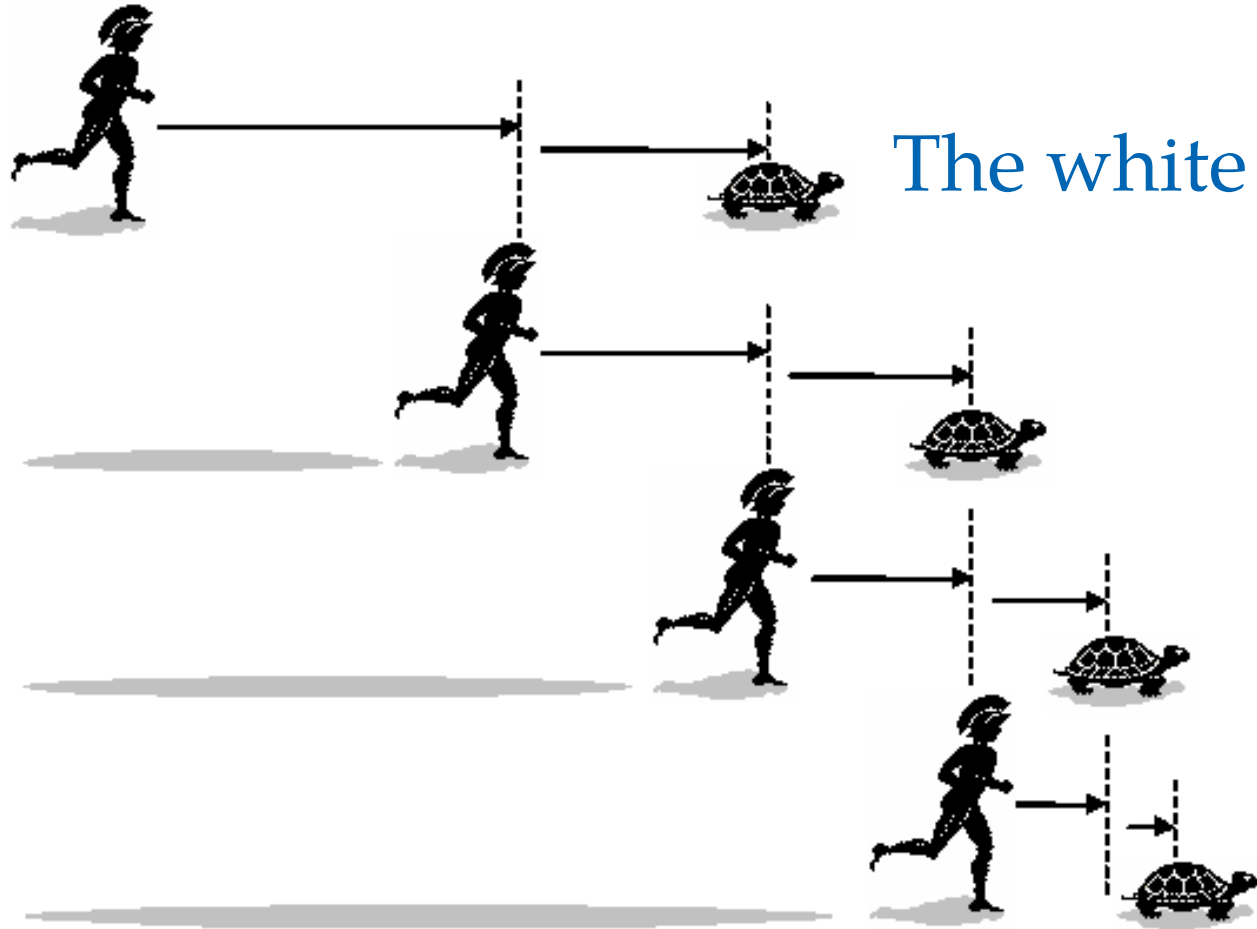# Finishing the white paper

Mauricio Bustamante

Niels Bohr Institute, University of Copenhagen

GRAND White Paper Workshop
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The white paper

The plan

Mid-September: All input received

▶ Write-up of new simulation results (Olivier)
▶ Muon excess in GRANDProto300 (Tanguy)
▶ New plots of model constraints (Kohta)

From mid- to late September: Edits, new money plots

▶ Finish the new plots discussed during this workshop
▶ Global text edits

Early October: Share with Auger publication committee

Mid October: Upload to arXiv ($\to$ And submit to journal)

Items we agreed to add/fix in the WP – 1/2

▶ Plot of exposure vs. year including all relevant experiments
  – For UHECRs and neutrinos separately

▶ Table of useful quantities for phenomenologists
  – Energy resolution, angular resolution, X_{max} resolution, event rates, *etc.*

▶ Re-calculate GRAND event rates according to Alves, Kotera, *et al.*

▶ Update GRAND sensitivity curves in Figs. 4, 5, 23 – make them consistent
  – Change "conservative" to "pessimistic"

▶ Change angular resolution from 0.05° to < 1°

▶ Refine text about data management (refer to EU/US recommendations)

Items we agreed to add/fix in the WP – 2/2

For the science case:

▶ Add an overview of science reach of each construction stage (table?)

▶ GRAND300 science case: add plot and text about muon excess

▶ Stress tests of how the PeV neutrino flux transitions to EeV
  – In GRAND10k vs. GRAND200k, predictions by Ke & Kohta

▶ Update GRAND sensitivity curves in Figs. 4 & 23
  – Change "conservative" to "pessimistic"

▶ Change angular resolution from 0.05° to < 1°

▶ Elaborate on table of transient models in WP (GRAND10k, GRAND200k)

▶ Unfolding to reconstruct neutrino spectrum from shower spectrum

▶ Anisotropy using multiple GRAND10k hotspots

▶ Measure composition of UHECR with cosmogenic neutrinos (Denton & Moller)
  – Stress the little impact of energy resolution

▶ Non-detection of cosmogenic ν constrains p fraction (van Vliet, Alves, Hörandel)

Still undecided

- ▶ Add text about site surveys?

- ▶ Mention MoUs/LoIs?

- ▶ Refine budget?

- ▶ ?