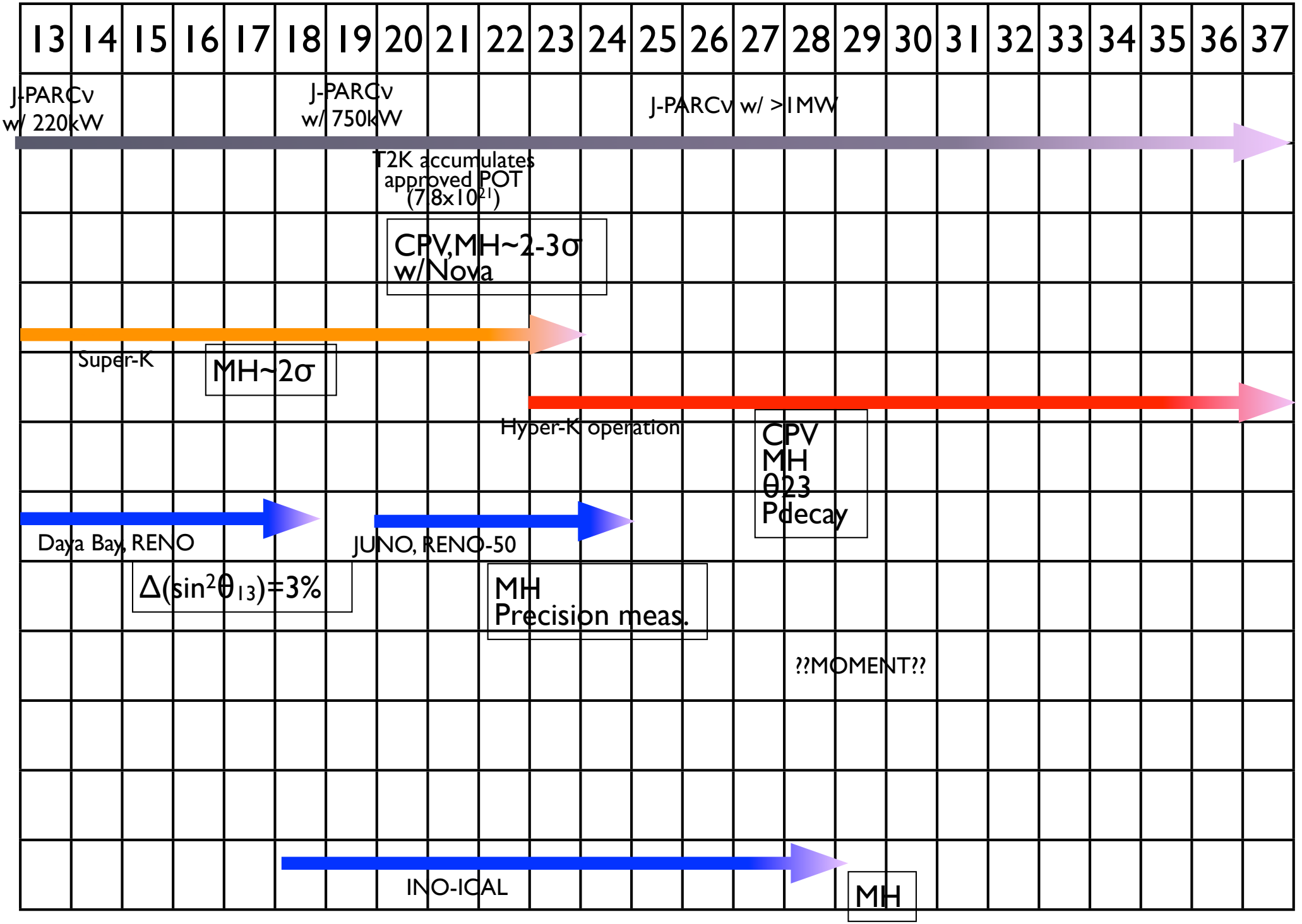
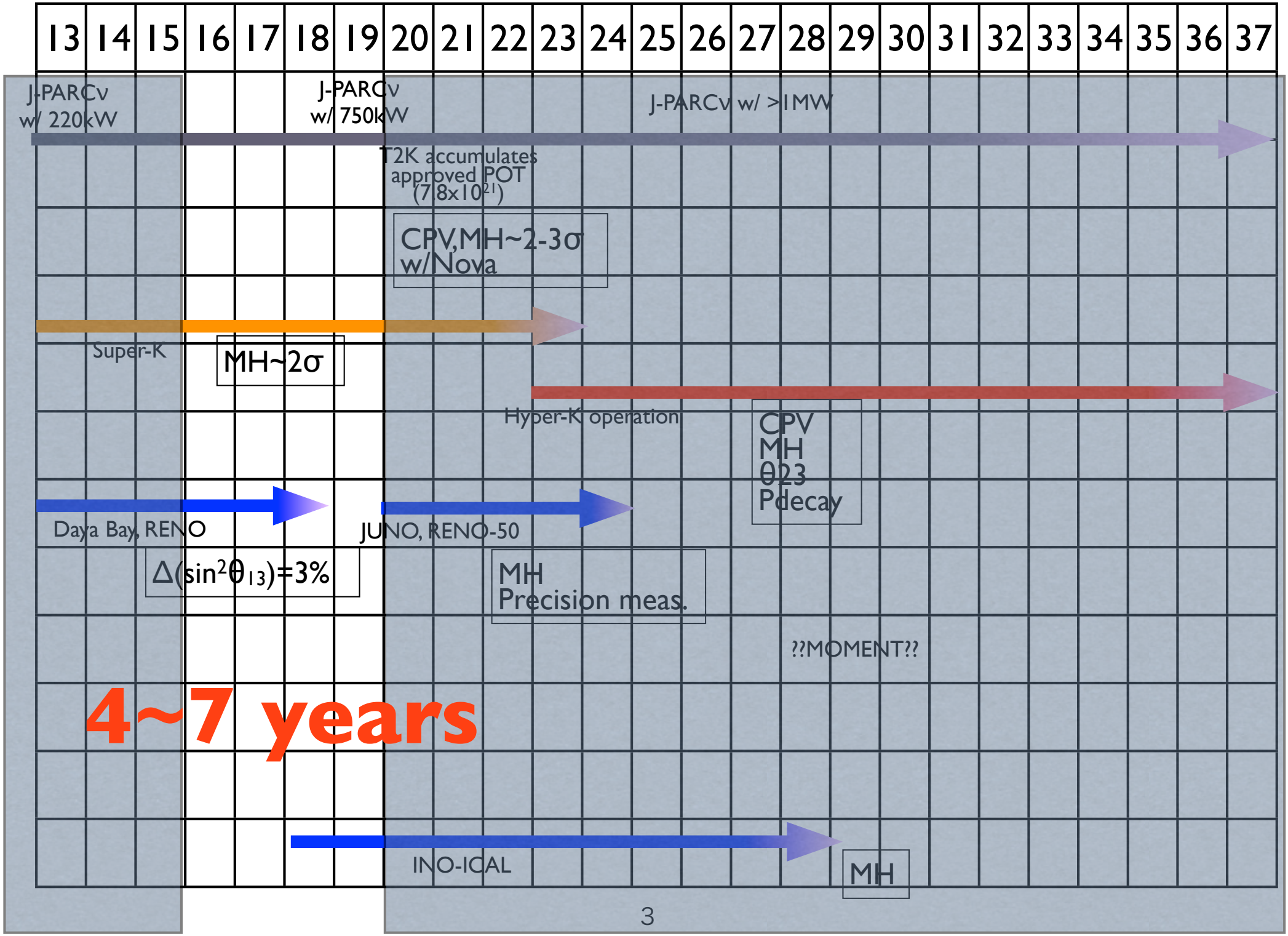
Objectives

4. Through consultation with the neutrino-physics community, funding agency and laboratory management and other stakeholders, the Panel will carry out a review of:
   (a) The present status of the neutrino-oscillation programme and the developments that can be expected on a 4–7-year timescale;
   (b) The opportunities for discovery for which the accelerator-based neutrino-oscillation programme must be optimised on the 7–25-year timescale; and
   (c) The measurements and R&D (including software development) that are required for the near-term (4–7-year) and medium- to long-term (7–25-year) programmes to fulfil their potential.

Modus operandi

7. The Panel will meet as required by teleconference and exploit the various international workshops and conferences, on a "best-efforts basis", to meet face-to-face at least once per year.
8. In its first year, the Panel will organise a "mini-workshop" in each region to communicate that the Panel exists, to collect input from the community and to receive reports from the regional planning activities. The Panel will write a short report summarising its findings.
9. In its second year, the Panel will continue its community consultation and engage with Laboratory Directors and Funding Agency representatives to refine its understanding of the factors that influence the development of an optimal scenario or optimal scenarios. A mini-workshop (or series of mini-workshops) will be organised to present progress, solicit input and discuss the emerging scenario or scenarios. The Panel's findings and the emerging scenario or scenarios will be outlined in an interim report.
10. In its third year, the panel will continue its community and stakeholder consultation while preparing its final report. The contents of the report will be circulated and mini-workshops will be organised to present the draft findings and to solicit input from the communities and stakeholders.


13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
J-PARCν w/ 220kW
J-PARCν w/ 750kW
J-PARCν w/ >1MW
T2K accumulates approved POT (7.8x10^21)
CPV,MH~2-3σ w/Nova
Super-K
MH~2σ
Hyper-K operation
CPV
MH
θ23
Pdecay
Daya Bay, RENO
JUNO, RENO-50
Δ(sin²θ13)=3%
MH
Precision meas.
??MOMENT??
INO-ICAL
MH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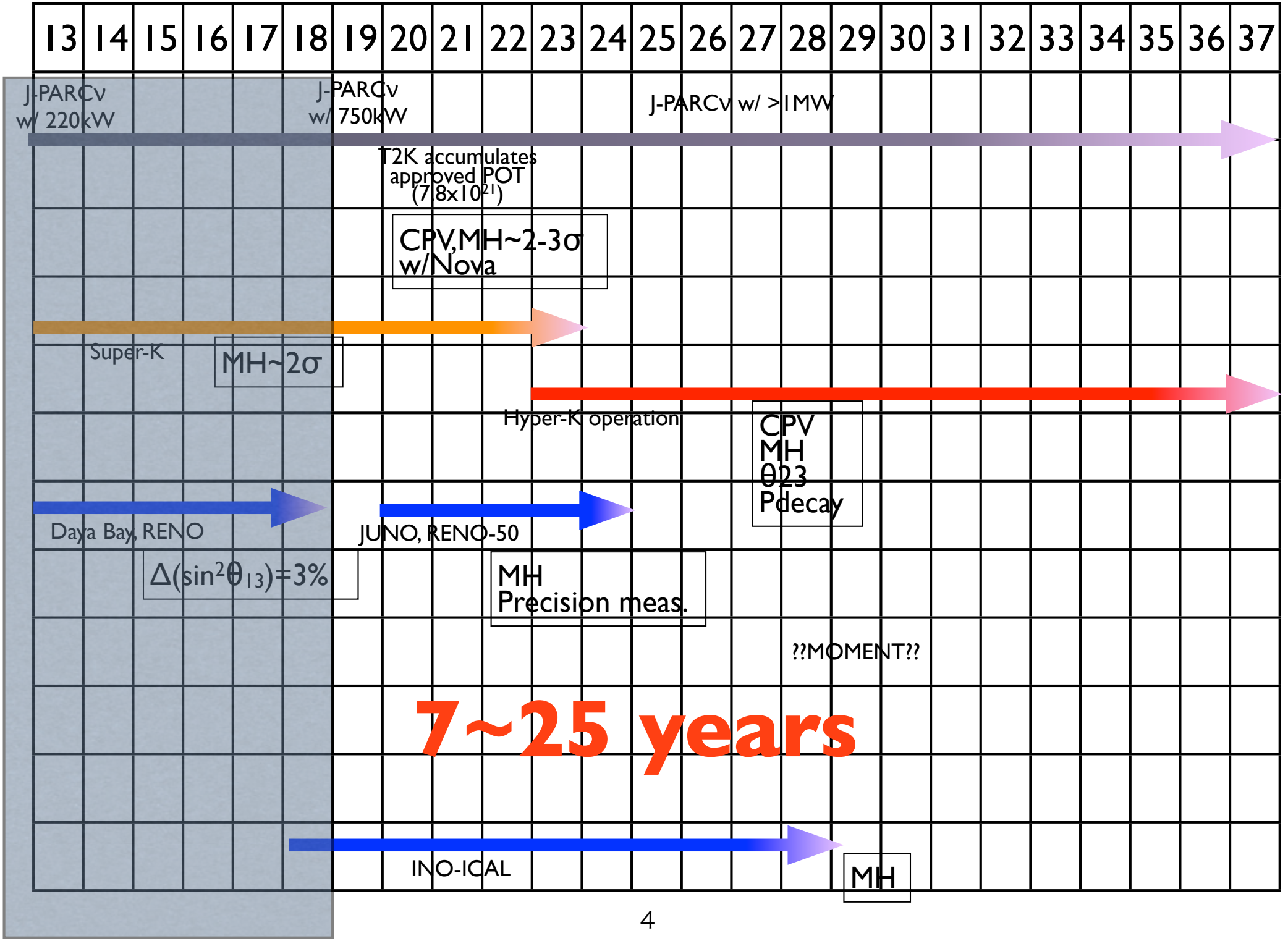
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Δ(sin²2θ13)=3%
MH
Precision meas.
??MOMENT??
7~25 years
INO-ICAL
MH

(a) The present status of the neutrino-oscillation programme and the developments that can be expected on a 4–7-year timescale;

- T2K CPV~2σ, $\delta(\sin^2\theta_{23})/\sin^2\theta_{23}$~9%
- Super-K MH~2σ and θ_{23} octant at 2σ level
- RENO, Daya Bay $\delta(\sin^2\theta_{13})/\sin^2\theta_{13}$~3%
- results from sterile ν experiments proposed in KamLAND and J-PARC, Korea
- ββ, DM search experiments

(b) The opportunities for discovery for which the accelerator-based neutrino-oscillation programme must be optimised on the 7–25-year timescale

- Hyper-K + JPARCν (~300km, ~0.6GeV)
  - >3σ CPV, MH, θ_{23} octant (w/ help of atmν)
  - proton decays, supernova νs

- 3σ MH determination, high-precision measurement of Δm^2_{31}, θ_{12}, Δm^2_{21} (<1% by JUNO, RENO-50)
- 3σ MH, θ_{23} by ICAL
- Degeneracy of CPδ and MH in Hyper-K might be solved by reactor ν/atm ν experiments

(c) The measurements and R&D (including software development) that are required for the near-term (4–7-year) and medium- to long-term (7–25-year) programmes to fulfil their potential.

- J-PARC/beamline upgrade for 750kW and multi-MW, new near detectors, and Hyper-K detector
- R&D of Liq. scintillator
- photo-sensors

- R&D for advanced technology (Liq.Ar)
- R&D for Gd loaded water CH.

- MOMENT: R&D for 15MW proton SC linac, high power targetry, muon transportation, far detector

- hadron production measurements, ν cross section measurements are important