



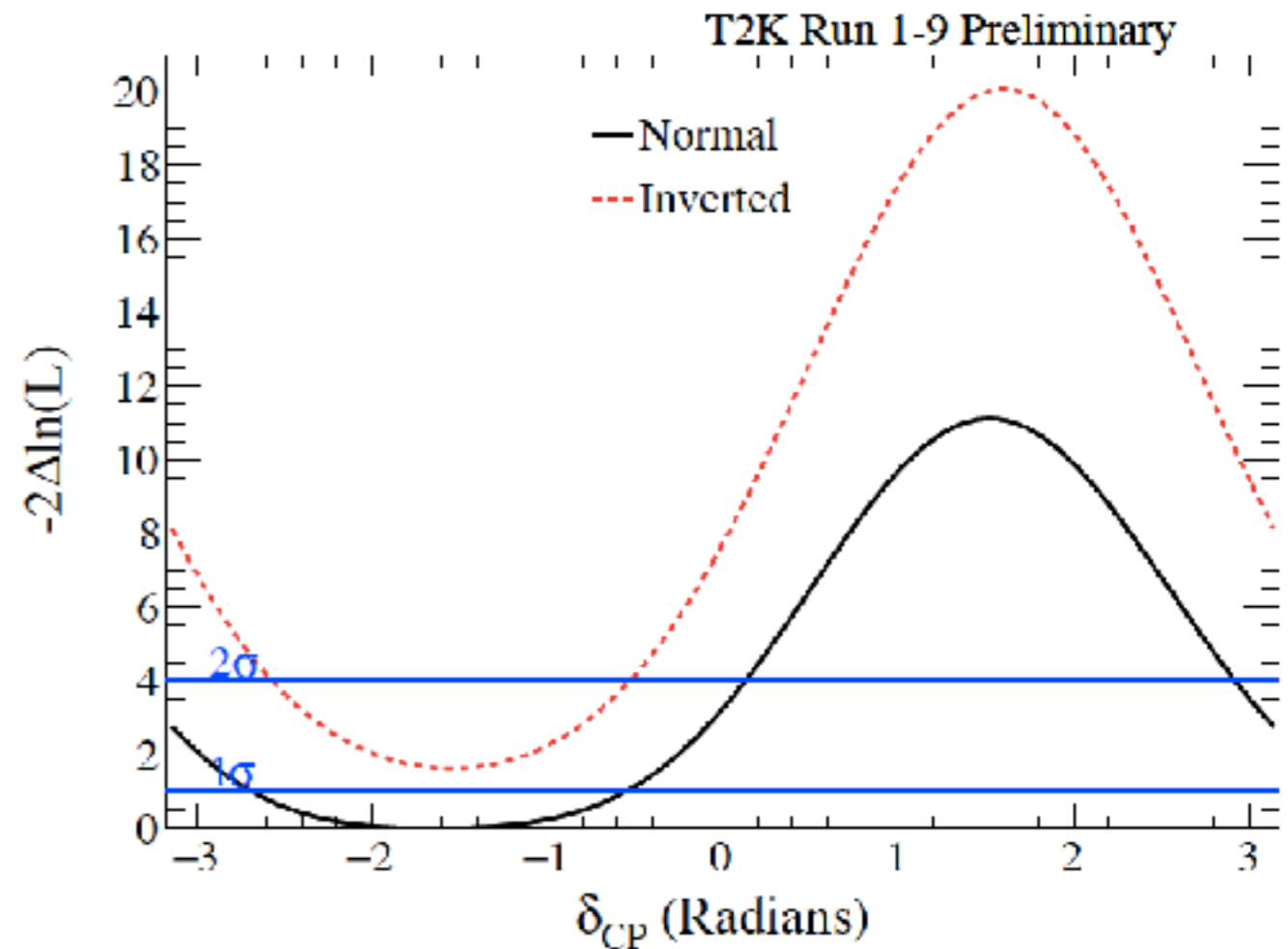
# Current status update

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Maria Antonova  
IFIC Valencia

# VALOR

- General sensitivity study for run9
  - Asimov A and B fits
  - w/ or w/o reactor constraint
  - $\delta_{cp}$ ,  $\Delta m^2_{32}$ ,  $\sin^2\theta_{23}$  1D fits
- Comparing these results with other analysers



Asimov A with reactor constrain

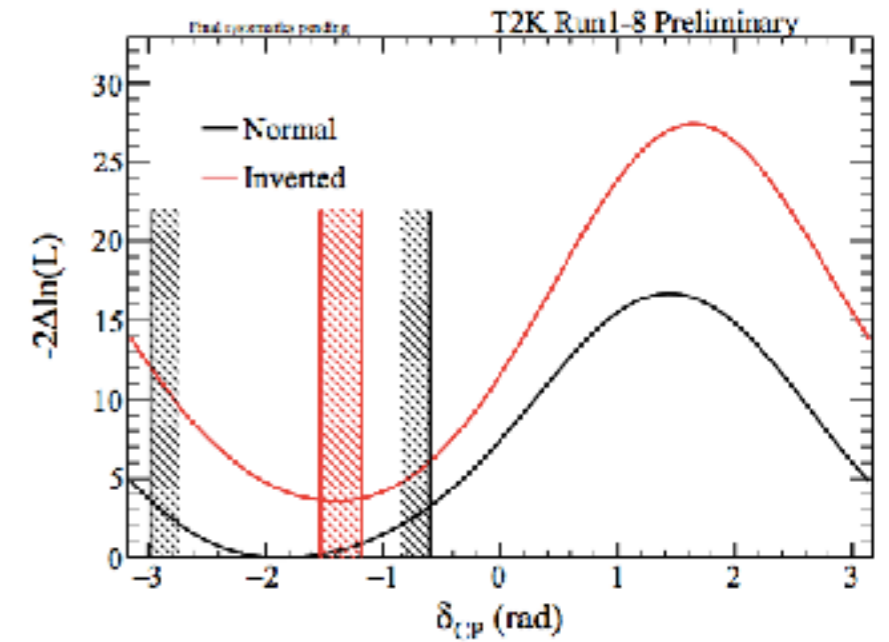
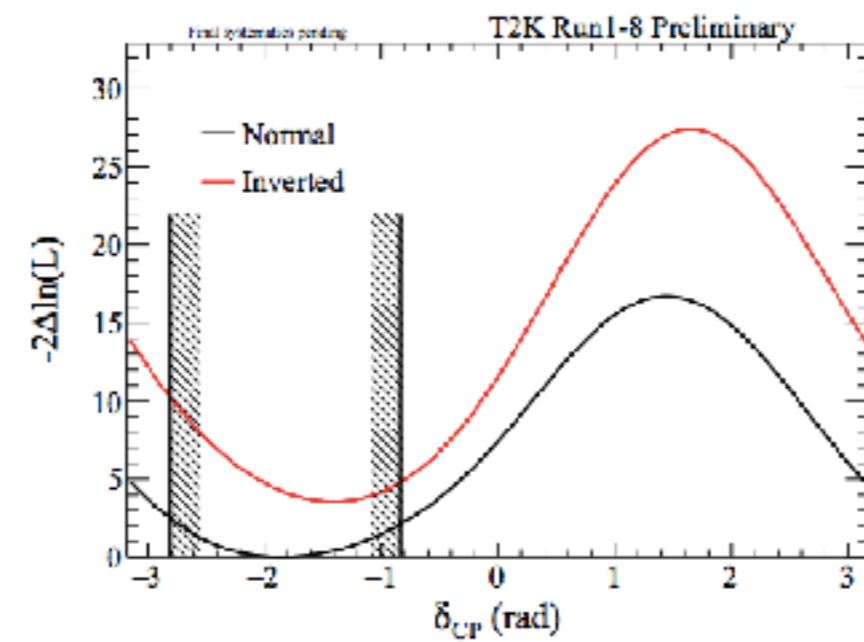
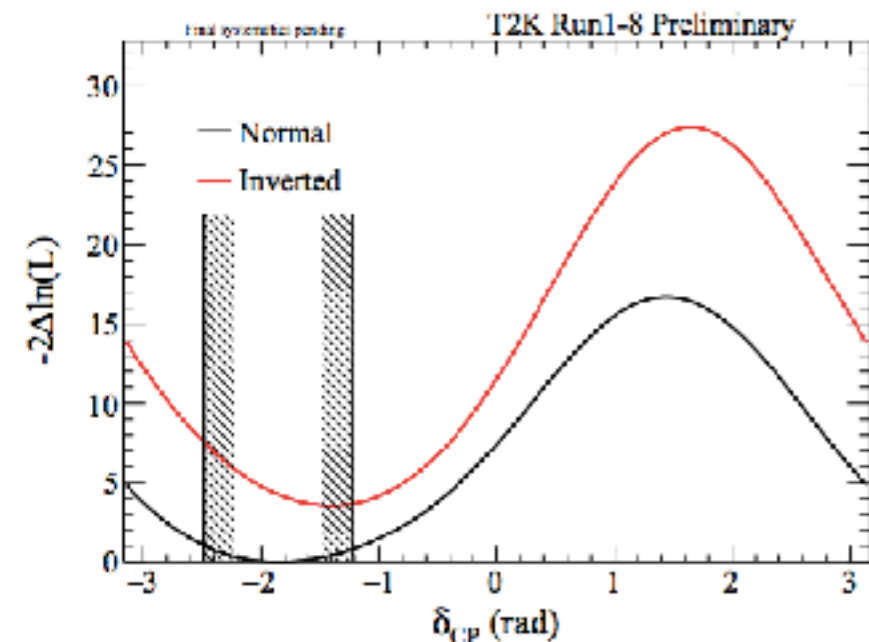
# VALOR FC fit

- Running FC fit for  $\delta_{CP}$  and mass hierarchy:
  - $\sin^2\theta_{13}$ ,  $\sin^2\theta_{12}$  and  $\Delta m^2_{21}$  from PDG
  - $\sin^2\theta_{23}$ ,  $\Delta m^2_{32}$  from the likelihood distribution produced by an Asimov fit
  - $\delta_{CP}$  is fixed for one of 9 values in  $[-\pi;\pi]$  interval
- Previous results :

$1\sigma$  CL exclusion region

90%CL exclusion region

$2\sigma$  CL exclusion region



# Reactor term in VALOR

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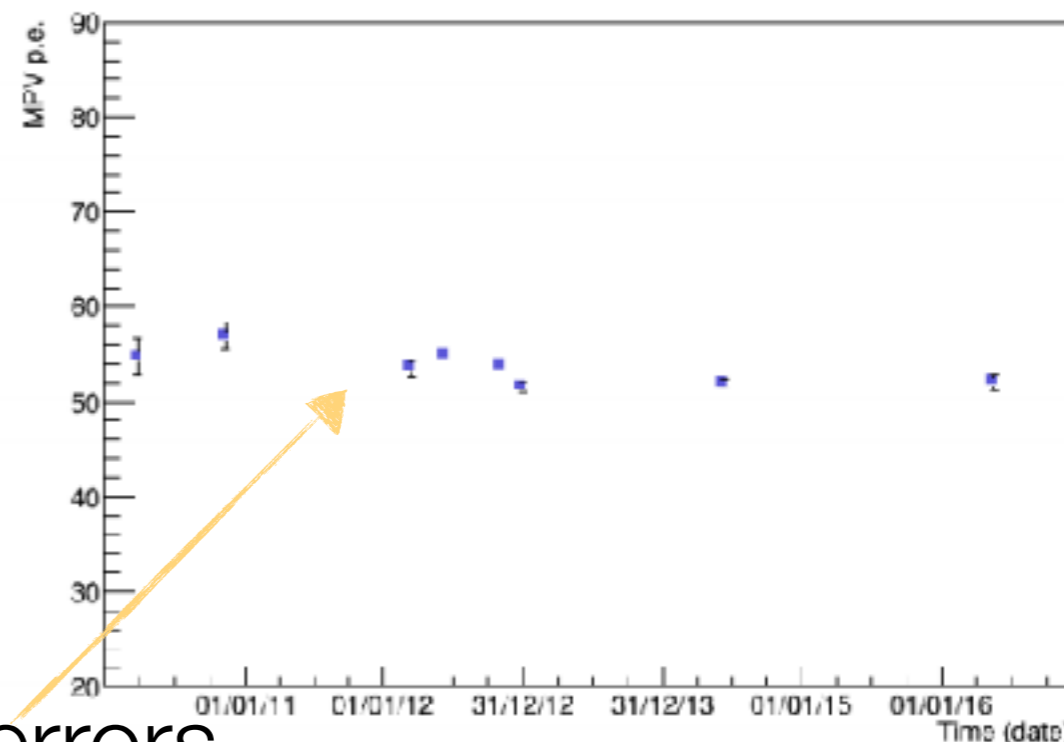
- Reactor term implementation within VALOR FWMK
- Done:
  - Went through the DC and DayaBay papers
  - Discussed with Pau main sources of systematic errors in reactor experiments
  - How these terms are introduced to the likelihood function
- Next steps:
  - Get hands on likelihood function implementation on VALOR FMWK
  - Rate only study

# SMRD ageing

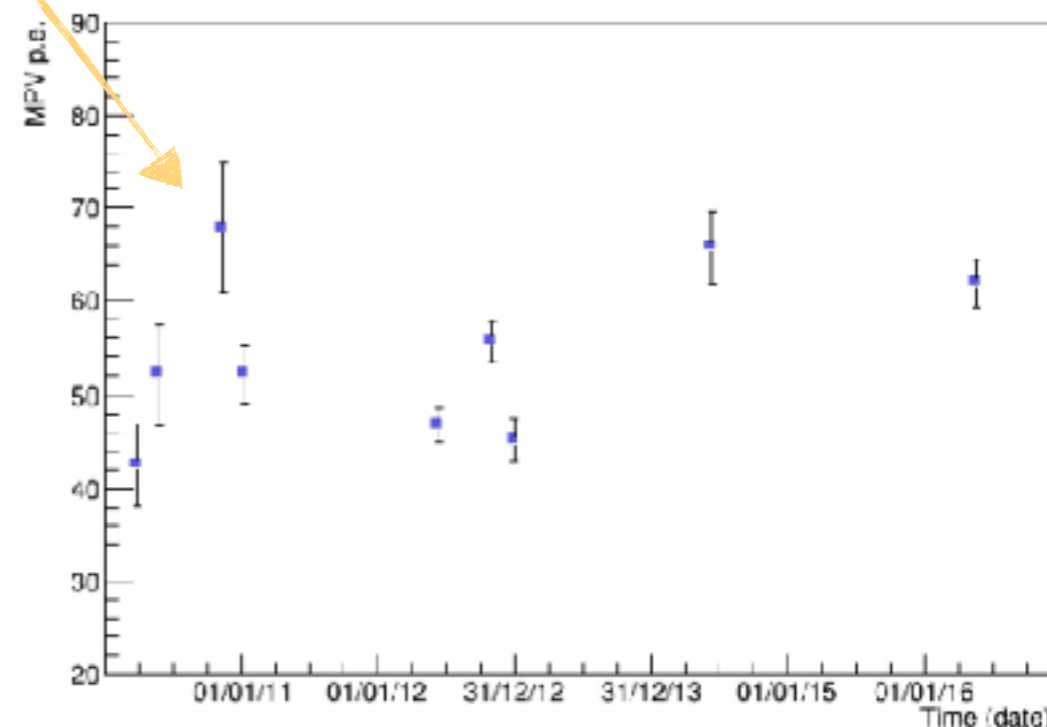
Run 1 -6 study

- Reviewing the analysis method:
- Before
  - Point corresponded of the fixed time bin → bad fits due to the low statistic → larger errors
- Now
  - Set a limit on min number of events for fit
- Needed files:
  - Beam data/MC: run6-9
  - Flat cosmics

Average LY for tracks from SMRD



Average LY for tracks from FGDs



# Other activities and near term plans

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- Preparing a note about SK open tank shifts for IFIC webpage
- La Caixa publicity campaign ( 15 oct in Barcelona)
- Stay in Liverpool 10/10 - 3/11
  - Work towards implementing reactor term in VALOR likelihood
  - FATF
  - VALOR FC studies
- Joint ageing paper: developing unified style of plots, preparing SMRD chapter with new result