



PRS muon meeting
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Update on MC production and future plan

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Since the last meeting:

- Increase of statistic in MB1mu_pt1;
- new dataset available mu_MB2mu_pt4 in Bologna;
- new signal dataset available in Padova;
- what next?

Datasets Single muon:

Dataset	num of events	$\int \mathcal{L} dt [\text{nb}^{-1}]$	where	note
mu_MB1mu_pt1	320290	0.0344	LEGNARO	was 161899
mu_MB1mu_pt4	54345	0.2052	LEGNARO	
mu_MB1mu_pt10	40995	2.81	BOLOGNA	
mu_W_1mu	42853	2856	PADOVA	
mu_Z_1mu	50000	2336	BOLOGNA	
mu_tt1mu	11000	41843	BOLOGNA	

- **LEGNARO**
cmsfarmgw.lnl.infn.it::/gwdata/MuonFed/MuonFed.boot
- **PADOVA** lxcmgw.pd.infn.it::/data/MuonFed/MuonFed.boot
- **BOLOGNA** cmsfarm2ds.bo.infn.it::
/dspool/data/cmsdata/db/MuonFed/MuonFed.boot

Datasets Di-muon:

Dataset	num of events	$\int \mathcal{L} dt [\text{nb}^{-1}]$	where	note
mu_MB2mu_pt1	31843	0.2935	LEGNARO	was 16570
mu_MB2mu_pt4	50000	23.7	BOLOGNA	new!!
mu_MBmix_mu2	18542	0.0093849	ooHit not filtered, LEGNARO	~ 15000 ev. filtered

Datasets Signal:

Dataset	num of events	where	note
mu_gg_bbh200_2tau_muX	9997	LEGNARO	with TK digis!
mu_HWW2m ($m_H = 120\text{GeV}$)	9373	PADOVA	"
($m_H = 140\text{GeV}$)	5429	PADOVA	"
($m_H = 160\text{GeV}$)	8550	PADOVA	"
($m_H = 180\text{GeV}$)	10000	PADOVA	Finishing CMSIM
($m_H = 200\text{GeV}$)	10000	PADOVA	"
mu_HZZ4m ($m_H = 130\text{GeV}$)	10000	PADOVA	"
($m_H = 150\text{GeV}$)	10000	PADOVA	"
($m_H = 200\text{GeV}$)	10000	PADOVA	"
($m_H = 300\text{GeV}$)	10000	PADOVA	"
($m_H = 500\text{GeV}$)	10000	PADOVA	"

CMSIM processing delayed by (stupid) technical problems.

Future:

- More statistic on some dataset? Which one? (PT4?, 2mu_pt1/4);
- Other dataset? What? (WZ2mu? “B’s”?)
- Tracker for current dataset? Which one (W,Z1mu, tt1mu)? Which events (all/passing L1 and/or L2 threshold)
- Other issue?

Requirement for future production: my personal view

- This is the last production that I will personally run with all the problems we had during last year;
- Example on $H \rightarrow ZZ \rightarrow 4\mu$ dataset: 10000 cmsim produced, 5429 events digitised: all other lost for crashes: only 1 digitisation run out of 20 runs w/o problems, all other has to be resubmitted several times to try to recover more events.
- We had support from CCS, but no solution: not enough priority given to our problem, but it's a real, big problem: it has to be solved soon!
- The severe delay in production lead to last-minutes result (which is becoming a sort of fashion for the muon's)

- This production has been performed by essentially 2 sites (LNL/PD and BO): if we want to include other sites we absolutely a smooth production, with no/few problems which requires an ORCA expert.
- **TAG**: we have produced TAGs: how to use them? examples, documentation needed, otherwise most of users are forced to stay on ntuples/trees. We have to demonstrate that a “standard” user can access and use the TAG, as easily as he/she can use ntuples/trees.