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DWC calibration

The delay Wire Chambers should be calibrated before the start of a test beam.

The instruction to perform the calibration are in the attached pdf file.

HV

You need to supply +2800V to each camera.

Calibration signal

t (ns)	V (mV)
0	0
10	V _{max}
30	V _{max}
90	0

V_{max} = 40mV according to the manual, but you should probably use V_{max} > 100mV because the discriminator thrs is set to 40mV. The pulse frequency should be $f < 10\text{kHz}$. Actually you can use a square pulse of width ~40ns. Worse come to worse use a TTL signal and attenuate it to get the amplitude in the right ballpark.

Calibration with the DAQ

If you want to use the DAQ for the calibration you'll have to provide a trigger in sync with the calibration pulse. The quantities (up - down) and (right - left) can then be found in one of the online histograms (debug folder). Take one run for each of the three calibration inputs (up-left, center and down-right).

The new macro to compute the calibration is `dwc_calib.cxx`. Just change the number of the calibration runs at the bottom of the file.

The calibration should be updated in the monitoring software and in the ntuple production program.

Manual calibration

Measure the time (up - down) and (right - left) for each of the three calibration inputs (up-left, center and down-right).

The old macro to do the calculation is `calibration_DWC1_Jul2012.cxx`, just change the values of this variables

- float `ud_left_up`
- float `ud_right_down`
- float `ud_center`
- float `lr_left_up`
- float `lr_right_down`
- float `lr_center`

with what you measured.

The calibration should be updated in the monitoring software and in the ntuple production program.

-- MicheleCascella - 15-Jul-2012

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