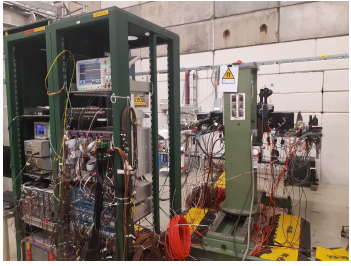
Group Meeting

Mathieu Ferey

19/12/2024

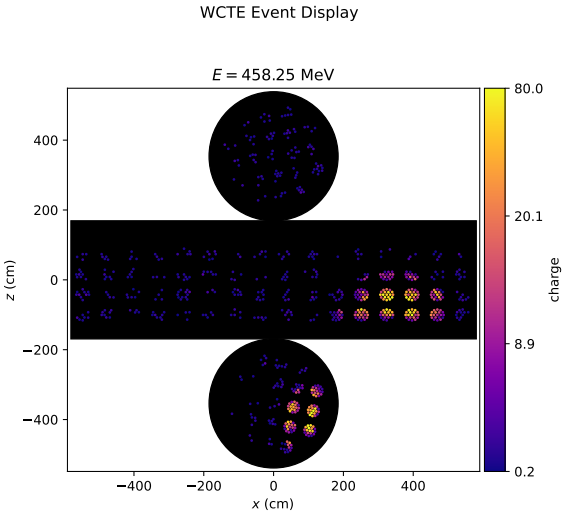
Martine va au CERN



Event Reconstruction

WCTE (Water Cherenkov Test Experiment):

- demonstrator for HK and IWCD technologies
- measurements of Cherenkov processes (charged pion hadronic scattering, secondary neutron production...)



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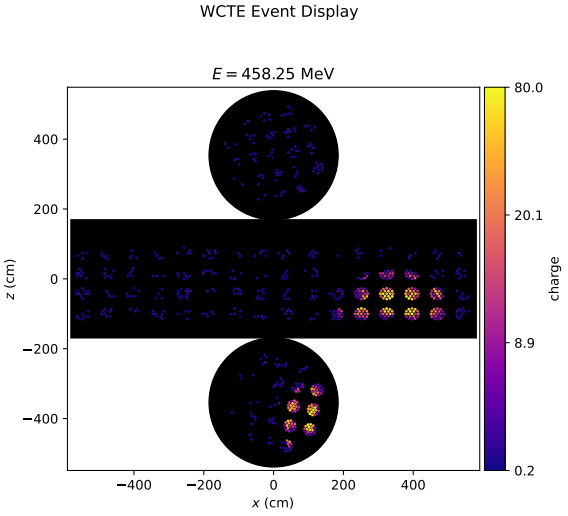
Validate new ML software, compare with Anna's results.



Oscillation analysis

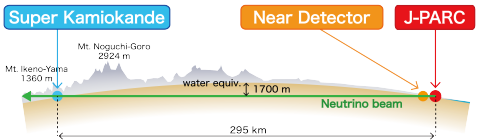
Mass ordering and δ_{CP} are still unmeasured...

Accelerator Neutrinos

- Good constrains on neutrino interaction xsec thanks to ND280
- Degeneracy between mass ordering and CPV

Atmospheric Neutrinos

- Good sensitivity to mass ordering thanks to matter effects on long baselines
- No sensitivity to δ_{CP}



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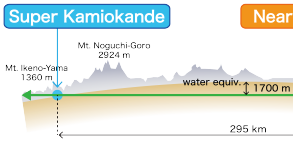

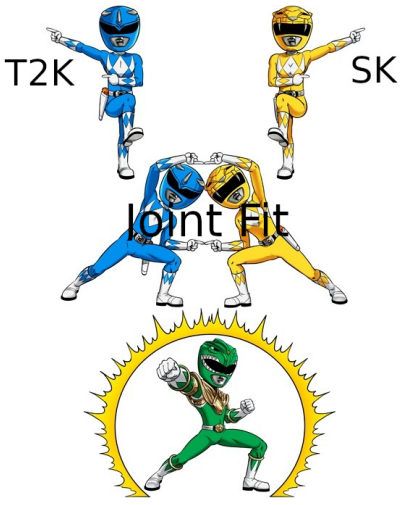

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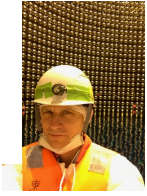

Oscillation analysis

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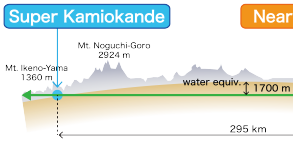

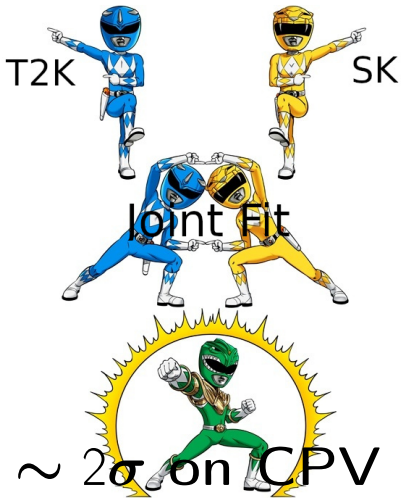

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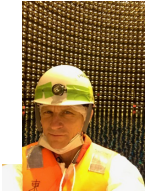

The next joint-fit

1. Sensitivity studies on to get acquainted with the detector $\rightarrow$ P-theta (<3 Denis)
2. Investigate the CC1π low-momentum excess $\rightarrow$ fiTQun :(
3. Add most recent phases of SK
4. Inputs from ML reconstruction ?