

Software Week - 17/06/2009

L0 Software Report

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Outline

News :

- only minor fix & upgrades

Plans

- harmonization of L0 components configuration
- L0PileUp

Conclusion

Harmonization of L0 software configuration

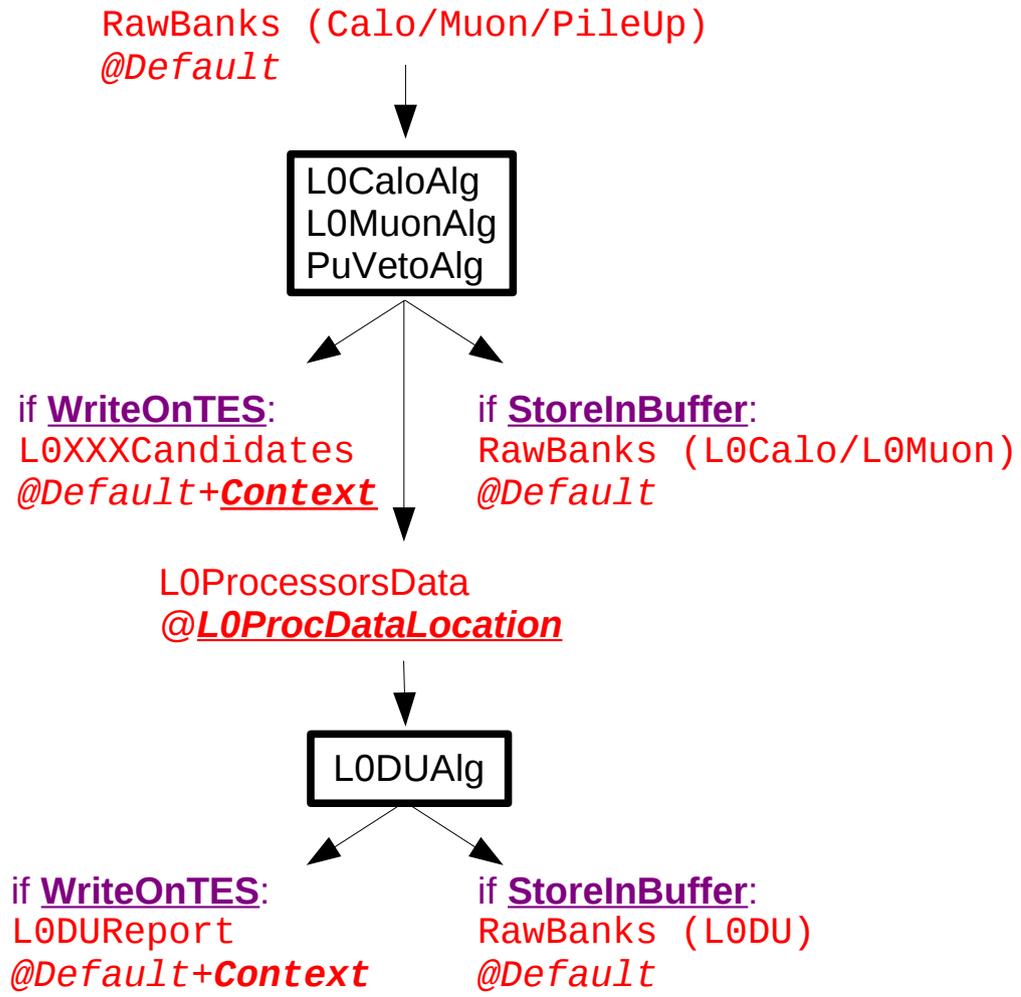
L0 components can be configured according to the needs

Each components uses its own convention

Harmonization of the component properties :

→ ease steering and maintenance

L0 emulators : L0XXXAlg



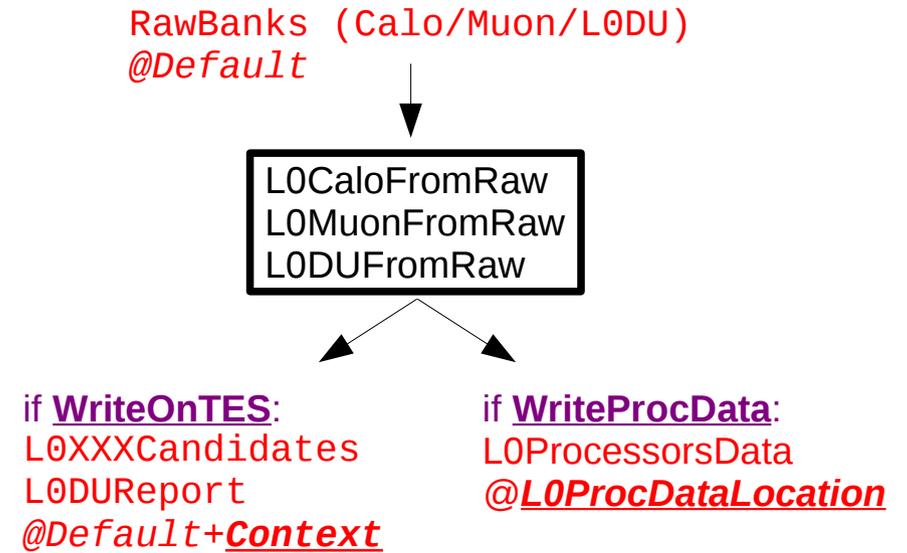
Common properties :

- StoreInBuffer = True (/False)
 - flag write raw banks
- WriteOnTES = False (/True)
 - flag to write results on TES
- Context = ""
 - suffix to the result's default location
- L0ProcDataLocation = location(system)
 - each system (L0Calo, L0Muon, PileUp) writes at a different location. Default :
 - L0ProcessorDataLocation.Calo
 - L0ProcessorDataLocation.Muon
 - L0ProcessorDataLocation.PileUp
 - L0DU reads from all of them

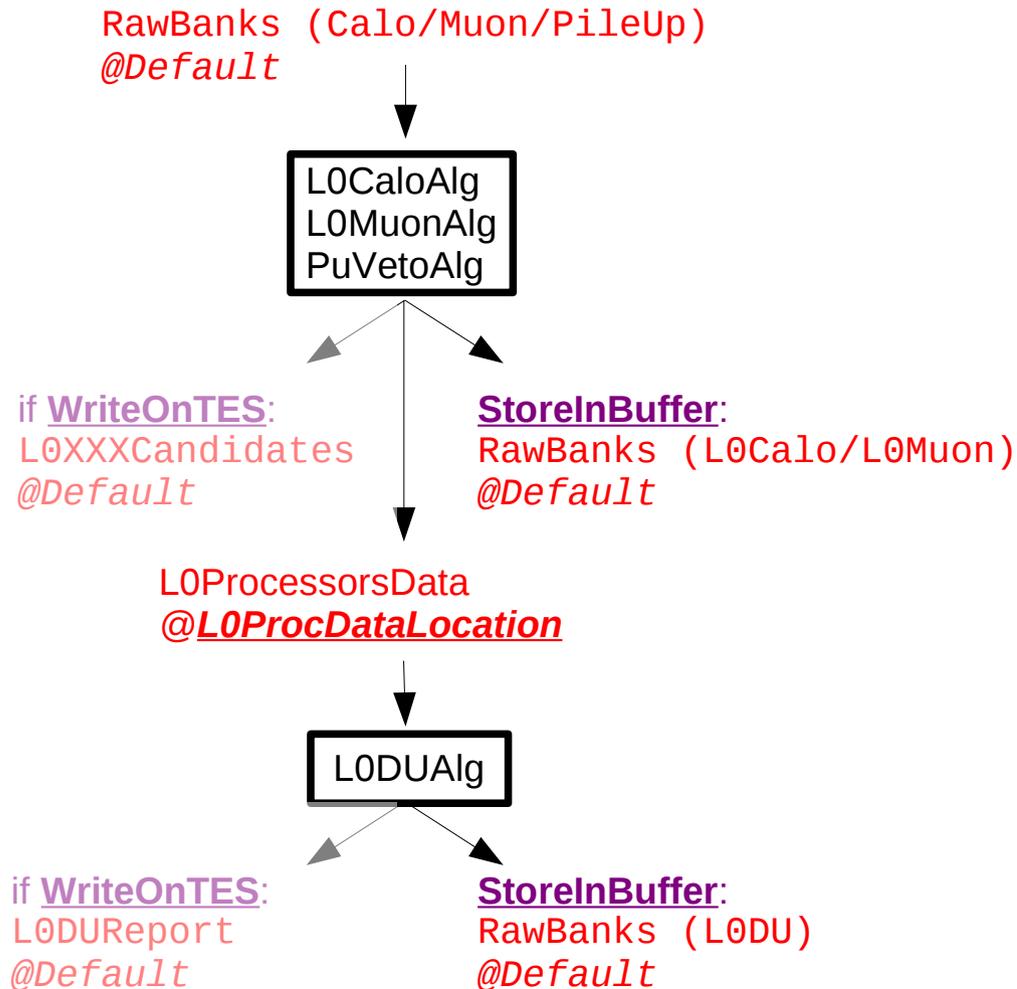
L0 decoding : L0XXXFromRaw

Common properties :

- WriteOnTES = True (/False)
 - flag to write results on TES
- WriteProcData = False (/True)
 - flag to write L0DU input datas
- Context = ""
 - suffix to the result's default location
- L0ProcDataLocation = location(system)



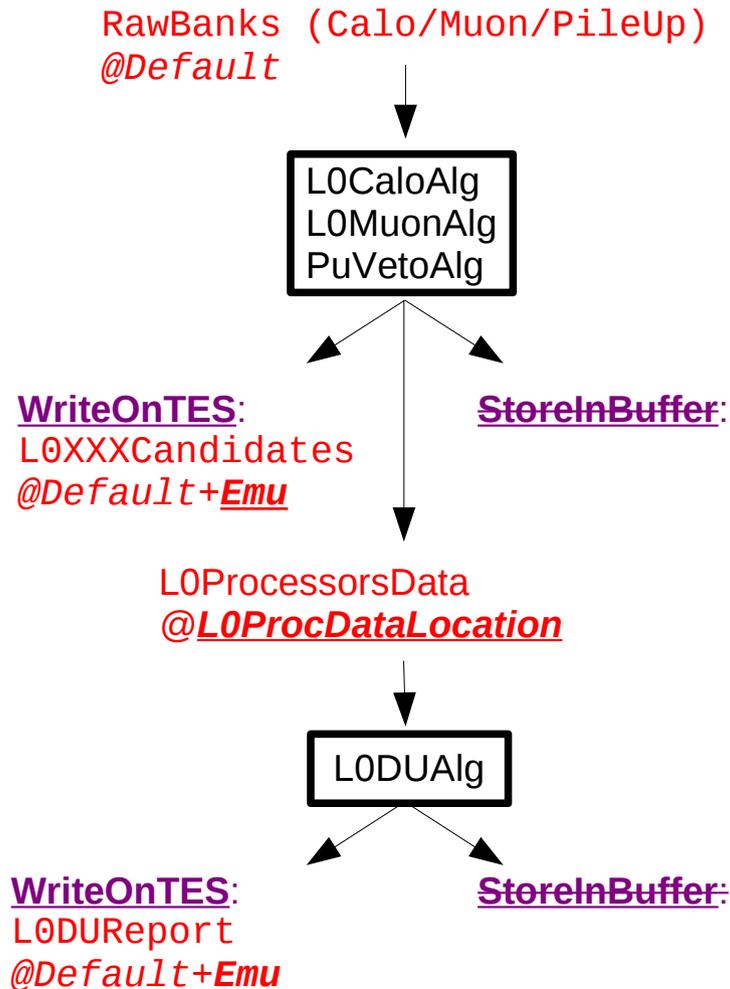
Use case # 1 : simulation



Common configuration :

- StoreInBuffer = True
- WriteOnTES = False
- set to True if monitoring is wanted
- Context = ""
- L0ProcDataLocation : defaults

Use case # 2 : emulation (re-run full L0 on real data)

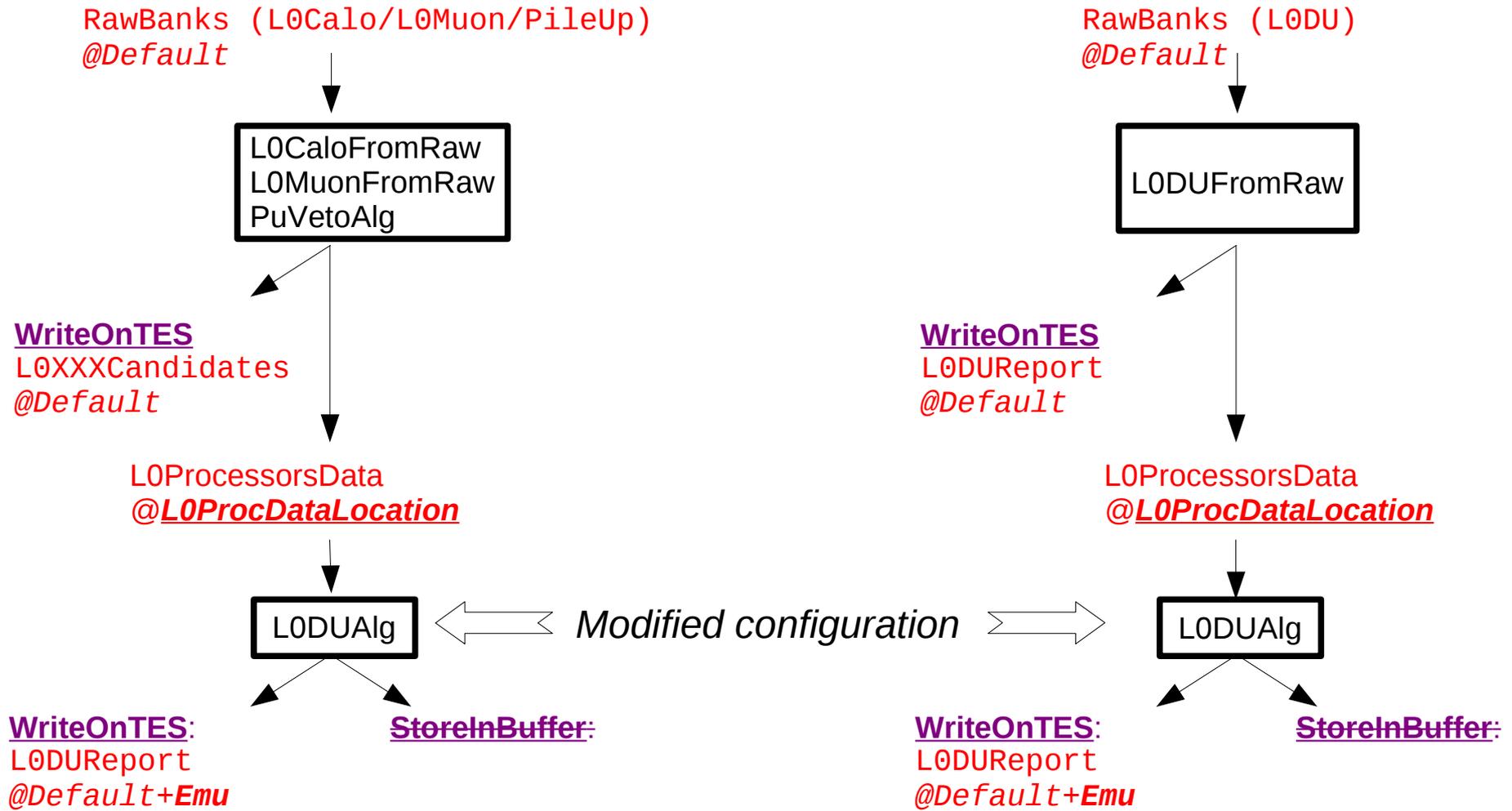


Common configuration :

- StoreInBuffer = False
- WriteOnTES = True
- Context = "Emu"
- L0ProcDataLocation : defaults

Use case # 3 : re-run L0 decision only

2 possibilities :



Harmonization of L0 software configuration

Agree on a set of common properties

- same name and behavior
- almost all pieces are already there, mostly cosmetic changes
- transparent for the user of L0Conf

Done in the next weeks

L0 PileUp plans (Serena Oggero)

Raw event

- simulation
 - check format of L0PU banks
 - implement L0PUfull bank
- decoding
 - should follow changes if any

L0PileUp algorithm

- should be OK

Event model

- new event model classes to hold PileUp channels (and results ?)

Repackaging of PileUp software

- move algorithm using MC to an other package (VeloSim ?)

Monitoring

Work is starting - aim : done by end of August

Conclusion

L0 components configuration will slightly change soon

- transparent for most users

PileUp velo software will evolve radically

On going :

- improve monitoring
 - histograms legend
 - automatic tasks
 - alarms