8th Rencontres du Vietnam

Viet Nus 2012

Toward CP Violation In Neutrino Oscillations

Qui Nhon, Vietnam, Dec 16-21, 2012

Topics

- Implications of Lepton CP violation
- Experimental strategy
- Beam challenges
- Neutrino flux modeling
- Detectors

Qui Nhon is a coastal town in central Vietnam. It is about one hour flight from Ho Chi Minh City and one and a half hour from Hanoi. Qui Nhon has had a university for more than 50 years with 30 000 students with majors in science. The origins of the town stretch back to the 11th century Cham civilization, whose vestiges can be visited. The region is rich in historical remains.The present town was officially founded over 100 years ago.

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The Workshop

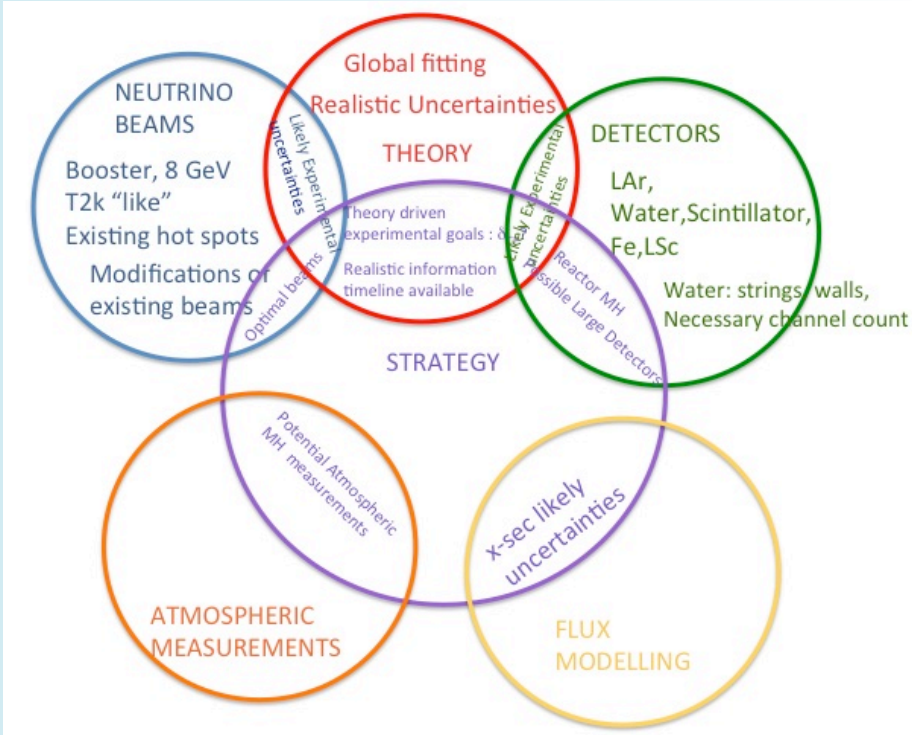
- It's a WORK shop!
- Everyone involved has a role
- We have 5 working groups
  - Detectors (Existing, New and Planned)
  - Beam and Flux (limitations of technology, possible modificatons)
  - Global Fits (each new neutrino interaction counts)
  - Theory (how big does δ_{CP} have to be to be interesting?)
  - Strategy (how well can we measure δ_{CP} this decade)
- There is a deal of interdependence, subgroups will work in pairs for the duration, except for some plenary sessions
- If you are interested in Plenary Sessions:
  - www.hep.ucl.ac.uk/~jthomas/Agenda.html

Workshop Goals

- 9 months ago, reactor experiments confirmed large θ_{13}
- Until then, all future experiments were being designed to reach smaller and smaller values of θ_{13}
- The challenge has changed: Mass Hierarchy and CP violation are now the new goals for the field
- This workshop has been set up to try to find the best strategy for measuring δ_{CP} in the next decade

Workshop Outcomes

- Intention is to write up the findings for publication on the arXiv : intention is to impact world planning
- It should also act as a seed for certain areas of future study
- Hopefully, the strategy will encourage collaborations and new endeavors where appropriate



- If this workshop is successful (and enjoyable!), we hope to repeat it every 2 years
- It could also act as an example for other "niche topic" workshops