WG1 EvtGen/.dec-files charmless decays

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Semileptonic, charmless decays

- $\pi, \rho, \omega, \eta, \eta'$ updated to PDG 2017 values
- $B \to X_u \ell \nu$ updated to PDG2017 values
  - Pull request made, DECAY_BELLE2.DEC
  - Asked the author of the VUB-Hybrid: need to redo weights or entire hybrid
  - Quick solution: use old BABAR webtool
  - Pull request submitted

Excerpt from DECAY_BELLE2.DEC

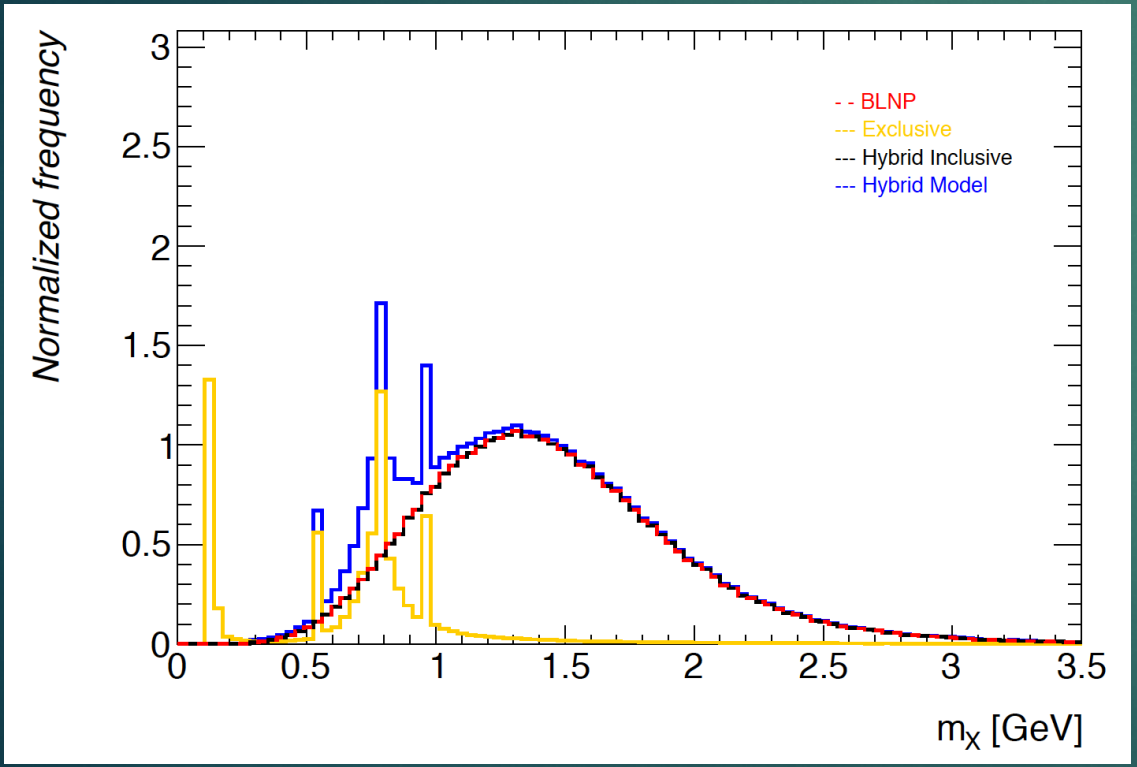
- 0.000145000 pi+ e- anti-nu_e PHOTOS ISGW2; #[Reconstructed PDG2017]
- 0.000294000 rho+ e- anti-nu_e PHOTOS ISGW2; #[Reconstructed PDG2017]
- 0.002140 Xu+ e- anti-nu_e PHOTOS VUB 4.8 1.29 0.22 20 0.30 0.55 1.20 0.61 1.26 0.85 1.34 1.08 1.41 1.21 1.48 1.30 1.55 1.30 1.61 1.33 1.67 1.36 1.73 1.39 1.79 1.33 1.84 1.42 1.90 1.39 1.95 1.39 2.00 1.37 2.50 1.30 3.00 0.74 3.50 0.99 4.00 1.09 4.50 .00;
- **But weights need to get recalculated for the updated massed**

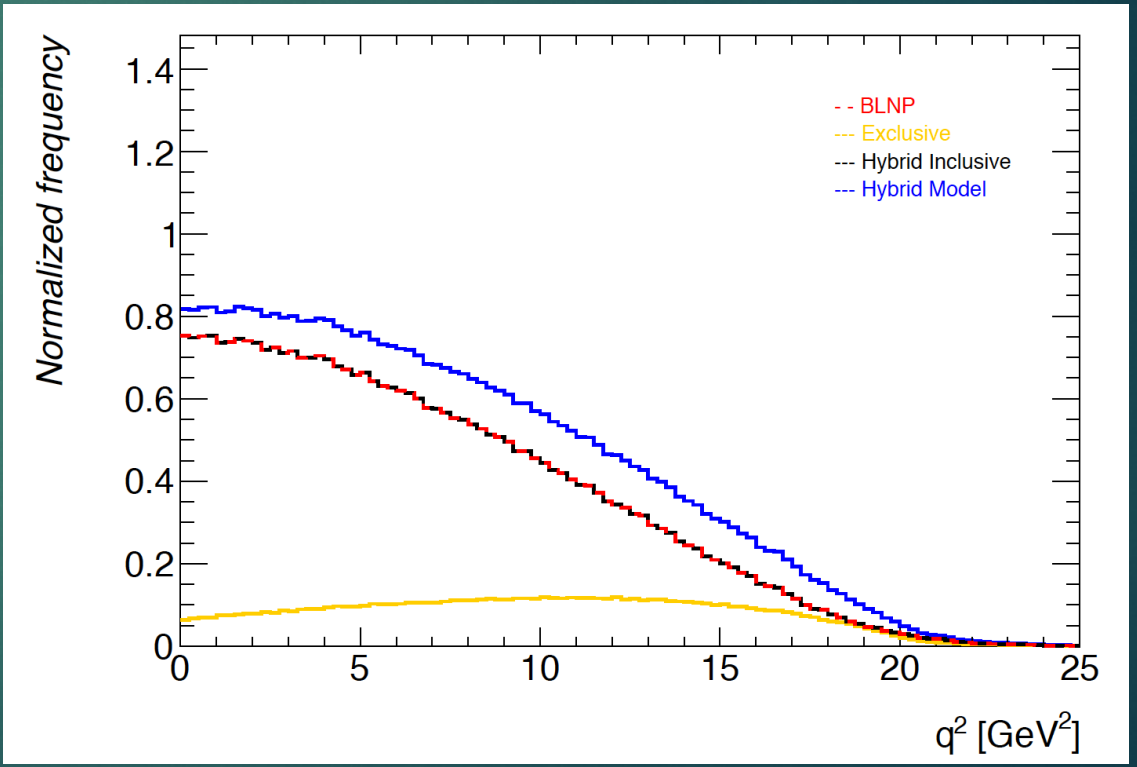
Implementing the hybrid

- Code and webtool available
- Using previosu collaboration‘s file formats and
- Another possibility: Florian Bernlochner‘s reweighing tool
- Available ntuples: ISGW2, BLNP, GGOU, ADFR, DFN:
  - Can compare to previous models (DFN, ISGW2)
  - M_X, q^2, E_{LEP}
- Starting point so far: Babar-style reweighing with not updated weights
- Recalculate weights using Babar tools?

Other hybrid tools

- Or provide simple starting point, e.g DFN and exclusive modes with correctly summed BF and table of weights on truth level in 3 variables?





Next steps

- Either reuse Babar weights or recalculate new ones
- Best and most future-safe and user-friendly:
  - Provide simple starting point and set of weights to be applied by individual analysts, not at MC generation level?
  - Provide **simple** code snippet containing a function doing the reweighing, so that it can be used and adjusted for individual analyses easiest (e.g for analyses in differential kinematic distributions or exlclusive states)
- Any other ideas? ☺