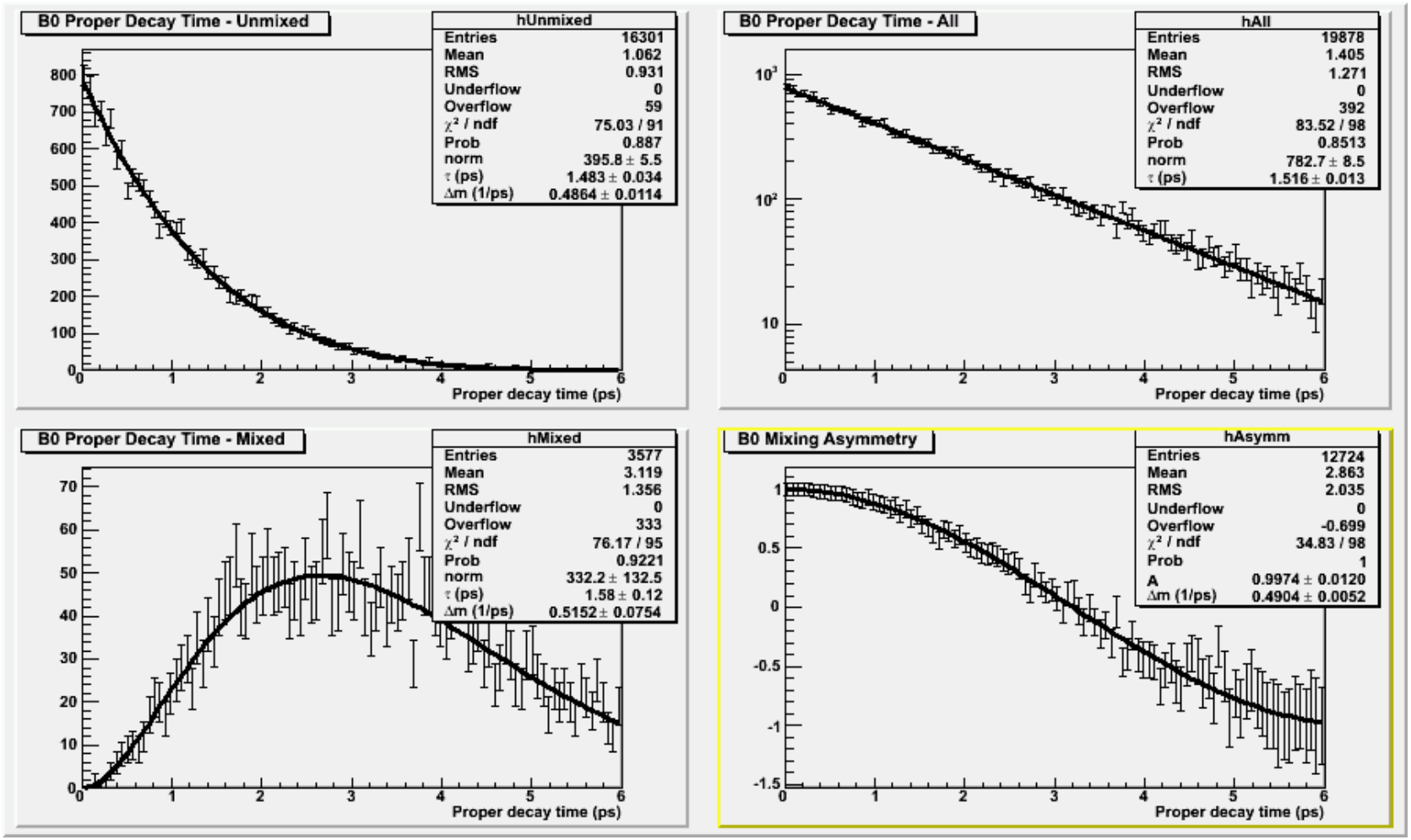
Update on EvtGen

- Preliminary EvtGen release V00-14-05 (May 31, 2005)
  - contains most of the fixes for problems found in earlier private pre-releases
  - still had a number of problems – all of them are now fixed
    - crash for B*0 decays
    - incoherent mixing only for particles without parents
    - wrong time-evolution for incoherent mixing
    - missing max phase space amplitudes for ISGW2 model
    - rare crash in BTOXSLL model
- JETSET74 again:
  - finally rediscovered what Frank Wuerthwein realized a long time ago: EvtGen settings for Pythia are not compatible with CDF use of Pythia
  - revert to private copy of JETSET74 (as before)
  - it's a feature, not a problem!
- Some cleanup of linking / PackageList for simulation related packages

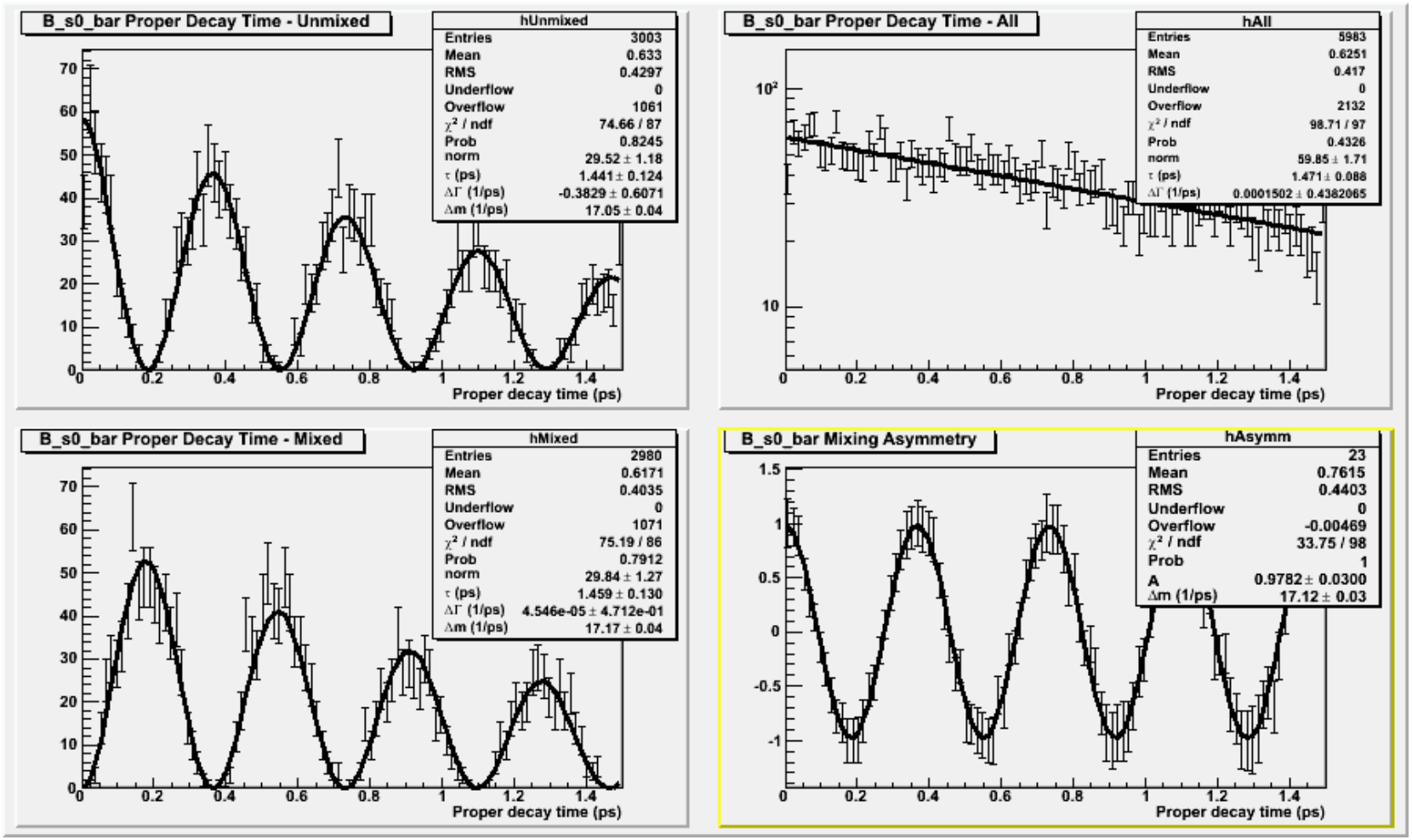
Incoherent Mixing Validation: B^0

- B^0 decays in 50k Pythia events (τ = 1.543ps, Δm_s = 0.489/ps)
  - only one flavor; check & fit different distributions individually



Incoherent Mixing Validation: $\overline{B}_s^0$

- $\overline{B}_s^0$ decays in 50k Pythia events (τ = 1.461ps, Δm_s = 17.1/ps, $\Delta\Gamma/\Gamma$ = 0.14)
  - fit includes $\Delta\Gamma$



Still To Do

- Finish updating DECAY.DEC / pdt.table together with Rick Tesarek
- Properly decay eta_c(2S)
  - current EvtGen doesn't decay eta_c(2S)
  - new EvtGen decays eta_c(2S), but decays done through JETSET aren't handled yet
- Wading through diffs vs current EvtGen in order to find CDF-specific additions that may have been missed
- Add new model from Steve Nahn (polarized vector to lepton decays)
- Finish updating documentation
- Waiting until 6.1.1 is out before putting upgraded EvtGen into development (as decided at May 5 Simulation meeting)
- Greg Williams joining EvtGen effort