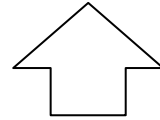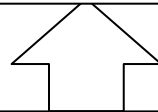# Request on DAQ tool for PITZ

MK, FS

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DAQ

DAQ high level tool
Written in Matlab, ROOT, Origin, Excel, etc
Development and support: PITZ physicists

DAQ intermediate level toolkit(s)
Written in ???
Development and support: Control group?

DAQ raw data collector
Data types: spectrum, scalar (incl. bits)
Written in ROOT,…
Responsible: Levon

DAQ: intermediate level

The main goal of the intermediate level is to provide appropriate data sets for further analysis. This should be (at least partially) a kind of *daq_br* analog (written by Galina).

Main purposes of this toolkit are:

– synchronization of various data sets to time stamps

– some (more or less simple) standard operations (arithmetic, averaging, integration, differentiation, filtering, sorting, selection etc)

– manipulation with spectrum data (cut, average, integration, arithmetic)

– selection of data with respect to time stamp

– selection of data with respect to a set of parameters,

  e.g. 10 or 20 arbitrarily chosen doocs parameters, e.g. absolute time in given range, RF power in gun in given range, RF power in booster in given range, water temperature in gun in given range, booster temperature in given range, RF pulse length in given range, laser pulse train length in given range, ….. e.g. define a mask where the user can select e.g. 10 doocs freely chosen parameters and the range of values in which the parameters should lay and then the toolkit will provide an ASCII (???) table with all DAQ quantities which fulfill the requirements. If this list with all DAQ quantities is too large then a second list of output parameters should be defined by the user (individual for each request)

– …

DAQ: intermediate level - output

- The output of the intermediate level should be binary or/and ASCII files with configurable content. They will serve as input files for the high level tools (to be individually written by physicists or interested persons. Here some small library with routines to read the files could be of common use

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