# Goals of the meeting

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Open Hyper-K meeting, August-22-2012

# <u>Hyper-Kamiokande</u> Quest for leptonic CP violation Proton Decay searches Astroparticle physics



#### x25 Larger v Target & Proton Decay Source

~0.6GeV vµ 295km baseline

Super-k

#### higher intensity V by upgraded J-PARC

OCODE GOOGLE

J-PARC

Hyper-k

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# Main Points of Hyper-K

- Water Cherenkov detector technology
  - Well-proven technology, with excellent performance
  - Scalability (can make big one)
- Rich physics topics (discovery potentials)
  - $\bullet$  Discovery potential of CPV,  $\nu$  mass hierarchy, precise measurements of  $\nu$  parameters
  - World best sensitivity for nucleon decay searches, direct test of grand unification picture
  - $\bullet$  Supernova  $\vee$  observatory for astronomy and particle physics
  - Other astronomical objects
- Good reason to do it in Japan
  - Existing accelerator J-PARC and its upgrade plan
  - Long, good experience of detector construction, operation, analyses (Super-K)

## Meeting Goals

- Discuss physics potentials of Hyper-K, the design of the detector, and necessary study items including:
  - cavern, water tank, water purification & circulation system, photo-sensors, DAQ system, calibration system, and software development
  - learn about detector technology at SK and others (LBNE, LAGUNA, Daya Bay, Borexino etc)
  - learn about J-PARC status and prospect
- You are encouraged to present your interests in topics related to Hyper-K and discuss future contributions to the project.
- Start forming an international Hyper-K working group, a seed for a formal future Hyper-K collaboration.

#### Hyper-K Working Group Organization



# **Parallel Discussion Session** (tomorrow evening) Plan to have separated discussions tomorrow evening

- -
  - Cavity and Tanks contact person: Shiozawa
  - Water System : Sekiya and Mark
  - Photo-sensor : Nakayama, Nishimura
  - DAQ : Hayato
  - Software : Miura
  - Calibration : Hide Tanaka
- Please sign up today to participate one of the sessions
- Each sub-WG is supposed to
  - identify interested members, and nominate conveners if possible
  - discuss plan/milestones of the sub-working-group

# Discussion Session for Physics (tomorrow evening)

- at Lecture Hall
- Accelerator Physics
- Atmospheric V, Nucleon Decays
- Astroparticle physics (SN, solarv, etc)
- identify interested members, and nominate conveners if possible
- discuss plan/milestones of the sub-working-group

# Final Discussion Session (tomorrow evening)

- at Lecture Hall
- Each contact persons or convener candidates are expected to make a report on the parallel discussions
  - Cavity and Tanks contact person: Shiozawa
  - Water System : Sekiya and Mark
  - Photo-sensor : Nakayama, Nishimura
  - DAQ : Hayato
  - Software : Miura
  - Calibration : Tanaka
  - Physics :Yokoyama
- next meeting date?

## What's next

- After this startup meeting
  - start collaborative works in the framework of new organization (sub-WGs)
  - write document to set plan/milestone for each sub-WGs/subjects.
- Let's have a followup meeting
  - candidate days:
    - December 3,4
    - December 10, 11
    - January 13, 14
  - put your availability by tomorrow noon at
    - <u>http://doodle.com/yvpb45e5wqmdgmgx</u>

## Supplements



assuming budget being approved from JPY2016