Study

- Small study about Δt cut:
    - previuosly it was used $\Delta t < 15$ ns
    - at the end $\Delta t < 5$ ns
- This seemed a motivation to start on the DY analysis.

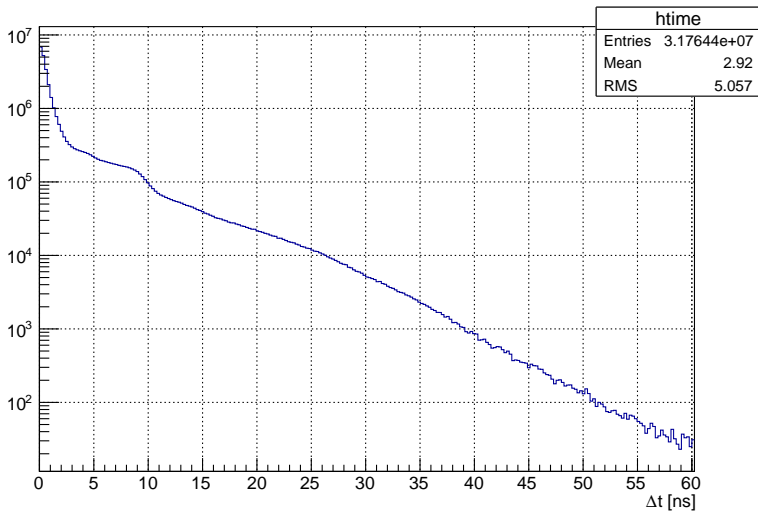# Selection

Based on Márcia's selection.
In my selection I did not ask for:

- Δt cut
- μ tracks χ^2 and momentum cuts
- trigger validation
- good spills
- x_1, x_2 and x_F cuts.

I use 1W11t3 data.

Δt

On the next plot ...
I will show the dimuon invariant mass as a function of Δt:

- No cut on Δt (in blue).
- $\Delta t < 15$ ns (in black).
- $\Delta t < 10$ ns (in red).
- $\Delta t < 5$ ns (in green).

Invariant Mass: NoΔ t cut

hmass0	
Entries	3.17644e+07
Mean	2.736
RMS	0.5113
χ^2 / ndf	121.5 / 20
Constant	1.834e+04 ± 4.384e+01
Mean	3.102 ± 0.001
Sigma	0.2164 ± 0.0012

hmass2	
Entries	2.86773e+07
Mean	2.765
RMS	0.5047
χ^2 / ndf	90.82 / 19
Constant	1.619e+04 ± 4.262e+01
Mean	3.111 ± 0.001
Sigma	0.1989 ± 0.0011

hmass1	
Entries	2.988192e+07
Mean	2.75
RMS	0.508
χ^2 / ndf	95.06 / 19
Constant	1.712e+04 ± 4.362e+01
Mean	3.107 ± 0.001
Sigma	0.2065 ± 0.0012

hmass3	
Entries	2.527138e+07
Mean	2.806
RMS	0.4941
χ^2 / ndf	61.67 / 19
Constant	1.47e+04 ± 4.09e+01
Mean	3.118 ± 0.001
Sigma	0.1864 ± 0.0010