

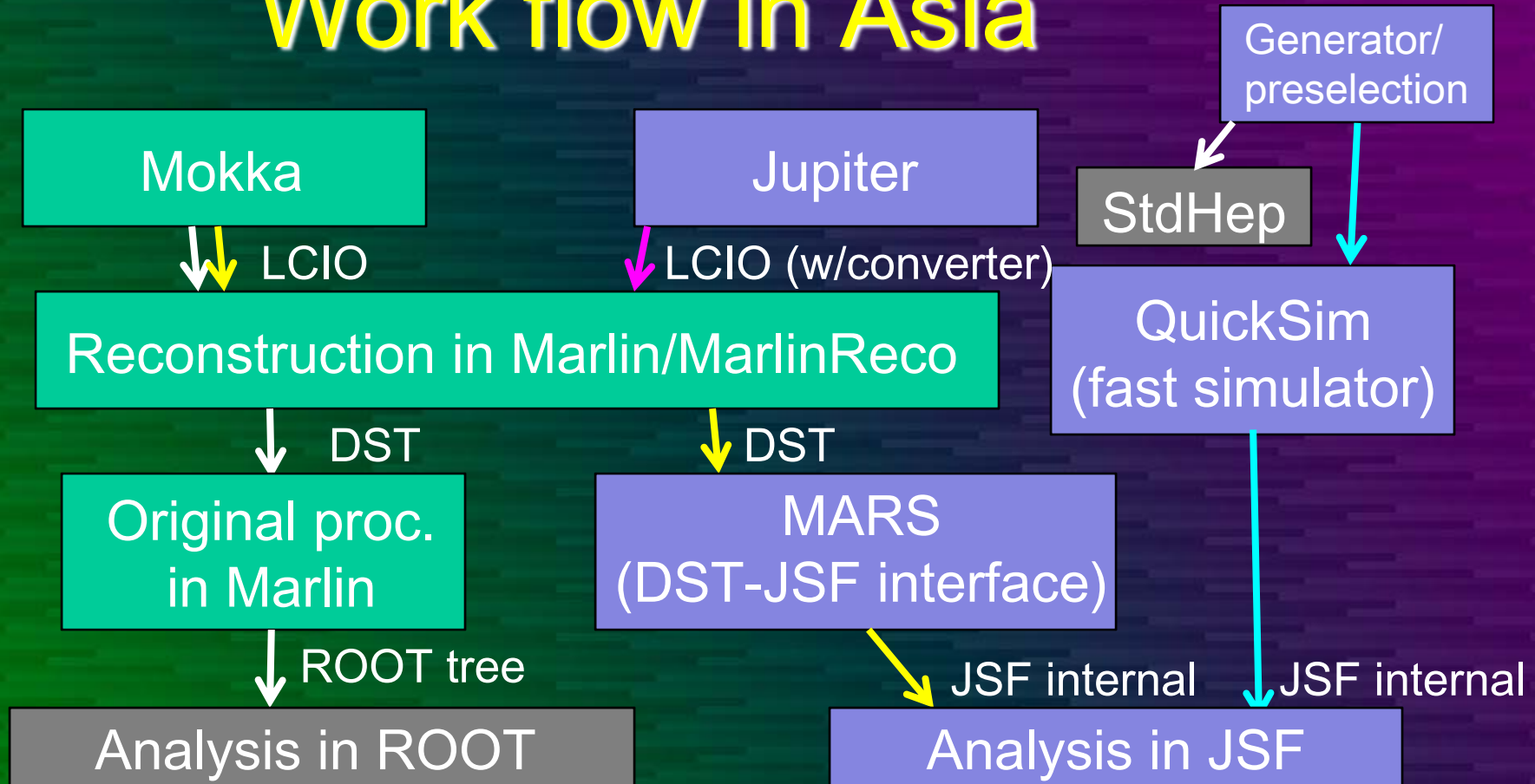
Comments from MarlinReco users in Asia

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Topics

- Introduction of our work flow
- ROOT issues
- Other LCIO/Marlin/DST issues
- Future collaboration

Work flow in Asia



Tokyo procedure

- Tau-pair
- SUSY point5 (w/DESY)
- Jet clustering development

KEK/Tohoku procedure

- Higgs / Top
- ZHH / ttH / Little higgs etc. in QuickSim
- Strip clustering

Tokyo analysis flow in detail

TAU

DST

Tau clustering

TauProcessor

- Precuts
- Fill ROOT trees

Marlin

hadd

Many (~15000) small .root files
contains cluster 4-momentum,
charge, MC info, cut variables,
whizard ID etc. in each tree

Combined file (1 - a few)

SUSY point5

DST

BCalTagEfficiency

1cfit-proc

- Precuts
- Kinematic fit
- Fill ROOT trees

Marlin

hadd

DESY
analysis

Share trees

Analysis with ROOT macros (event weighting, obtain plots/numbers)

Issues on current analysis flow

- Many trivial work concerning LCIO in the Marlin processor
 - No built-in 3- and 4- vector classes
 - 1-by-1 copy from LCIO to ROOT tree
- Event weighting is performed in the analysis level – should be standardized?
- Original scripts which modifies steering file and run Marlin are needed – also should be standardized?

Virtually everyone uses ROOT,
so ROOT-friendliness is very important.

Proposals for ROOT interoperability

Two independent proposals:

1. Add ROOT-friendly LCIO interface and allow using it in Marlin.
 - For Marlin processors
 - Use of TVector3/TLorentzVector etc. as the interface to LCIO parameters
2. Implement an easy conversion processor from LCIO to ROOT trees.
 - For off-Marlin analysis
 - Specification of the trees can be fixed or determined by Marlin parameters

Both can be done without critical change of LCIO/Marlin framework.

Miscellaneous issues

- LCIO
 - (Shallow) copy of ReconstructedParticle etc.
 - Polarization in MCParticle
 - Event-ID numbering
- Marlin/MarlinReco/DST
 - Command line modification of Marlin parameters
 - JSF has the feature.
 - Eg. Marlin hoge.xml --/global/SkipNEvents=1000
 - Lepton + jets clustering
 - Slow lfc-ls in GRID: too many files in a directory

Contributions to Marlin framework

- Possible contributions from Asia:
 - Tracking
 - JetClustering/Vertexing/(Flavor tagging)
 - Strip clustering PFA
 - Generator/Preselection (StdHep output)
 - Fast simulator (QuickSim)
 - LCIO/ROOT interface
- ...of course manpower is very limited...

The end