


$D_{1,2}$ PD & job transforms: status and plans



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Job Transforms Status

- ❑ Reco_trf and Merging_trf used for ~100% of RDO/BS→anything jobs in production
 - Reco_trf also relatively widely used for private production and for various nightly tests
 - significant workload just for basic maintenance
 - ❑ in particular to regularly add NTUP_xxx outputs
- ❑ Simulation trfs in the process of migrating to Reco_trf “framework”
 - work by J. Chapman and A. Buckley
- ❑ Man power situation is worrying:
 - PyJobTransformsCore is orphan since A. Tan left(!)
 - Reco_trf and Merging_trf maintained almost exclusively by D. Côté → not sustainable

Job Transforms development plans

□ New features:

- GEN→DAOD+NTUP in one command
 - useful for:
 - MC production filtered at reco-level
 - e.g. dijets with cut on MissingET requested by SUSY
 - RECAST
 - will work on this with J. Chapman this week
- Arbitrary outputs with Reco_trf
 - working prototype in PATJobTransforms-00-02-93 developed with P. Behera
 - only for interactive usage at the moment
- TrfSignature.pickle as replacement of ListOfPositionalKeys
 - generated during build with gmake
 - implemented since AtlasProduction-16.0.2.4
 - not yet used by ProdSys: coming soon!

□ Technicalities:

- Unify Reco_trf skeleton files
- Migrate code from PATJobTransforms to PyJobTransformsCore to ease unification with simulation trfs
- Makes wider use of new OutputsMgr (used for arbitrary outputs)

D_{1,2}PD status and plans

□ Status:

- core infrastructure mostly in place
- DESD/DAOD production happening routinely
 - DAOD usage by physics group could increase
 - usefulness of original DESDs could be revisited
- Manpower: insufficient.

□ Plans:

- finish CutFlowSvc (next slide)
- integrate D3PD in MSMgr for configuration
 - unification of D3PD and D12PD configurations could go further but no effort has started in this direction yet
- some clean-up of PrimaryDPDMaker code
 - bundled DESDSkimmingFilters.py should disappear
- Proposal: add a D₂PD section in ATLAS tutorials

Status of CutFlowSvc implementation

- POOL files support
 - CutFlowSvc and ICutFlowSvc separation ●
 - parent ↔ child filters navigation (T/P) ●
 - multiple output streams ●
 - multiple skimming cycle ●
 - file merging ●
 - integration in RecExCommon ●
 - topFilters connection to DecisionSvc ●
 - migration of all filters to AthFilterAlgorithm ◆
 - weighted events ●
 - EventSelector counter "all events" ●
 - PrintCutFlow.py executable ◆
- NTUP support
 - dumpCutFlowToTTree() ●
 - loadCutFlowFromTTree() ■
 - PrintCutFlow.py executable ◆
 - configurable D3PD dumper tool ■
 - D3PD standalone CutFlow tools ■
- EventBookkeeper ↔ SkimDecision connection
 - navigable EventBookkeeper↔SkimDecision link (T/P) ■
 - smaller SkimDecision_p2 (m_name pointing to EB) ■
 - simpler SkimDecision configuration in python ■

The hardest part is done but many details remain to be done. Help is welcome!!

This could ease cut flow comparisons between independent analysis groups.

● implemented ◆ ongoing development ■ pending