

News from LAL

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LAL – Orsay

Framework news

- Gaudi MR 462 (reentrant DataHandles) :
 - After several months of silence, ATLAS agreed to merge...
 - ...only to have it reverted a week later. Felt too disruptive.
- Trying again with a different strategy :
 - MR 798 cleans up the existing DataHandle base
 - MR 800 introduces reentrant DataHandles on top of that
 - Begun integrating condition handling on top of MR 800
- Discussed DD4hep integration with Ben Couturier
 - No problem foreseen if “borrowed” storage is supported

ACTS news

- Finishing a CHEP proceeding on ACTS + verrou
 - <https://v1.overleaf.com/read/bdmqnbjxbhnq>
- Moved the ACTS test framework from OpenMP to TBB
 - Will simplify studies of intra-Algorithm parallelism
 - Nicer than OpenMP, but brings one more dependency → OK
- Packaged ACTS and its test framework with Spack
 - Simplifies builds (automated dependency setup)
 - Will be upstreamed once ROOT package update is
- Next project : clean up FP comparisons and use f32 more

Belle 2 news

- Submitted a PR for enabling link-time optimizations
 - Builds are up to 13% faster
 - Builds use up to 20% less RAM at peak
 - Build products are up to 54% smaller
 - Sadly, runtime performance change is unimpressive for now
 - But should enable more avenues for manual optimization
- “Wait, shouldn’t LTO use *more* resources ?”
 - I *think* this is because SCons groups all link jobs at the end
 - That creates a disk resource bottleneck + RAM usage peak
 - LTO uses the CPU at link time + discards more symbols

Questions? Comments?