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PID Lookup Tables in EICRECON

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Lookup Tables in EICRECON

- "Software" can provide blueprint code for EICRECON
- DSCs implement their part to lookup PID migration matrices from track parameters (p, eta, …)
  - Can reuse DELPHES tables, copy&paste root macro code into EICRECON blueprint
- For each track, we MC "reconstructed PID" based on migration matrix
  - "reconstructed weight" is either 1 or 0
- Does not allow for straightforward combination of detector information with overlapping phase space (TOF/dRICH, TOF/hpDIRC)
  - Can simply use "best" subsystem for each slice of phase space
- We see great advantages over "afterburner" solutions:
  - Workflow for analyzers is (almost) identical to full eicrecon based reconstruction
  - Nobody needs to develop, test and maintain the afterburner tool itself
  - Implementing the subsystem table lookup is a low-barrier entry point into becoming an eicrecon developer…