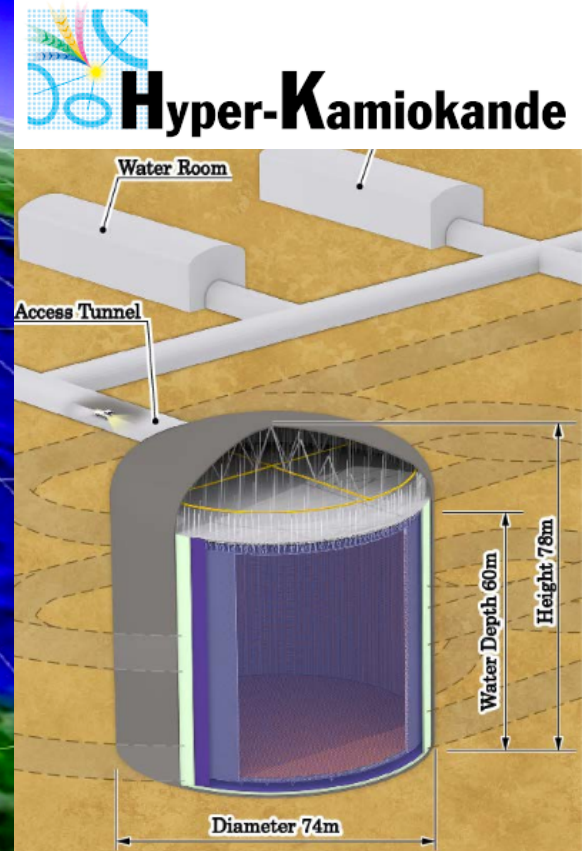
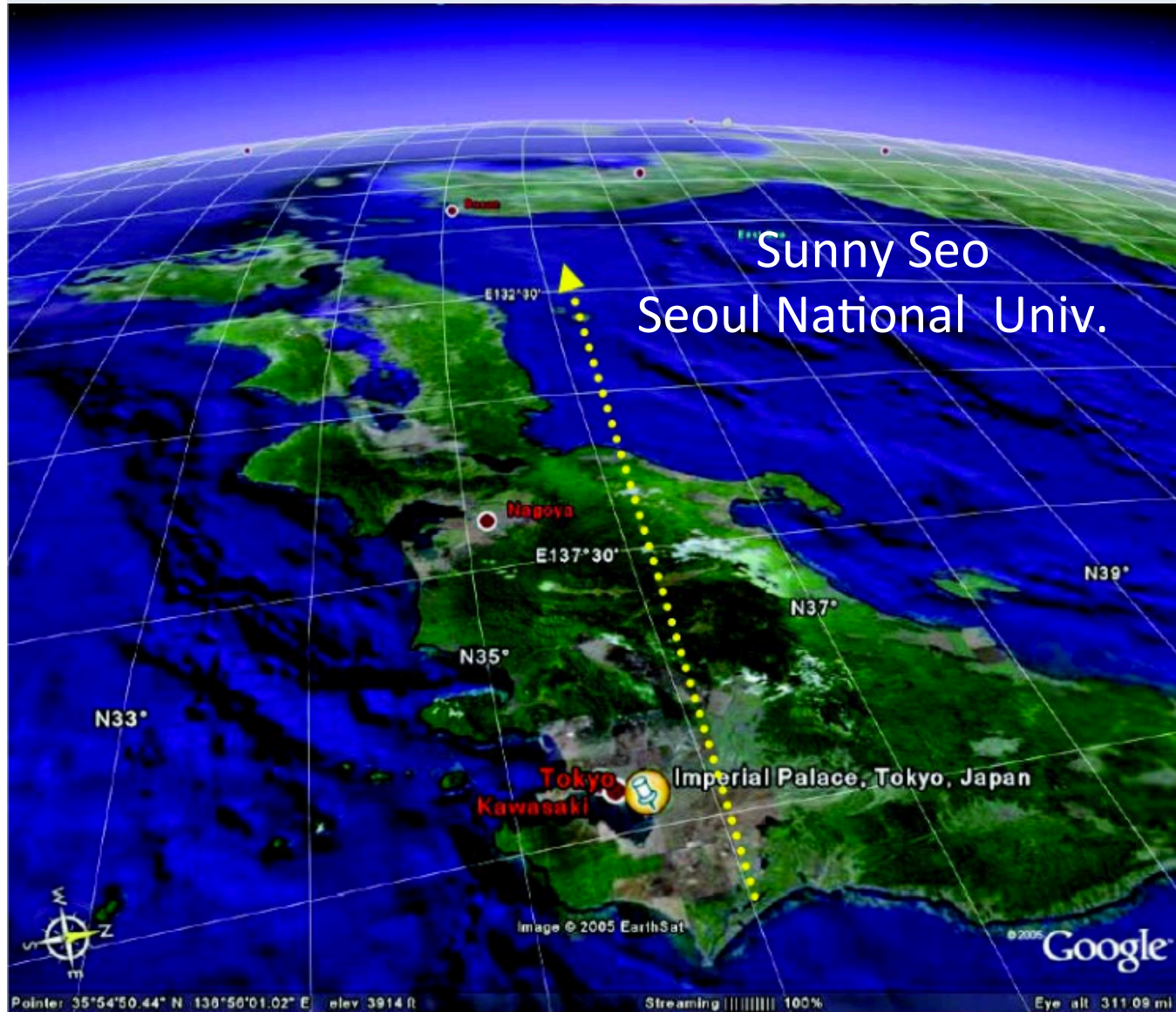


2nd Tank in Korea (T2HKK): Status & Plan



4th Hyper-K Meeting
Feb. 16th 2017
IPMU

T2HKK Current Activities

- Sensitivity studies using VALOR – T. Dealtry (Edinburgh)
→ by next Hyper-K meeting
- Systematics impact studies -- M. Hartz (IPMU) & Students
(S.Y. Kim, S.H. Jeon, J.H. Kim),
-- M. Scott (TRIUMF)
- Improving systematics -- Phil Litchfield (Imperial College)

T2HKK Current Activities

- Sensitivity study with CC1pi selection
 - T. Towstego/H. Tanaka (Toronto U.)
- Sensitivity study with LBL+Atmospheric data
 - M. Jiang (Kyoto U.)
 - need to make the plots official
- Low energy physics:
 - muon flux, Solar/SN → . Shimizu, T. Yano, Y. Koshio → ??
 - DM/ ν geophysics → C. Rott (SKKU)
- Flux production at the Korean site -- S. King (QMUL), M. Hartz

T2HKK Current Activities from non-HK members

- Non-standard ν interaction studies:
 - Fukasawa/M. Ghosh/O. Yasuda (Tokyo Metro. U.)
arXiv:1611.06141
 - J. Liao/D. Marfatia (Hawaii U.) & K. Whisnant (ISU)
arXiv:1612.01443
- Reactor neutrino oscillation study:
 - S. Petcov (Trieste/IPMU)

T2HKK plan (I)

■ Version 1 White Paper:

-- arXiv:1611.06118 → PTEP by March ~ April

Updates:

- (1) improve abstract slightly → by next online meeting
- (2) Low energy physics: more quantitative description
→ within one month time scale
- (3) Systematic impact studies → one month is enough ?
- (4) LBL + Atms. Combined results (?)
-- include this version or next V2 version ?

**** Need paper committee review**

→ Francesca will make a paper committee.

T2HKK plan (II)

■ Version 2 White Paper:

- Sensitivity studies with VALOR
- Sensitivity studies including CC1pi events
- More full quantitative description on low energy physics

** Goal is to release V2 white paper to arXiv by the end of 2017.
By this time we will know Japan's approval of the 1st tank.
And thus it is a good time to release our V2 white paper.

-- The studies need to be finished by next Hyper-K meeting in Sept.
So that we have time to prepare write-up.

T2HKK plan (II)

- **Sensitivity studies with 20% photo-coverage**
→ we request new MC data from software group.
- **Other possibility studies:**
 - Sensitivity studies with Gd loading
 - Sensitivity studies with (water + LS) option

T2HKK online meeting

- Currently bi-weekly: every other Friday at 11 pm JST/KST
- We may want to change the frequency ?
- How about time ?