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# DaVinci status

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LHCb software week

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- The v24r2 series
- The v24r3 release
- The near future

- Many releases since last SW week
  - Release schedule mainly HLT driven
  - Development to Stripping, selections DST writing done concurrently
- Many patch releases in the last two weeks
  - Driven by MC09 stripping
- First LHCb v28r0 based release today
  - Patch already on the way!

- The v24r2 series contains a new DST writing mechanism
- MicroDST, Stripping and simple selection DST writing have same syntax
- Stripping puts MicroDST partition on output DST to save candidates and full decay tree
- Stripping split into five streams
  - For some unknown reason five streams is the maximum that can be written out

- New “framework” for particle selections
- Provides easy way of writing and re-using selections without resorting to importOptions
- Used for (Micro)DST writing, stripping
- More details in wiki pages:
  - <https://twiki.cern.ch/twiki/bin/view/LHCb/ParticleSelection>
- New DaVinci tutorial 4, to be used tomorrow:
  - <https://twiki.cern.ch/twiki/bin/view/LHCb/DaVinciTutorial4>

- For more details, see stripping status and MicroDST/Stripping/Selections tutorials in tomorrow's afternoon session

- Chris Jones' profiling of busy events in HLT:
  - Lots of time spent on Particle->PV relation manipulations in DVAlgorithm/PhysDesktop
  - Has led to many performance improvements
    - Some trivial, others required major changes
  - The changes are in Kernel packages in LHCb and missed v28r0
    - Expect to find them in DaVinci v24r4
- Stripping configuration
  - See discussions tomorrow
- ETC writing
  - Want to use the same pattern as in DSTWriter
  - StrippingConf() could then be independent of DaVinci()

- Every two days or so somebody reports that jobs are being terminated prematurely with some strange error message
- With a similar frequency, Vanya, Gerhard, Patrick or myself respond
  - It is because there are no PVs in that event and you are cutting on something that needs one
  - Add an instance of **CheckPV** at the beginning of your sequence
- Maybe it should become part of the first DaVinci tutorial



- Problems when using Particle->MCAssociation with non-standard locations of ProtoParticles (HLT)
- Need to tell many MCAssociator tool instances to look in a different place
  - Configuration bad dream (not nightmare). We have python after all.
- P2MCP MC association has a pattern that works
  - Algorithm with one tool
  - Writes MC association tables to TES
  - Client code could just pick them up from there.
  - Need to translate it to DaVinciMCTools

- DaVinci v24r3 is ready today
  - But DaVinci v24r3p1, with patch to PhysConf and StrippingConf is almost ready
  - Do we wait for the patch release?
- LHCb v28r1 is scheduled to be frozen on the 12 of October
- Would like to have a release on top of that soon after
  - Benefit from DVAlgorithm/PhysDesktop speed improvements
  - Include any changes to Stripping, ETC writing, MC association