

Closing remark

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Tuesday



Acknowledgement

<https://www.yukawa.kyoto-u.ac.jp/assets/contents/seminar/archive/2008/yitp-t-08-05/acknowledge.html>

- Organizing the workshops is one of the main activities of the Yukawa Institute. Sample phrases are as follows:
- The authors thank the Yukawa Institute for Theoretical Physics at Kyoto University. Discussions during **the YITP workshop YITP-W-25-04** on "The Frontier of Particle Physics. Exploring Muons, Quantum Science and the Cosmos" were useful to complete this work.
- The authors thank the Yukawa Institute for Theoretical Physics at Kyoto University, where this work was initiated [completed] during the YITP workshop YITP-W-25-04 on "The Frontier of Particle Physics. Exploring Muons, Quantum Science and the Cosmos".

Had good time?

- Thanks for coming and contributions!
- Hope you enjoyed the workshop, food, and city.
- Met new people and old friends.



- But let us know what you liked/things to be improved. Useful inputs for future workshops (and for report)..

International YITP workshop since awhile ago

- YITP is a shared facility. You can apply for your workshop or short/long-term visit [->Etsuko, Ryuichiro].
- Organizers had a similar workshop at Taipei [US, Japan, Taiwan]. Smaller size and more regional (but better treats).
- Many workshops in Japan are in Tokyo area.
At YITP, particle physics workshop in Japanese (PPP) has been organized. Last international one 10 yr ago, so we applied! (didn't know Ryuichiro would be local)
- **This workshop: ~50 ppl including postdocs, students. Speakers from Europe, US, Canada, India, Korea.**

Good physics with cutting edge techniques

- We learned a lot from each other. Questions from the mixed audience helped the understanding of new topics. **Many novel attempts. Spontaneous discussions!**
- Neutrinos from high energy to high precision, dark matter physics, cosmology, GW detector, muons, colliders, ML, many axions, many qubits... Many “cool” techniques like NS, entanglement at LHC

Thematic Cluster	Included Talks (Titles)
Neutrino Physics & Rare Processes	High-Energy Cosmic Neutrinos (Murase); Neutrino Wave Packets (S. Li); Neutrinos & Nucleon Decay in Japan (Wendell); Neutrino Self-Interactions (Y. Zhang); Sterile ν DM & Flavor Asymmetry (Akita); Nucleon Decay Chirality (Takahashi)
Muons & Colliders	J-PARC Muon Experiments (Mibe); Theory at Muon Colliders (Cesarotti); Top Yukawa at Muon Collider (Zheng); Quantum Tops & Entanglement (Afik);
Dark Matter & Light Particle Searches	DarQ Qubit Experiments (Nitta); NV-Center DM Search (Chigusa); Quantum Sensing for DM (Ito); Axion Exp'ts & Majoron (Liang); Quantum Circuit DM Enhancement (Sichanugrist); Shift-Current Axion Detection (Osaki); Undulator ALP Search (W. Yin)
Cosmology & Astrophysical Probes	EMD Cosmology (Chowdhury); High-f Gravitational Waves (D'Agnolo); Sommerfeld & Unitarity (Sato); Goldstone Theorem in Cosmology (Urakawa); Quantum Computing & Inflation (Miyamoto); Neutron Star Cooling/Heating (Nagata)
AI in HEP	Transformers for HEP ML (Nojiri); Galactic DM via NN (S.H. Lim); Higgs CP via Graph NN (Hammad)



- “All the quantum sensors can be an axion DM detector”

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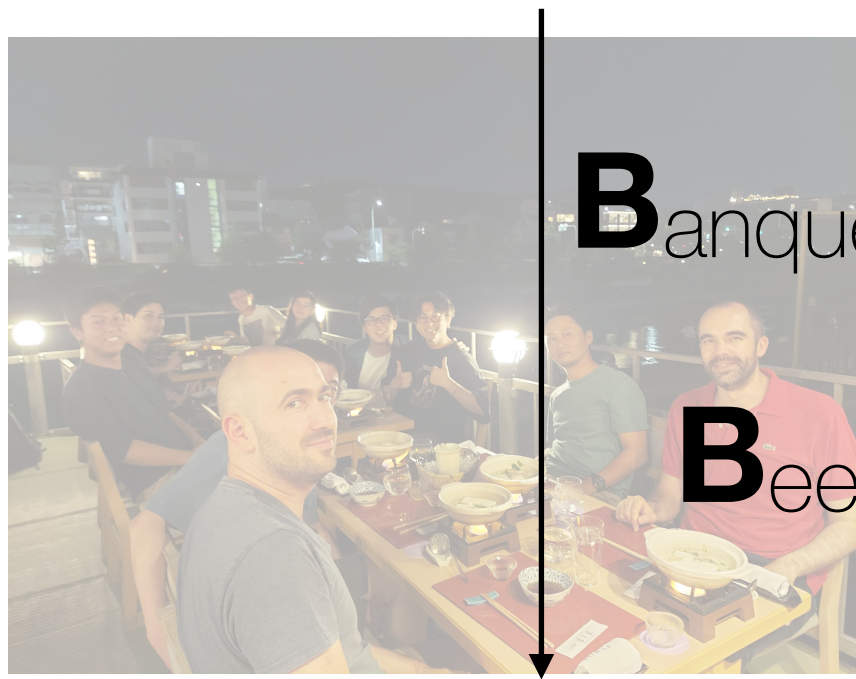
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Exciting idea

$|0\rangle$



Banquet

Beer



Bbq




anko



Excursion

t=5 days

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Readout?

Next workshop?

- This is NOT a repeating workshop, but we could have another one in the future [need to apply].
- Ideas welcome. Broad topics like this time? More specific ones?
 - Enjoy the rest of stay in Kyoto/Japan.



Many Thanks. Have a safe trip to home!