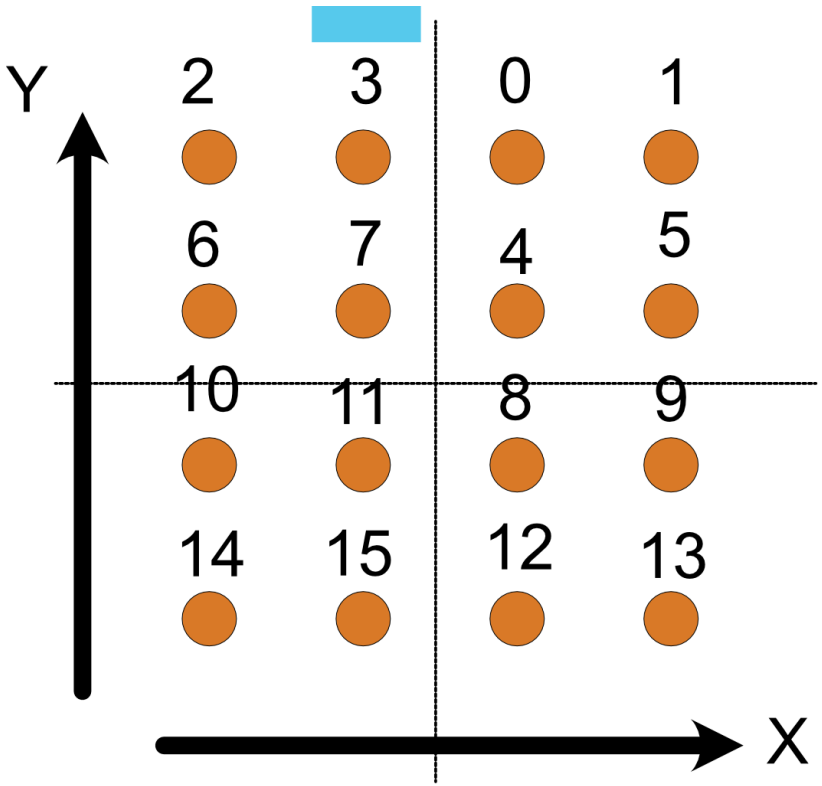
Christmas News

13/12/24

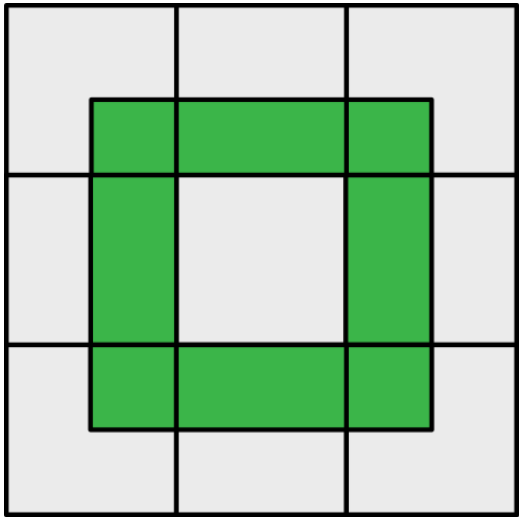
Reminder: Conventions



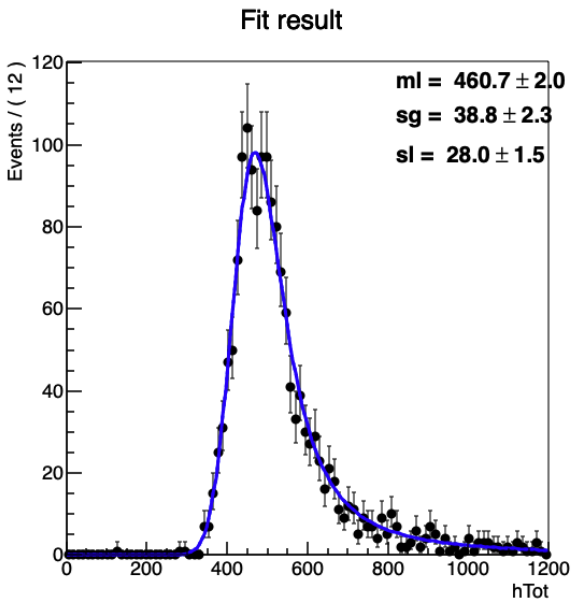
- X-Y convention derived from the drift chambers
- Propagated to the Xm-Ym variables
- Blue square is the drift chamber blind zone

Follow up of Troll1 with water analysis

- Difficulties to find the correct set of parameters for Pions and Troll1 with water
- Need to looks at the muons data
- Statistic is not large enough to do a fine analysis
- Geometry based on the parts used to determine the uniformity map



Geometry used

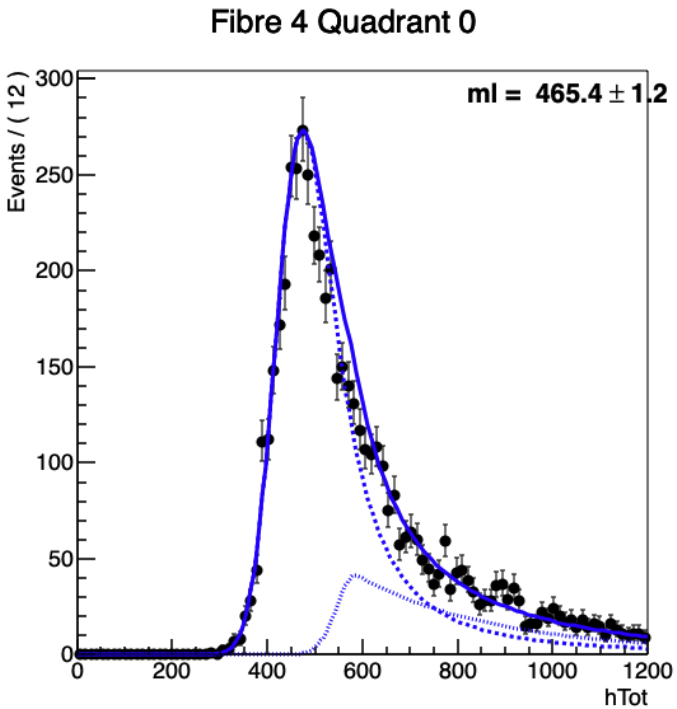


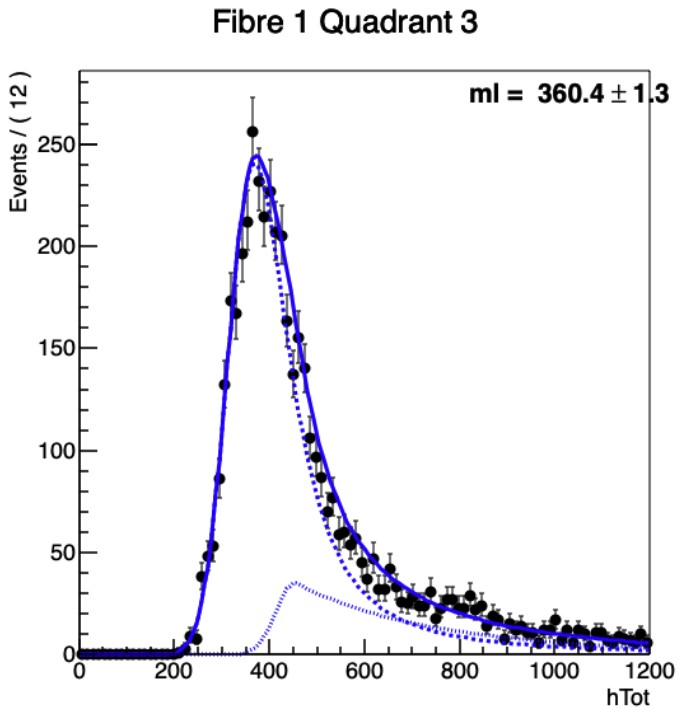
Applying muon results to pions data

Values used in the fit :

Landau	MPV (ml)	Free	
	σ_L (sl)	28.0	From muons
Gaussian	σ_G (sg)	38.8	From muons
CrystalBall	α_L	-0.134363	From Pion (HL)
	σ_L	$8/9\sqrt{2}\sigma_G$	From SM
	Power law (nL)	10	
Signal fraction	fsig	0.803417	From Pion (HL)

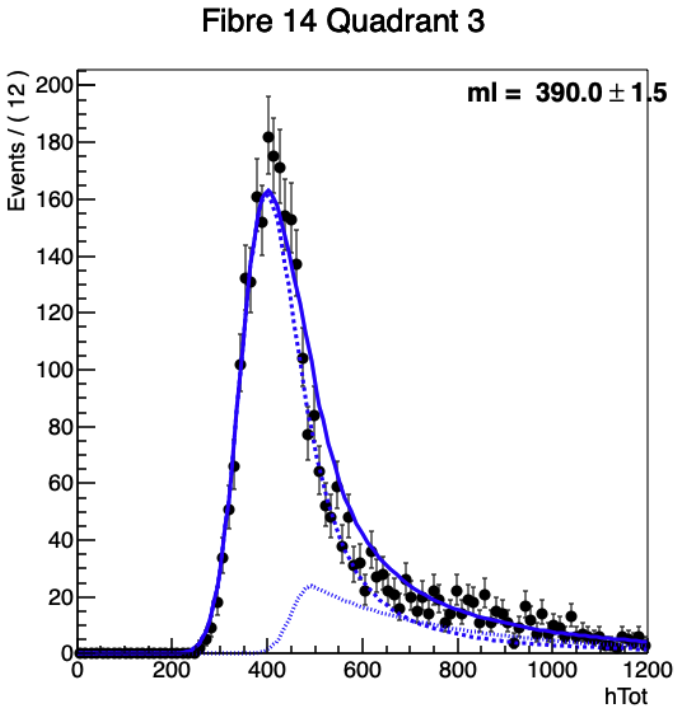
Some fit examples

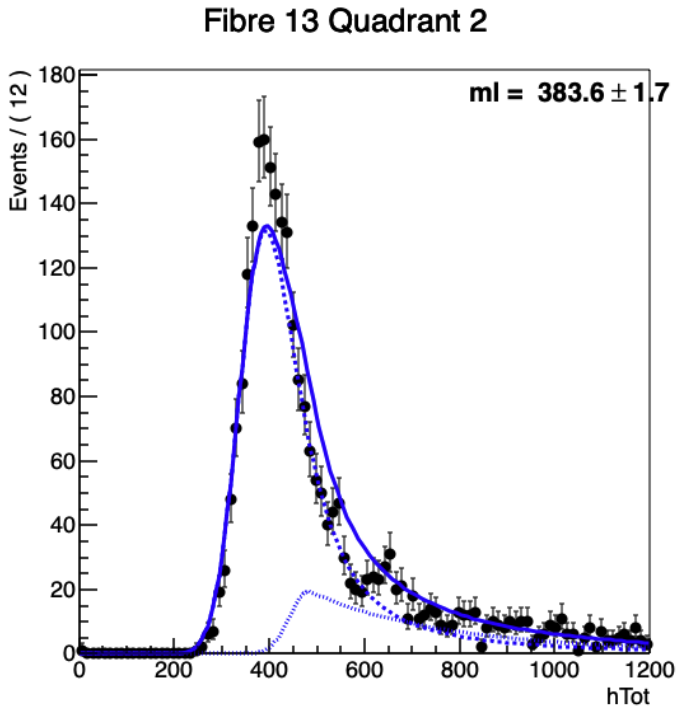




- Seems to works well

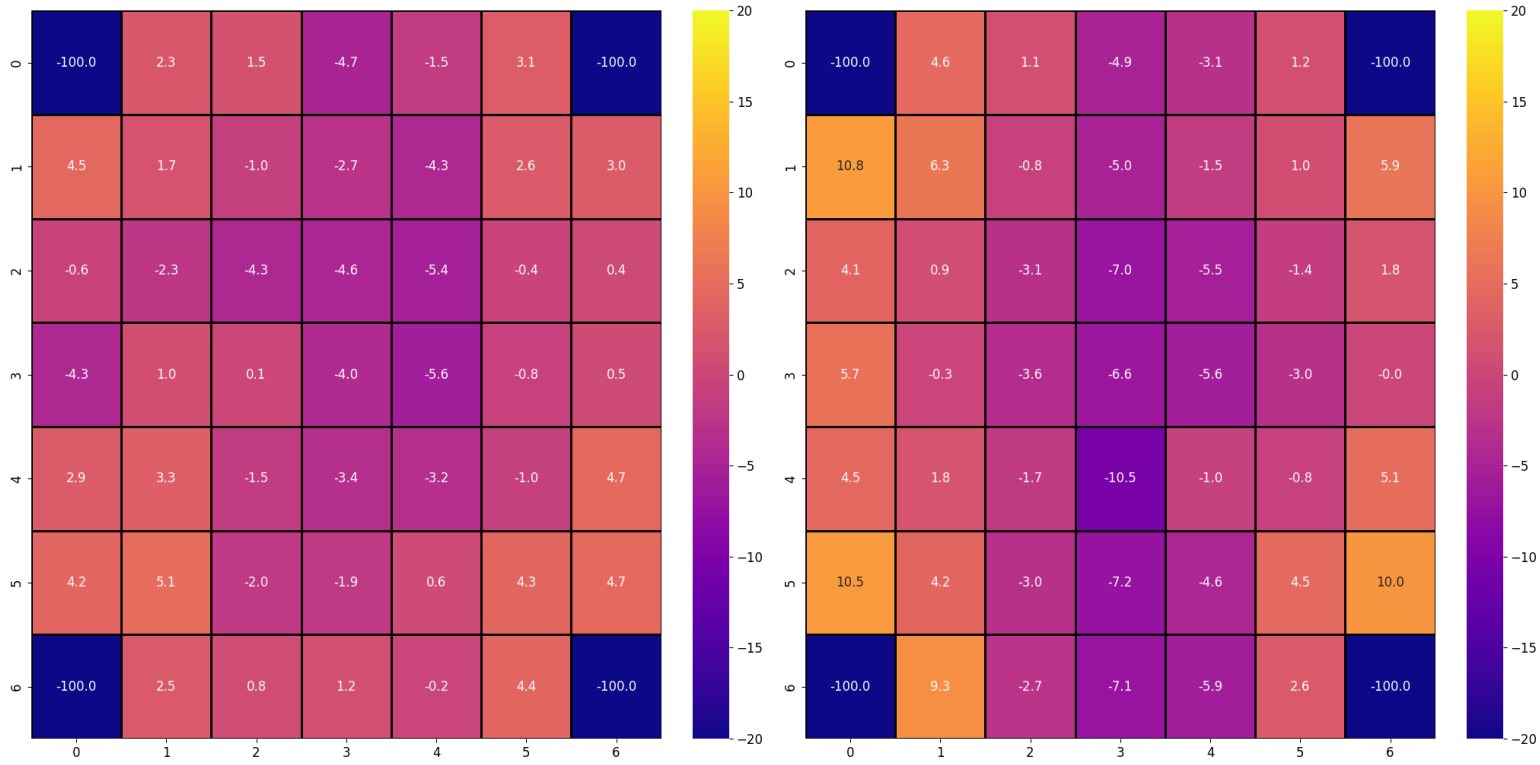
Some fit examples





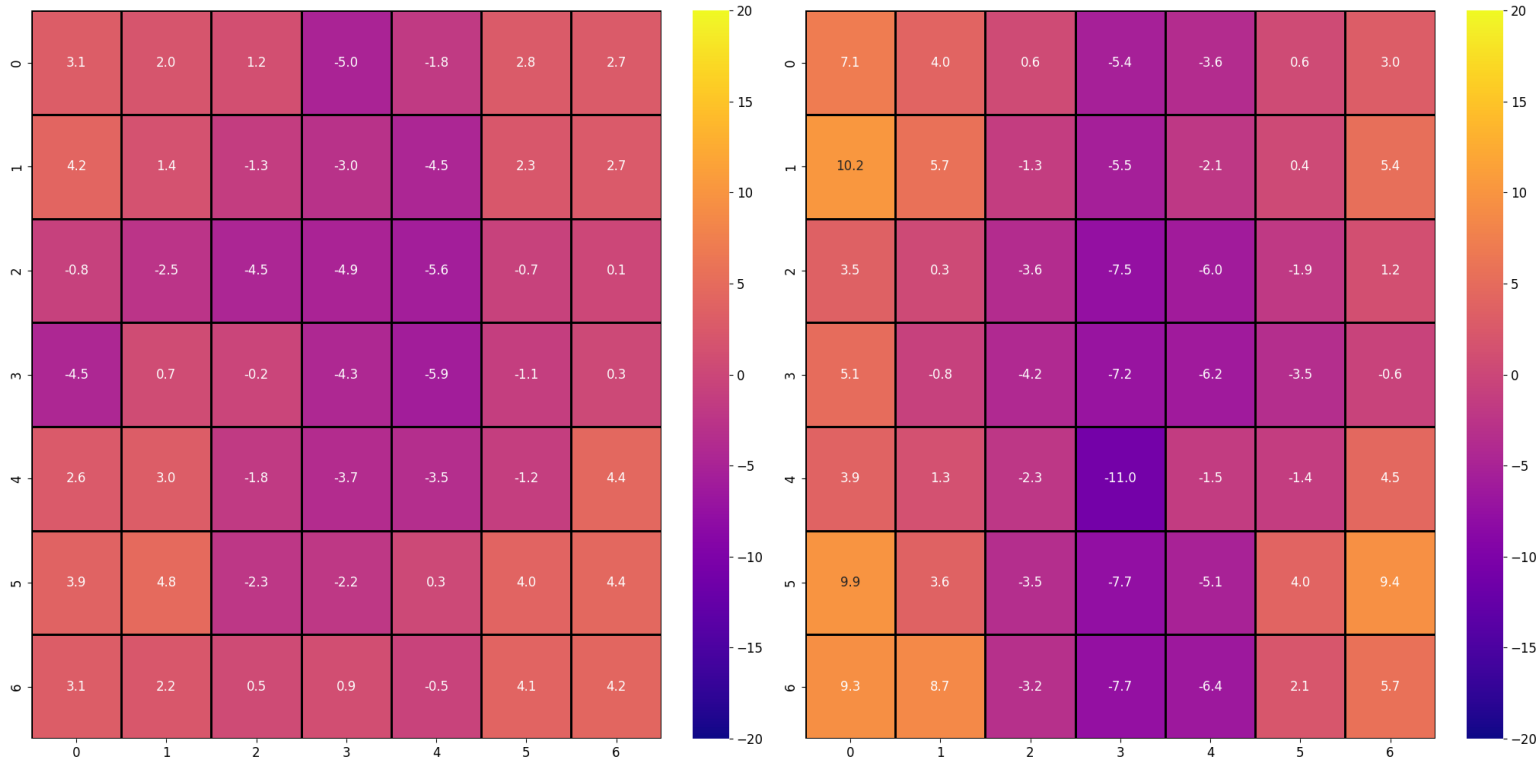
- Seems to works less well
- The fraction of signal (fsig) seems at fault
- The fitter disagree to perform reasonably when fsig is free
- However, MPV seems still correct and it is the only value used in the next stages

Uniformity map 1/2



- Uniformity map generated with these values
- 1 mm^2 bins

Uniformity map



- Corned filled with the mean of the two boundary cells
- Do not forget to take into account the fibre ($\approx$ 79 % of the corner cell is blind)