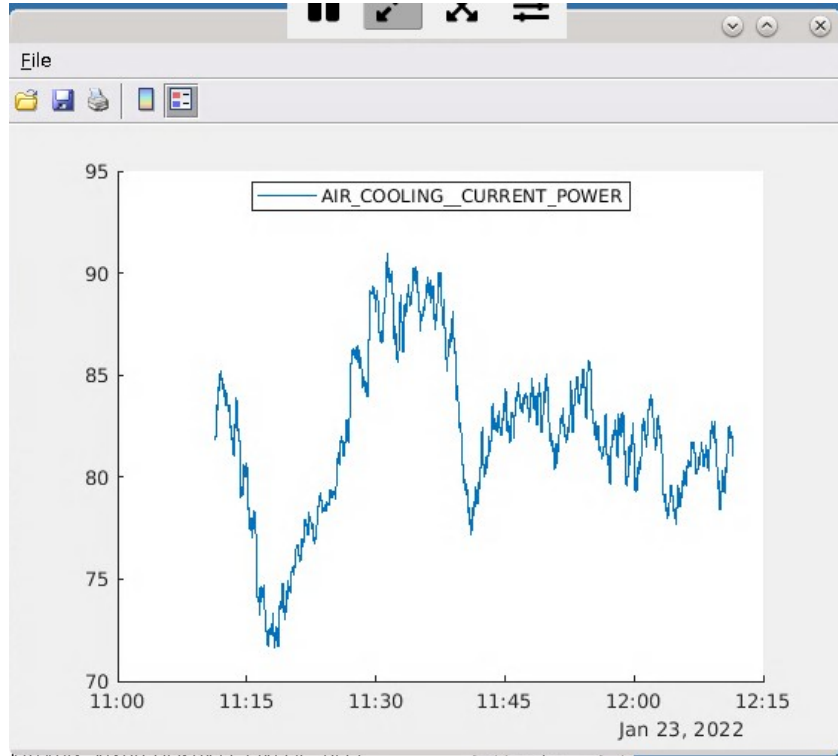
The main area is divided into two columns: "DAQ names" and "DOOCS addresses". The "DAQ names" column lists various parameters such as AIR\_COOLING\_CURRENT\_POWER, BEAM\_CURRENT\_MAX\_NA, BEAM\_MOMENTUM\_MEVC, BEAM\_POWER\_MAX\_W, BOARD\_ADC3BOO\_ATT\_VALUE\_CH7\_20170512, BOARD\_ADC3BOO\_BOARD\_VS\_CH\_ENA\_20170512, BOARD\_ADC3BOO\_Q\_SIGN\_20170512, BOARD\_ADC3GUN\_ATT\_VALUE\_CH7\_20170512, BOARD\_ADC3GUN\_BOARD\_VS\_CH\_ENA\_20170512, BOARD\_ADC3GUN\_Q\_SIGN\_20170512, BOOSTER\_WATER\_DF307\_20140131, BOOSTER\_WATER\_DF308\_20140131, BOOSTER\_WATER\_FIS305\_20140131, BOOSTER\_WATER\_FIS310\_20140131, BOOSTER\_WATER\_RV303\_20140131, BOOSTER\_WATER\_RV306\_20140131, BOOSTER\_WATER\_SPT\_20140131, BOOSTER\_WATER\_TF326\_20140131, BOOSTER\_WATER\_TF329\_20140131, BOOSTER\_WATER\_TF333\_20140131, BOOSTER\_WATER\_TF336\_20140131, BOOSTER\_WATER\_TF348\_20140131, BOOST\_IJP1\_P, BOOST\_IJP2\_P, BOOST\_IJP3\_P, BOOST\_IJP4\_P, BOOST\_IJP5\_P, BOOST\_PM\_CELL14\_TD, BOOST\_PM\_CELL1\_TD, and BOOST\_TEMP\_CELL\_1.

The "DOOCS addresses" column lists corresponding addresses such as PITZ.COOLING/SPS/PITZ\_02/REAL\_01\_232, PITZ.DIAG/ADCDIFF/LOW.ICT1/MAXCURRENT, PITZ.DIAG/ADCDIFF/LOW.ICT1/BEAMMOMENTUM, PITZ.DIAG/ADCDIFF/LOW.ICT1/BEAMPOWER, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.BOO/ATT\_VALUE\_CH7, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.BOO/BOARD\_VS\_CH\_ENA, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.BOO/Q\_SIGN, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.GUN/ATT\_VALUE\_CH7, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.GUN/BOARD\_VS\_CH\_ENA, PITZ.RF/LLRF.CONTROLLER/BOARD\_ADC3.GUN/Q\_SIGN, PITZ.WATER/WCS/BOOSTER/COOLWATER.PRESSURE, PITZ.WATER/WCS/BOOSTER/WARMWATER.PRESSURE, PITZ.WATER/WCS/BOOSTER/COOLWATER.FLOW, PITZ.WATER/WCS/BOOSTER/CAVITY.FLOW, PITZ.WATER/WCS/BOOSTER/VALVEBIG.VALUE, PITZ.WATER/WCS/BOOSTER/VALVESMALL.VALUE, PITZ.WATER/WCS/BOOSTER/SETPOINT, PITZ.WATER/WCS/BOOSTER/COOLWATER.TMP, PITZ.WATER/WCS/BOOSTER/WARMWATER.TMP, PITZ.WATER/WCS/BOOSTER/CAVITY\_IN.TMP, PITZ.WATER/WCS/BOOSTER/CAVITY\_OUT.TMP, PITZ.WATER/WCS/BOOSTER/CAVITY.TMP, PITZ.VAC/ION\_PUMP/BOO.IGP1/P, PITZ.VAC/ION\_PUMP/BOO.IGP2/P, PITZ.VAC/ION\_PUMP/BOO.IGP3/P, PITZ.VAC/ION\_PUMP/BOO.IGP4/P, PITZ.VAC/ION\_PUMP/BOO.IGP5/P, and PITZ.DIAG/SLOWADC/MOD4/CH0.DATA.

At the bottom, there is a summary row: AIR\_COOLING\_CURRENT\_POWER <<=>> PITZ.COOLING/SPS/PITZ\_02/REAL\_01\_232 <<=>> scalar.

# Plotting data

For the type “scalar” simple plot is produced



For the type “spectrum”, first spectrum is plotted and several control elements help to navigate through the data:

- Slider – navigates through event numbers
- “Keep plots” – holds spectra while navigating through events

