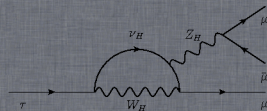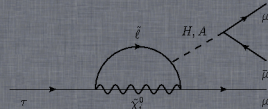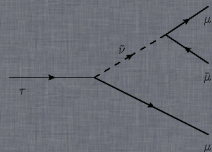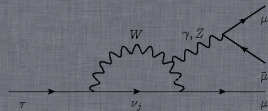# What could go wrong?

Marcin Chrząszcz[1,2]

[1] University of Zurich , [2] Institute of Nuclear Physics, Krakow,

January 30, 2014

University of Zurich[UZH]

What we know

- From Jon, alpha without any triggers is the same as 2011.
- From Paul, including or excluding triggers makes a 3% difference.

M.Chrząszcz 2014

Idea 1

- Signal calibration?
- We have more signal in trash bins?
- PID is for sure smaller then last year(PID was finetuned in the optimization).
- Maybe also fine-tune blend classifier in binning?
- Could I have numbers how much we loose in which clarifies?

Idea 2

- Form Jon, mixing is small correction to alpha.
- Can it influence the calibration?

idea 3

- Can it be that despite the ROC curve looks better the limit gets worse?
- only statistical fluctuations and calibration could explain it (any ideas, even wild?)

idea 4

- Binning optimisation.
- Can it be that the 2D binning is not doing what is should?
- xchecks:
- 1. Paul once showned the ranking of the bins, repeat now?
- 2. Take the old ntuples and do the new binning optimisation and see what happens.

idea 5

- Limit script
- Looks like there is a bug in the limit script.
- Taking old PDFS makes the limit worse(7.9 -> 8.7)
- Need to start from scratch, and as a xcheck get back the old limit.