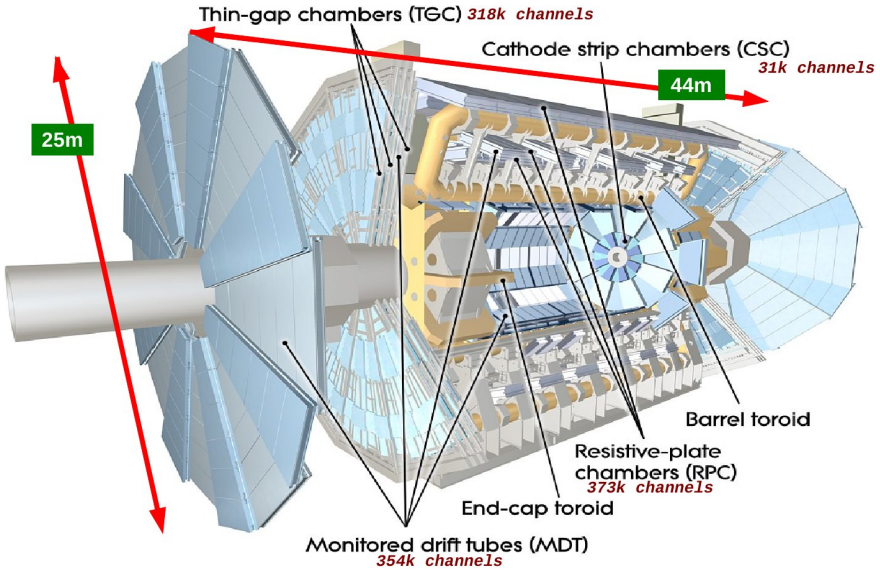
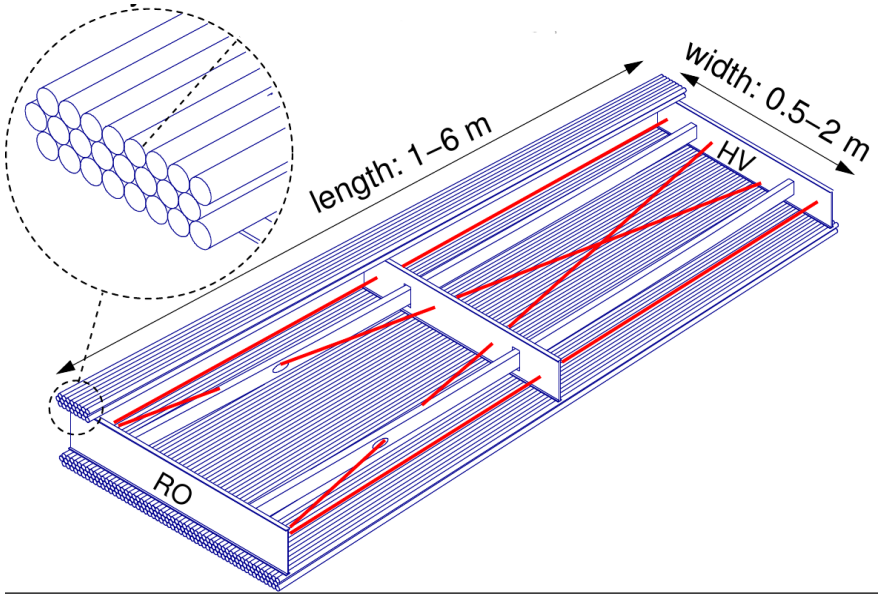
The ATLAS Muon Spectrometer - Drift Tube Chambers





Required chamber resolution: 50 μm

Drift Tube

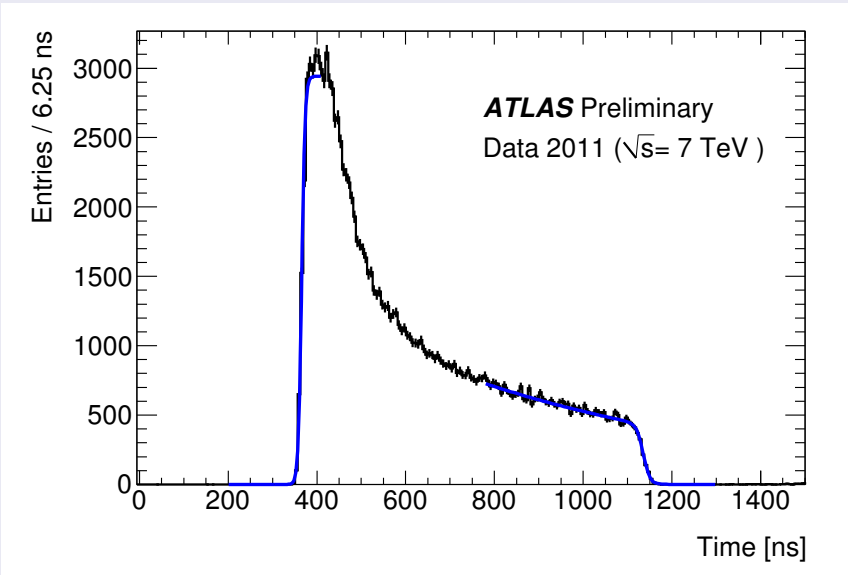
- Ar/CO_2 @ 3 bar absolute
- $\varnothing_{\text{Tube}} = 30\,mm$ $\varnothing_{\text{Wire}} = 50\,\mu m$
- HV= 3080 V
- Gas Gain: $2\ 10^4$

MDT-chamber

- 2 multi-layers with 3 or 4 layers.
- surface 0.5 - 11 m^2
- Monitoring of geometry, temperature, B-field.

t_0-Fit

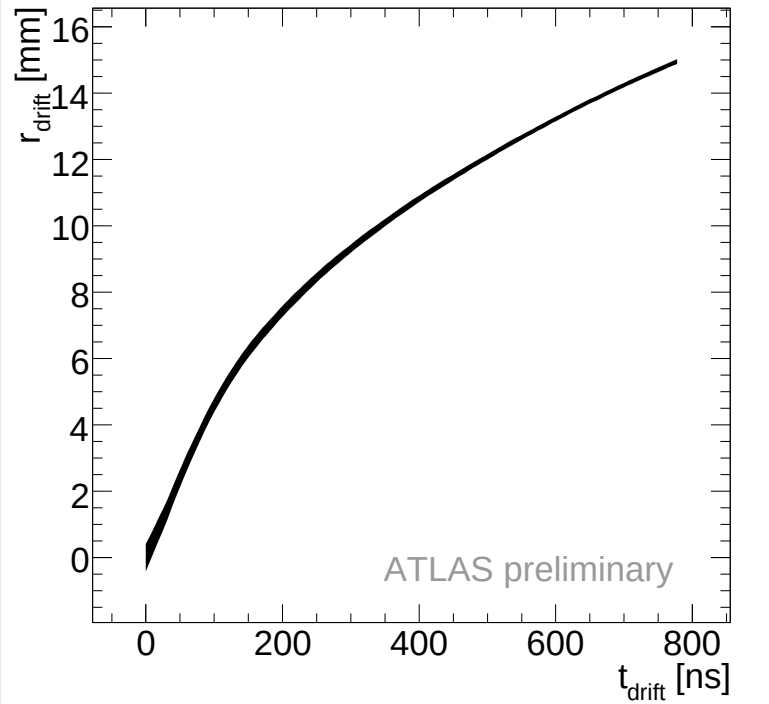
The drist-time spectrum with analytic functions fitted to the rising



- Automatic and reliable procedure

rt-calibration

Conversion function $t_{\text{drift}} \mapsto r_{\text{drift}}$:



- Derived from overdetermined straight line segment fit.

Required rt-precision: 20 μm - See poster for results.