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Short update on MC production and L2 reconstruction

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Datasets Signal:

Dataset	num of events	where	note
mu_gg_bbh200_2tau_muX	9997	LEGNARO	with TK digi
mu_h120_WW2mu	9373	PADOVA	"
mu_h140_WW2mu	5429	PADOVA	"
mu_h160_WW2mu	8550	PADOVA	"
mu_h180_WW2mu	5542	PADOVA	new
mu_h200_WW2mu	7459	PADOVA	new
mu_h120_ZZ4mu	7248	PADOVA	new
mu_h150_ZZ4mu	6407	PADOVA	new
mu_h200_ZZ4mu	5146	PADOVA	new
mu_h300_ZZ4mu	5752	PADOVA	new
mu_h500_ZZ4mu	8140	PADOVA	new

- OWNER muon2x1033FullPileUp_0512_PD
- Tracker digitization of mu_W1mu started

Update on L2 reconstruction code:

- Bug fix in left/right ambiguity solving for MuBarSegment in eta/R projection: wrong or no assignement for segments with $\phi \sim 0$ or $\phi \sim \pi$: was $\theta = \arctan(y/z)$ and not $\arctan(r/z)$. (ORCA 520)
- Bug fix / improvement in rechHit collection: tracks with e.g. 1 DT and 3 RPC were rejected and a track from two chambers only used (1 DT and 1 RPC): now we correctly ask for $N \geq 2$ chambers with at least one “tracking” (DT or CSC) (ORCA 520).
- Efficiency loss in $|\eta| > 2.2$ under study, not yet understood.
- By-product: splitting of MuonTrajectoryBuilder in several classes: increase modularity, readeability, and debugging of the steering. Soon completed: to be committed asap.