

$\nu_e \bar{\nu}_e H, H \rightarrow \mu\mu @ 1 \text{ TeV}$

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- Currently addressing received comments over the note v1.0 (1).

More Important Issues(1)

- Include preselection cuts rejecting hadronic/semileptonic modes (2).
- Many pseudoexperiments fail fits.
 - Suggested try fits with resolution Det. fixed.
 - Suggested increase number of toys.

(1) Comments are referred to the note v1.0 in:

<http://www-jlc.kek.jp/jlc/en/node/157>

(Full list of comments is available in same link.)

(2) Plots in these slides do not include this yet.

Toy MC

Before

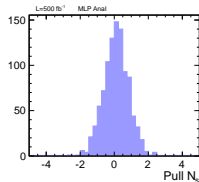
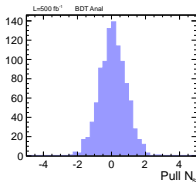
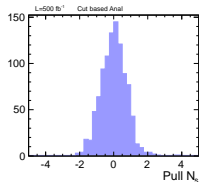
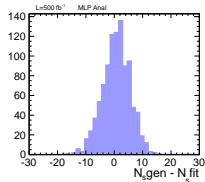
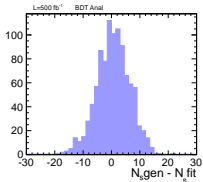
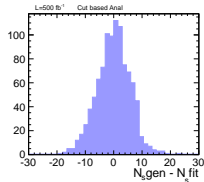
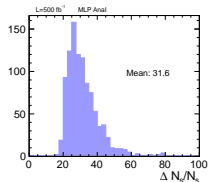
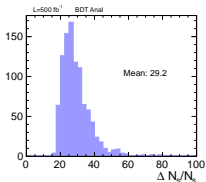
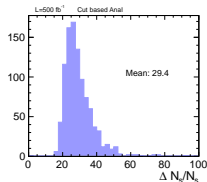
- Ngen=100 Toys.
- Resolution Det. **floating** in the fits.
- Background Generation: from background template (CrystalBall) in the range (100,140).
- Signal samples: pick up events from data.
- Many fits fail.

Now

- Ngen=1000 Toys.
- Resolution Det. **fixed** in the fits (350 MeV/c², from fit to data).
- Background Generation: from background template (linear) in the range (120,130).
- Signal samples: because Ngen=1000 not enough statistics to pick up events from data.
 - Fit signal to extract template.
 - Generation of random sample with statistics 10 times data sample.
 - Randomly Pick up events from this new sample: **events within (124,126)**
- All fits end successfully.

- Size of the samples include Poisson fluctuation.

Toy MC



Average

- Cut based anal and BDT same average: $\sim 29\%$.
- MLP shows a little higher uncertainty: $\sim 32\%$.
- Total average over 3 approaches: **30.1 %**(^{*}).

(^{*}) This result is using same preselection as showed before. It should be updated with the new preselection.