Latest News & Other Issues

Ricardo Goncalo (LIP), David Miller (Chicago)
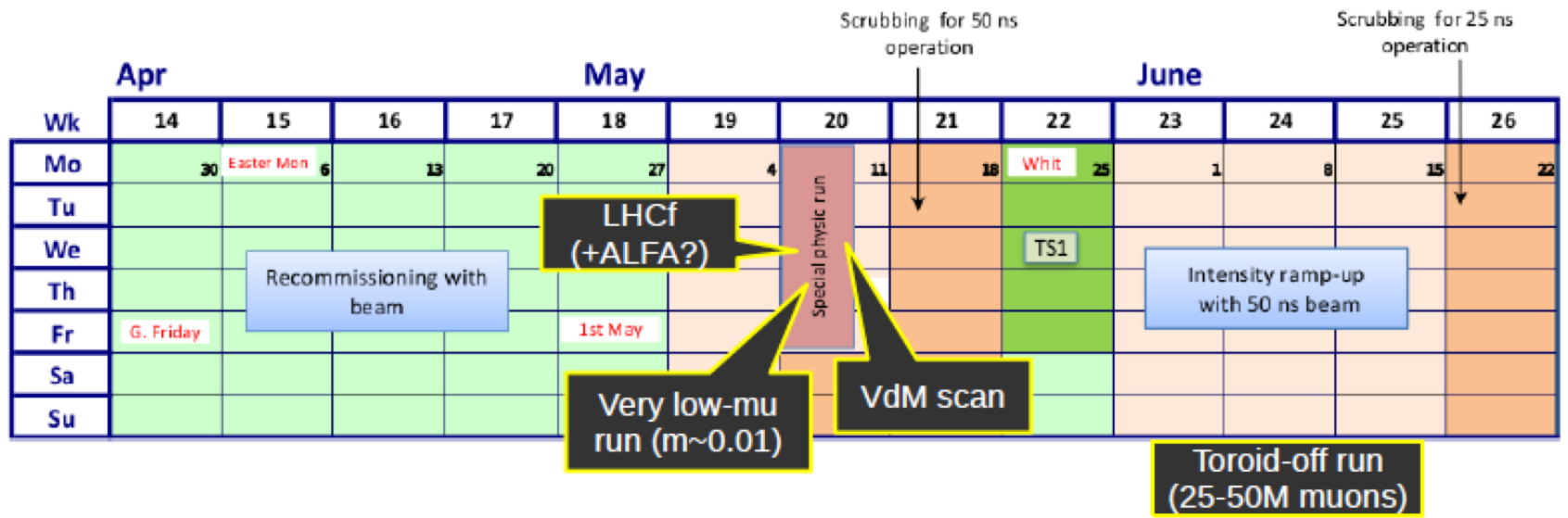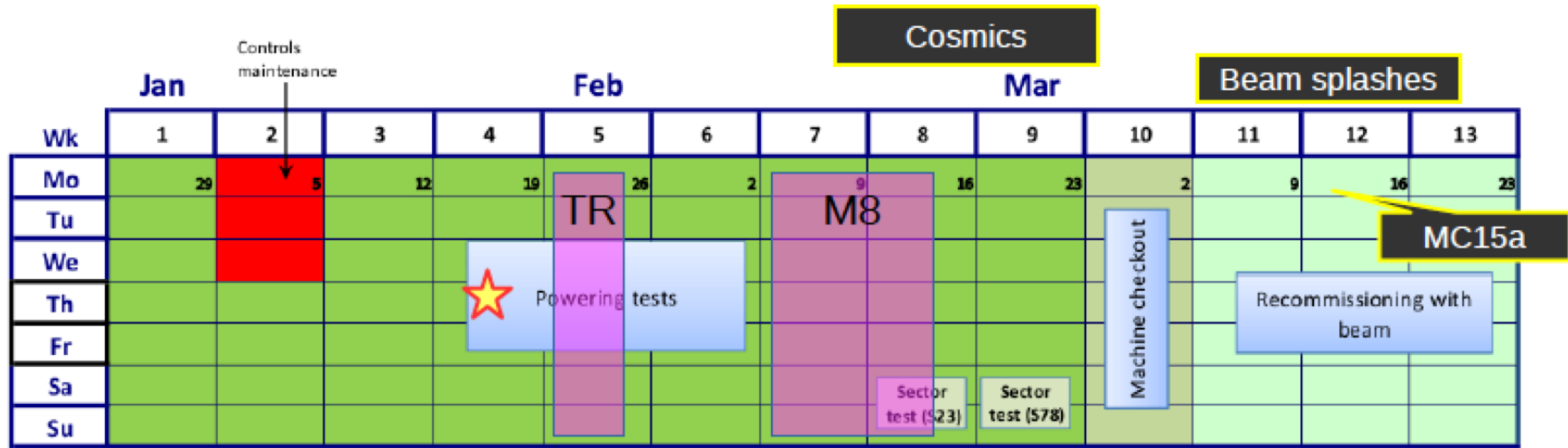
Jet Trigger Signature Group Meeting 26/1/2015

News

- Sample T a few days away, sample A too
- M8 around the corner…
- Run-II starts this year!
  - < 2 months for first beams
  - < 2 months for launching MC15a (digi+reco)
  - < 4 months to first physics data

Starting with M8 we are in continuous running mode

- Also many special runs up-coming that will require dedicated menus

M8 Menu

- Deadline today for requesting chains
- We need to test our new functionality online:
  - Different calibrations:
    - em vs lcw clusters
    - Jes vs nocalib
    - area subtraction
  - PS vs FS
  - fat-jet chains, including reclustering
  - Will put this together today. Ideas welcome.

Trigger Class 2 OTP – on-call shifts

- On-call tasks and OTP weights for 2015

Task ID	Task	OTP weight	8h Shifts	Comment
529219	Central Trigger validation shift	0.5	175	12 months
41696	Trigger Online Expert on Call	1	356	12 months
45709	Trigger Operations Coordination	1	730	2x12 months
46623	Trigger Offline Monitoring Expert on Call	1	353	2m@85%, 10m@100%
46640	Trigger Offline Monitoring Shifter	1	610	2x8h, Mar-Dec
47111	Trigger Online Release Coordinator	0.85	307	12 months
48647	CALO Trigger Reconstruction Software Expert on Call	0.45	147	11 months
530363	Trigger Offline Monitoring Expert on Call (night)	0.3	54	as needed, ~6 months
529785	Egamma and Tau slices expert on-call	0.85	270	11 months
529786	Bphysics and Muons slices expert on-call	0.85	277	11 months
529788	Jets and MET slices expert on-call	0.85	277	11 months
530496	B-jet, ID and MinBias signature expert on-call	0.85	277	11 months
530809	Trigger Menu Expert on Call	0.58	205	6m@100% (startup), 6m@15%
47030	TRP Support	0.2	48	8 months
		Total	4085	shifts
			11.2	FTE equivalent

Author Qualification Procedure

- See https://indico.cern.ch/event/363542/contribution/0/material/slides/0.pdf

Change to Qualification Procedure

- Each qualification project now requires a Technical Supervisor
  - This is in addition to the already existing "Local Institution Supervisor"
  - After 4 months, the Technical Supervisor receives an automatic email and needs to confirm in Glance that the qualification task is progressing as planned.
    - The qualification is put ON HOLD until this is confirmed!
  - At the end of the qualification period, the Technical Supervisor needs to provide a short description of the outcome of the qualification task (max 1000 chars)
    - Already now, we ask for this via email. It is just more formal now.

- Who is the Technical Supervisor?
  - "person within the project/activity where the qualification task takes place who will supervise the work of the qualifier"
  - In most cases, this should be one of the signature coordinators
    - But you could delegate it to someone working closely with the qualifier
    - Ideally local (institute) supervisor should not be the technical supervisor at the same time, but exceptions are possible of course

Signature sign-off procedure

- Studies to be done from sample A and sample T – expected 1 week after sample T is produced !
- https://twiki.cern.ch/twiki/bin/viewauth/Atlas/TriggerSignOffRel20#Jet
- Instructions
  - Please insert the relevant information next to each trigger chain. Don't edit the twiki page but the relevant table only, by clicking on the 'Edit' button.
  - The columns in the tables are expected to contain the following information:
  - **HLT Chain** : Chain name.
  - **Assigned to** : Trigger or Physics group responsible for the trigger sign-off.
  - **Configuration check** : Basic check of a reasonable trigger configuration in the menu.
  - **Rate (2e34)** : Unprescaled rate.
  - **V5 vs V4** : Comparison between Run1 and Run2 scaled rates / performance, wherever relevant.
  - **Emulation check** : Comparison between trigger decision and emulated trigger decision to verify selections and cuts (incl. L1).
  - **Efficiency check** : Performance and efficiency curves, on signal and/or background.
  - **Supporting material** : Links to presentations and/or plots.
  - **Signed off?** : If all above checks have passed!

HLT Chain	Assigned to	Configuration check	Rate (2e34)	V5 vs V4	Emulation check	Efficiency	Supporting material	Signed off?	Comments
HLT_2j55_deta2	Jet								
HLT_2j55_deta2_invm400	Jet								
HLT_2j55_invm400	Jet								

Jet Trigger Deliverables

- https://docs.google.com/spreadsheet/ccc?key=0AokQEYCc3bjpdElWR1I2MC1nR2U0Q0pzTFM3U1RleWc&usp=sharing#gid=14

Deliverable		%	People	Comment
Trigger Tower full-scan (L1.5) chains	E	90 %	Peter Sherwood/Nuno/Craig/Sasha Mazurov	missing simple algorithm to unpack TTs (Craig) and debugging TT collection (Sasha); needed for data taking
Monitoring software for Run II	E	80 %	Lee Sawyer/Dilip Jana	needed for data taking
Validation software for Run II	E	80 %	Lee Sawyer/Sebastien Prince/Valentinos Chr.	independent of data taking
Add diagnostics algos to RTT validation tests	E	80 %	Valentinos Christodolou	independent of data taking
Testing pileup tools and stability vs pileup	E	80 %	Annabelle Chuinard/Erich Varnes	missing new MC to test PU subtraction; study independent of data taking
Jet cleaning selections in HLT	E	50 %	Peter Sherwood/Nuno Anjos/Caterina	debugging jet attributes; no major difficulties expected but takes time; independent of MC; needed for data
Implementation of simplified (Calo only) GSC in	E	50 %	Nuno Anjos	debugging jet attributes; other ingredients already in place; independent of MC; nice to have for data taking
Single jet menu optimization and	E	50 %	tba	Analysis framework written and in use; need to adapt to xAOD; offline analysis
Add trigger vs offline histos to monitoring and	E	20 %	Caterina Doglioni/Guy Koren	nice to have for data taking
Use of tracks and vertices from FTK tracking	E	10 %	Erich Varnes/Ruchika Nayyar	longer term
TLA-specific monitoring	E	0 %	Caterina Doglioni	needed for data taking
E/p trigger development for Run II	E	0 %	David Miller/Joakim Olsson	nice to have for data taking but alternative exists
Determine trigger-specific jet energy scale	E	0 %	M.Wobisch/Merlin Davies/Maria Roberta	Markus: central a4/Merlin: forward a4/Maria: fat jets; medium term; for analysis, not for data taking

Open Jira items for jet deliverables

- Data Scouting:
  - https://its.cern.ch/jira/browse/ATR-9906
  - https://its.cern.ch/jira/browse/ATR-9767
- Menu:…
- L1.5:…
- GSC:
  - https://its.cern.ch/jira/browse/ATLJETMET-175
- Trigger EDM (some containers not filled):
  - https://its.cern.ch/jira/browse/ATR-9865
- Jet cleaning:
- Jet trigger menu (and Hypo names/TE names discussion):
  - https://its.cern.ch/jira/browse/ATR-9521
- L1 jet seed:
  - https://its.cern.ch/jira/browse/ATR-9321

Express stream

- See wiki:
https://twiki.cern.ch/twiki/bin/view/Atlas/ExpressStream#E34_menu_Physics_pp_v4_menu_coll
- The express stream has the following features:
  - Contain a subset of the physics data corresponding to ~10Hz total.
  - Full events (unlike the calibration stream) but not for physics analysis.
  - Every event in the express stream will also be in the physics streams.
  - Will be reconstructed quasi-real time and looked at promptly (before the main reconstruction starts) for calibration and monitoring.
  - Used to check data quality, monitor the status of the detector, alignment and calibration, etc.
- Jet menu in express stream (looking for voluntary for contact person):

Trigger name	Desired rate in Hz	Short Motivation	DQ contact person
j25	0.8	from L1_RD0; calo & jet monitoring & calibration	Ricardo Goncalo
j60_L1RD0	0.2	jet/MET monitoring & calibration; bootstrapping	Ricardo Goncalo
j60	0.2	jet/MET monitoring, eta inter-calibration	Ricardo Goncalo
j60_280eta320	0.2	jet/MET monitoring, eta inter-calibration	Ricardo Goncalo
j60_320eta490	0.2	jet/MET monitoring, eta inter-calibration	Ricardo Goncalo
j360	0.2	from L1_J100; jet monitoring for high-pT chains	Ricardo Goncalo
j80_xe80	0.2	jet/MET monitoring for combined chain	Ricardo Goncalo