Status update of the FastSim PID code

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- Quick reminders: code organization, documentation
- Recent developments
- Next steps

PID FastSim code

- Five main packages
  - **PacDirc**: DIRC-like PID barrel simulation [Cinci., SLAC]
  - **PacForwardPid**: Forward PID-related code [Orsay, Nsk.]
  - **PacPid**: Definitions of PID selectors and sequences [BaBar imported, Orsay]
  - **PacPidCalib**: Selector testing tools [BaBar imported; not much used so far]
  - **BetaMicroAdapter**: containers with basic detector & PID information [BaBar]
- Documentation: http://mailman.fe.infn.it/superbwiki/index.php/FastSimDoc/PID_simulation
  → any contributor to the PID code should update it
  → aim is to keep documentation up-to-date ⇒ report any inconsistency/problem

Recent Developments (those I'm aware of)

- Two classes of truth-based selectors
  → (mis)-ID decisions based on true particle type + hardcoded (mis)-ID probabilities
  - PacPidTruthBasedSelector: flat efficiencies
  - PacPidTableBasedSelector: momentum + polar dependences
    BaBar-based tables (r24c Run 6)

  http://mailman.fe.infn.it/superbwiki/index.php/FastSimDoc/PID_simulation#PacPid
  → No complain nor bug report so far (feedback from users would be great)

- Nsk. work on the aerogel simulation
  → has the code been commited to SVN?

- Work on forward PID TOF started in Orsay
  - angular coverage [fixed system ordering bug in the edml parser]
  - first studies of the improvements brought by this detector
    → see presentations at DGWG on Thursday morning

- Truth association map synchronized with what's produced in reco.

- To get up-to-date versions of the code, use FastSim V0.0.9 or V0.1.0

Next Steps

- Need accurate descriptions of forward TOF (see Jerry's talk) and aerogel in FastSim
  → to quantify the corresponding improvements
  based on realistic measurements and errors
  → to see if these detectors actually fit in simulation (easier than real life!)

- Need EMC-based and muon selectors

- Need dE/dx to make realistic K/π selectors

- Manpower scarse as always/everywhere
  → Any commitment would be more than appreciated.
  Contact me (narnaud@lal.in2p3.fr) if you're interested in these activities