Physics and Peformance Evaluation Group

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5th IDS-NF plenary meeting

April, 2010

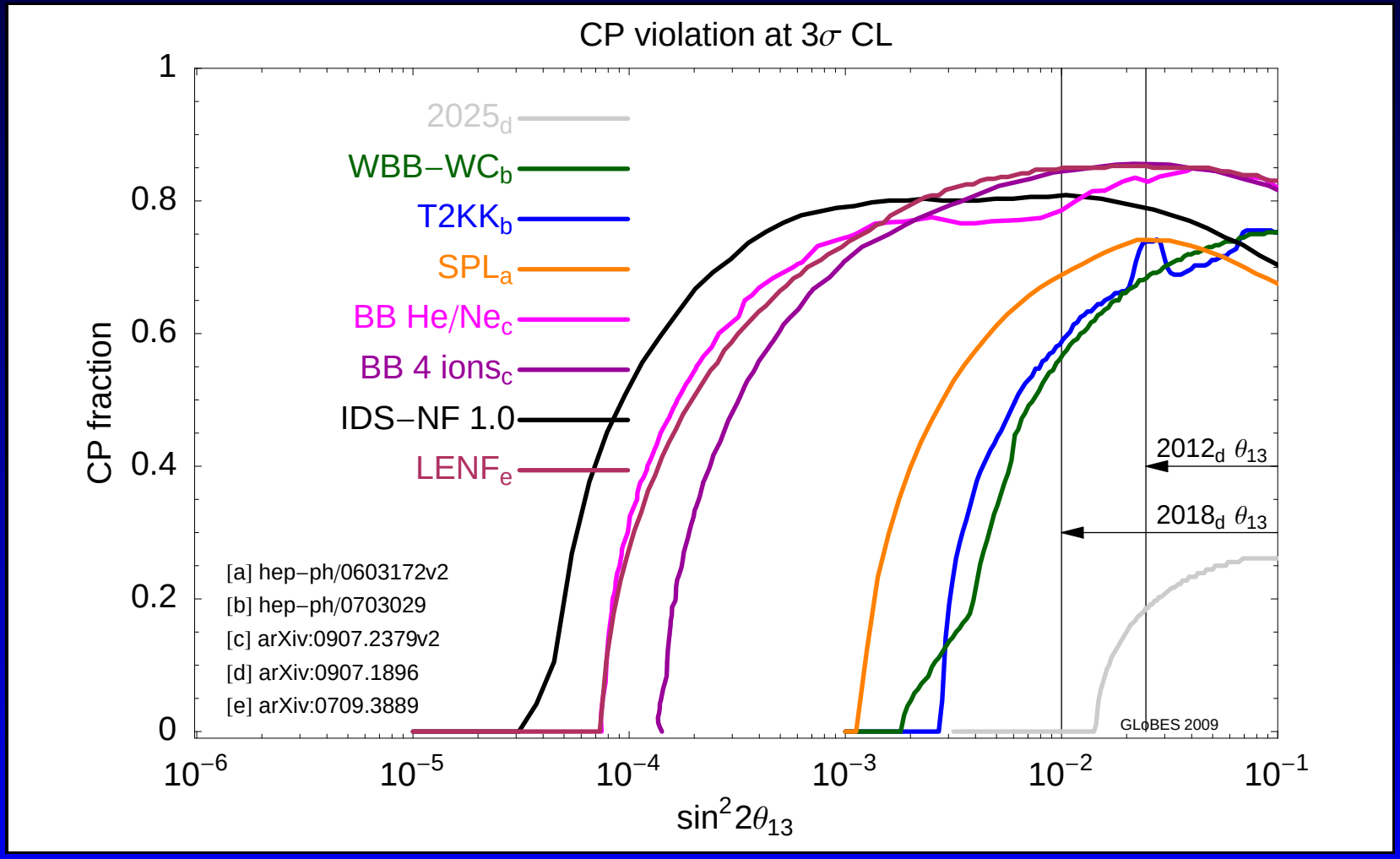
Fermilab, Chicago, USA

Contents I

- Summary of global fits, hints for θ_{13} – done, may need update
- Expectations for time between IDR and CDR and between CDR and start of construction – done, may need update
- Summary of physics case from ISS report and NuFlavour workshop – writing task

Contents II

Review of status of competition (BB,SB) – done, EuroNu 1 year report



Contents III

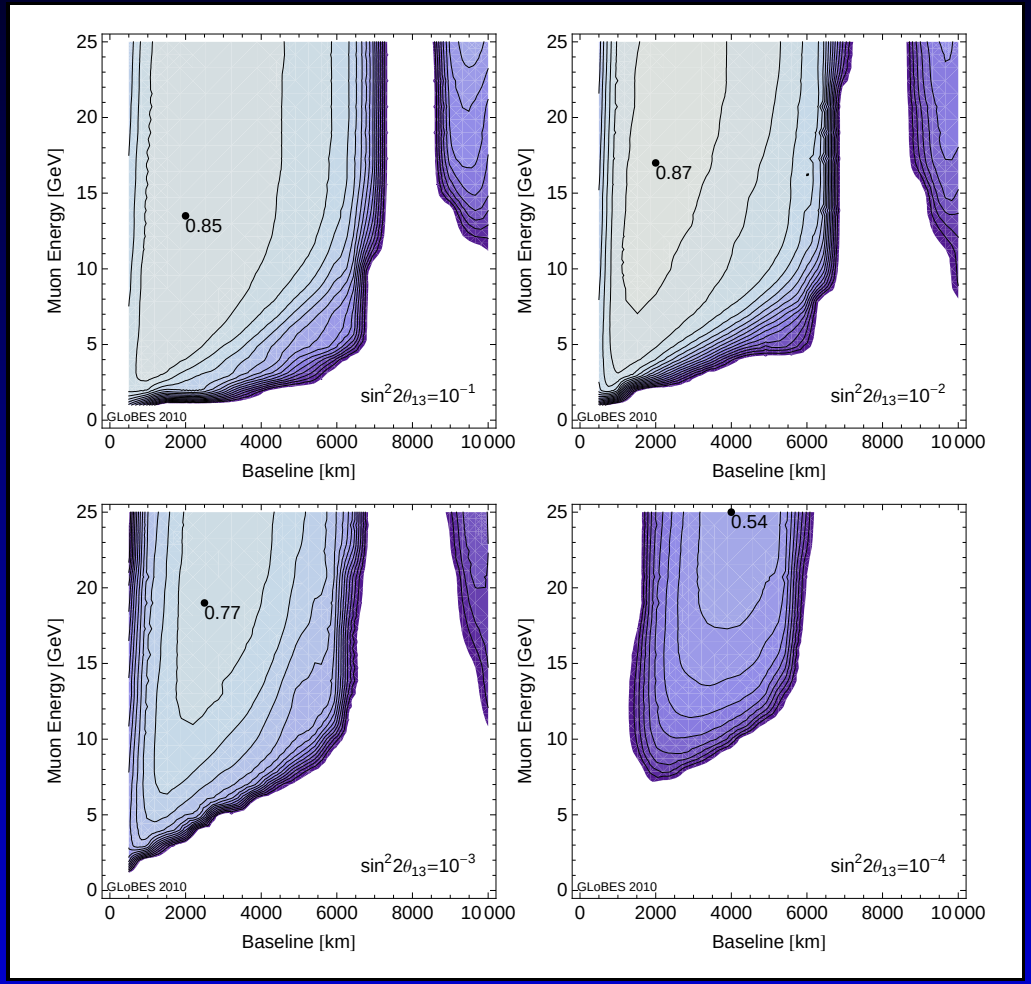
- Baseline, justification (includes NSI and standard physics) and changes – timely (!) inputs from WGs required to recalculate performance. Note, that if we want to include new aspects, like muons from tau decays, this requires some lead time for PPEG as well.
- Large θ_{13} case,
  - LENF optimization – needs more work (in progress)
  - LENF performance (includes NSI and standard physics) – needs more work (in progress)

Contents IV

Dealing with different sites

- accelerator sites – easy (=few)
- detector sites – many and not clear whether we have to be underground, but also not proven we can live at the surface
- can become a political minefield, e.g. proposing Henderson in a US context

Dealing with different sites



All possible site combinations would be small dots in a plot like this and it also, is obvious the optima are wide regions.

Time line

April	Assigning writing tasks (= finding authors for each piece) and find chief editor for PPEG
May	Establish monthly/bi-weekly phone meetings of authors to maintain momentum
July	Physics results on LENF on the arXiv
August	First assembly of pieces, draft 0
September	Discussion of draft 1 at RAL, finalizing scope (freeze)

After RAL, we will need to fill in the gaps and start editing the document in earnest.

Inputs from other WGs

The sooner an item can be frozen, the better this is, but even gradual freezing will not allow us to get started in a meaningfull way. We need *final* numbers.

- Ideally, we have final detector parameters for MIND by August, this would allow to show the updated baseline performance at RAL
- Can we expect any update for the TASD performance?
- Near detectors can be tricky and maybe we should agree on a strawman version soon, this allows us to setup the framework

Baseline 2.0

- The next SG meeting should finalize the list of baseline changes
- The next SG meeting needs to outline the new baseline, e.g. no silver detector and two 100kt MIND
- Need updated baseline specification by August, need draft even sooner! Experience shows, that wording can be very tricky.