



Outreach activities for KEK 50th Anniversary



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High Energy Accelerator Research Organization (KEK), Ibaraki, Japan

July 9th
Education & Outreach Session
ICHEP2022, Bologna

KEK 50th Anniversary in 2021



- ❑ KEK was founded in 1971
- ❑ 2021 was 50th anniversary year
- ❑ Due to the novel coronavirus pandemic, it has been very difficult to hold in-person outreach projects as we have envisioned
- ❑ We overcame this by putting some projects online

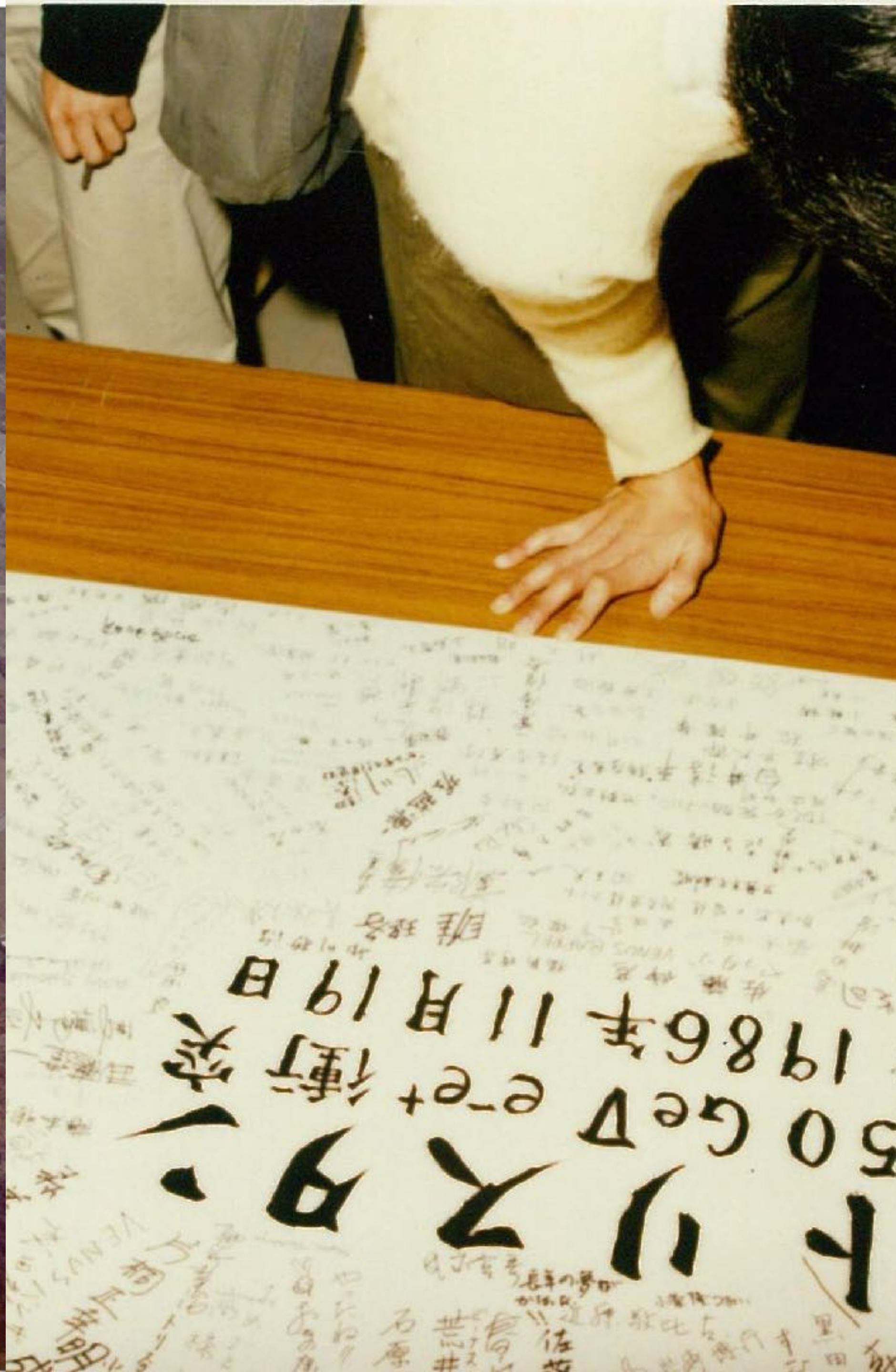
Contents



- ❑ I would like to report on some of the innovations and difficulties we faced in bringing our public outreach online, as well as the results of 50th anniversary symposium which was held as hybrid format
- ❑ I think we did our best, although it was not a great success as a whole...
- ❑ I'd like to hear your comments and experiences what we should have done.

Brief history of KEK

- KEK is based on the Institute for Nuclear Study (INS), which was an affiliated research institute of the University of Tokyo
- Established in 1971 as the first "Inter-University Research Institute"
- For half a century, we have worked together with university researchers to develop a wide range of sciences, from particle physics to material structure science, using accelerators



《Side Story》 Origin of the name "KEK"



▶ Some of you might have wondered why it is called "KEK"

□ In 1971

▶ 【English】 National Laboratory for High Energy Physics

▶ 【Kanji】 高エネルギー物理学研究所

▶ 【Romaji】 Kou Enerugi Butsurigaku Kenkyu-sho

□ Since 2004 (according to changes in laws and systems)

▶ 【English】 High Energy Accelerator Research Organization

▶ 【Kanji】 高エネルギー加速器研究機構

▶ 【Romaji】 Kou Enerugi Kasokuki Kenkyu Kikou

5 Milestone Researches in Web Manga



- Kasoku Kids (カソクキッズ)
 - ▶ accelerator kids
- 5 Major Topics
 - ▶ Photon Factory
 - ▶ Cancer Studies
 - ▶ B Factory
 - ▶ Neutrino Experiment
 - ▶ Superconducting Magnet



KEK50th Special Edition

Available at <https://www2.kek.jp/kids/comic/>

Booklets printed ... but could not have a chance distribute them in-person

History of accelerator science in Japan



□ Published from

▶ 集英社新書 (SHUEISHA Inc.)

□ Title

▶ "Why is the universe made of matter ? -
Mysteries of particles and challenge of
KEK -"

□ Edited by

▶ Makoto Kobayashi

Targeted to novices



Series of KEK 50th Related Events



- ❑ Kick-off Ceremony (Apr. 2021)
- ❑ Public Lectures (Jun. / Jul. / Oct.)
- ❑ Openhouse (Sep.)
- ❑ Memorial Ceremony (Nov.)
- ❑ Memorial Symposium (Nov.)
- ❑ KEK Concert (few times a year) → Cancelled
- ❑ Echoes of Science and Music (every Nov.) → Cancelled
- ❑ KEK Science Cafe (every Fri.) → Cancelled

KEK50th Kick-off Ceremony



- Apr. 16, 2021
- Kick-off ceremony
 - ▶ invited the mayor of Tsukuba
 - ▶ YouTube Live
- Tree-planting ceremony
 - ▶ Newton's apple tree
 - ▶ Mendel's grape tree



KEK50th Public Lectures



- 4 Lectures (in Japanese)
 - ▶ On the day : Zoom webinar
 - ▶ Later : Edited archives on YouTube
- Jun. 26 : The world is made of particles
- Jul. 03 : Evolution of the Universe and nuclear physics
- Oct. 09 : High-tech microscope to explore the mysteries of life
- Oct. 16 : 50 years of KEK accelerators

The poster for the KEK 50th Public Lecture Series features a dark background with green mathematical symbols and particle tracks. It is divided into two main sections, each with a title, a speaker's photo, and lecture details.

KEK公開講座 (KEK Public Lecture)

参加申し込み受付中 (Application for participation is ongoing)
〆切 6月25日 (金)

世界は『粒』からできている
—世界の素粒子物理学の歩みとKEKの貢献—

宇宙の進化と原子核
—原子核研究の歴史とKEKの貢献—

第1回
6月26日 (土)
高崎史彦さん
KEK名誉教授

第2回
7月3日 (土)
永宮正治さん
KEK名誉教授

KEK公開講座 (KEK Public Lecture)

参加申し込み受付中 (Application for participation is ongoing)
〆切 10月8日 (金)

生命の謎を探る
"ハイテク"な顕微鏡たち

KEK加速器50年の歩み
—研究分野と加速器の共進化—

第3回
10月9日 (土)
千田俊哉さん
KEK物構研教授

第4回
10月16日 (土)
鎌田進さん
KEK名誉教授

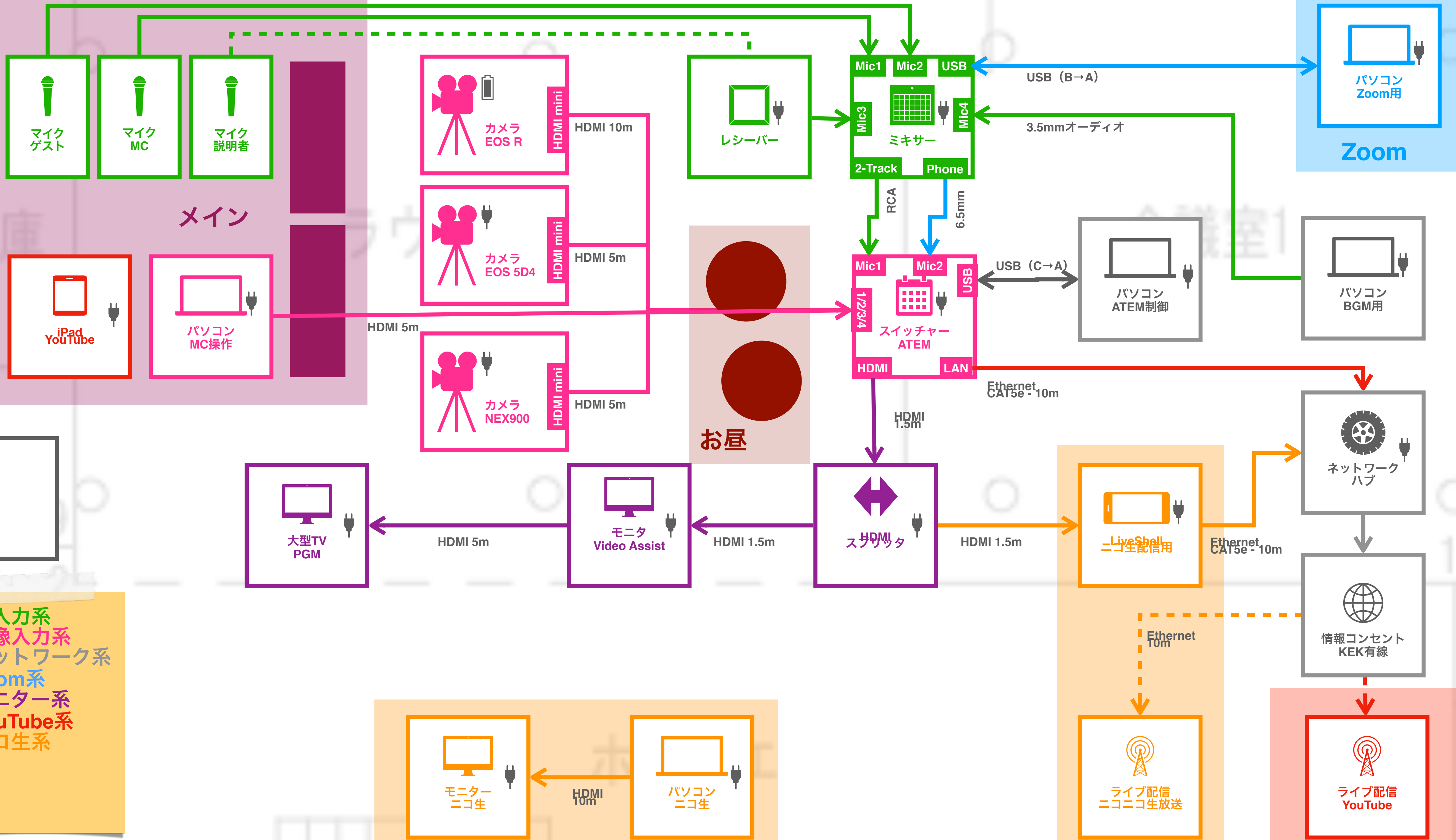
KEK50th Openhouse 2021



- Sep 04 & 05, 2021
 - ▶ YouTube Live
 - + niconico (ニコニコ生放送)
 - ▶ Total visitors : ~33k
- cf) : previous (=in-person)
 - ▶ 3000 - 5000 visitors / day

Reached 10x more people than usual





KEK50th Memorial Ceremony



□ Nov. 08, 2021

▶ Hitotsubashi Hall (in Tokyo)

▶ Hybrid

■ in-person : 150

■ YouTube Live

□ Invited relevant people

□ Streaming was outsourced





高エネルギー加速器研究機構

加速器だから見える世界。

50周年記念式典



KEK50th Memorial Symposium



□ Nov. 09 & 10, 2021

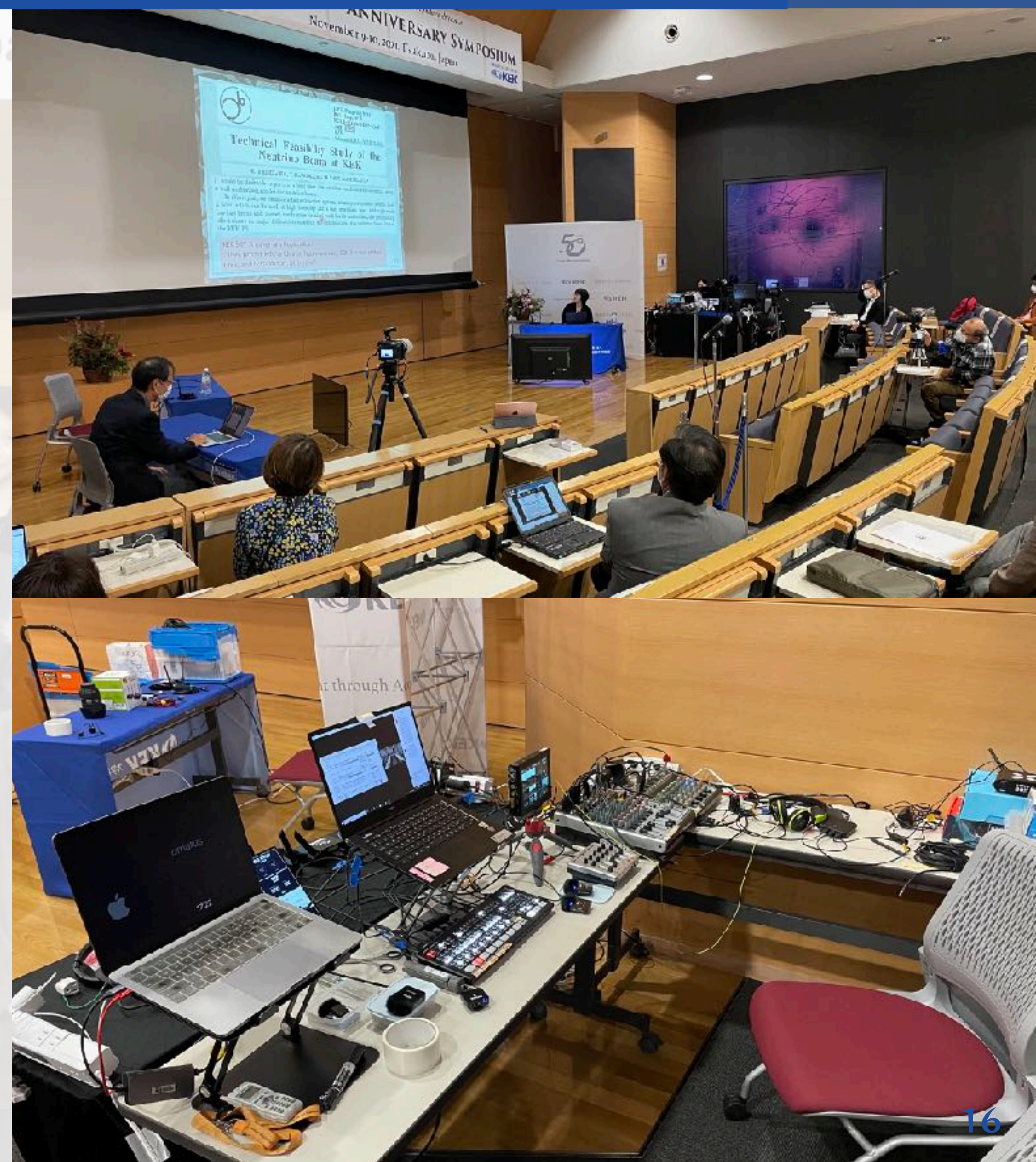
▶ Kobayashi Hall (KEK)

▶ Hybrid

■ in-person : ~50/day

■ Zoom webinar : 300~400/day

□ Prepared and operated streaming system all by ourselves






Past successes, present endeavors, future dreams

KEK 50TH ANNIVERSARY SYMPOSIUM

November 9-10, 2021, Tsukuba, Japan

加速器だから見える世界。
 **KEK**



Conclusion & Discussion



- KEK marked its 50 years anniversary in 2021
 - ▶ To be honest, it was very difficult campaign
- We overcame this by putting some projects online
- Glad to have hosted memorial ceremony and symposium as a hybrid format event
- We did our best, but it was not a great success
 - ▶ I'd like to hear your comments and experiences on what we should have done

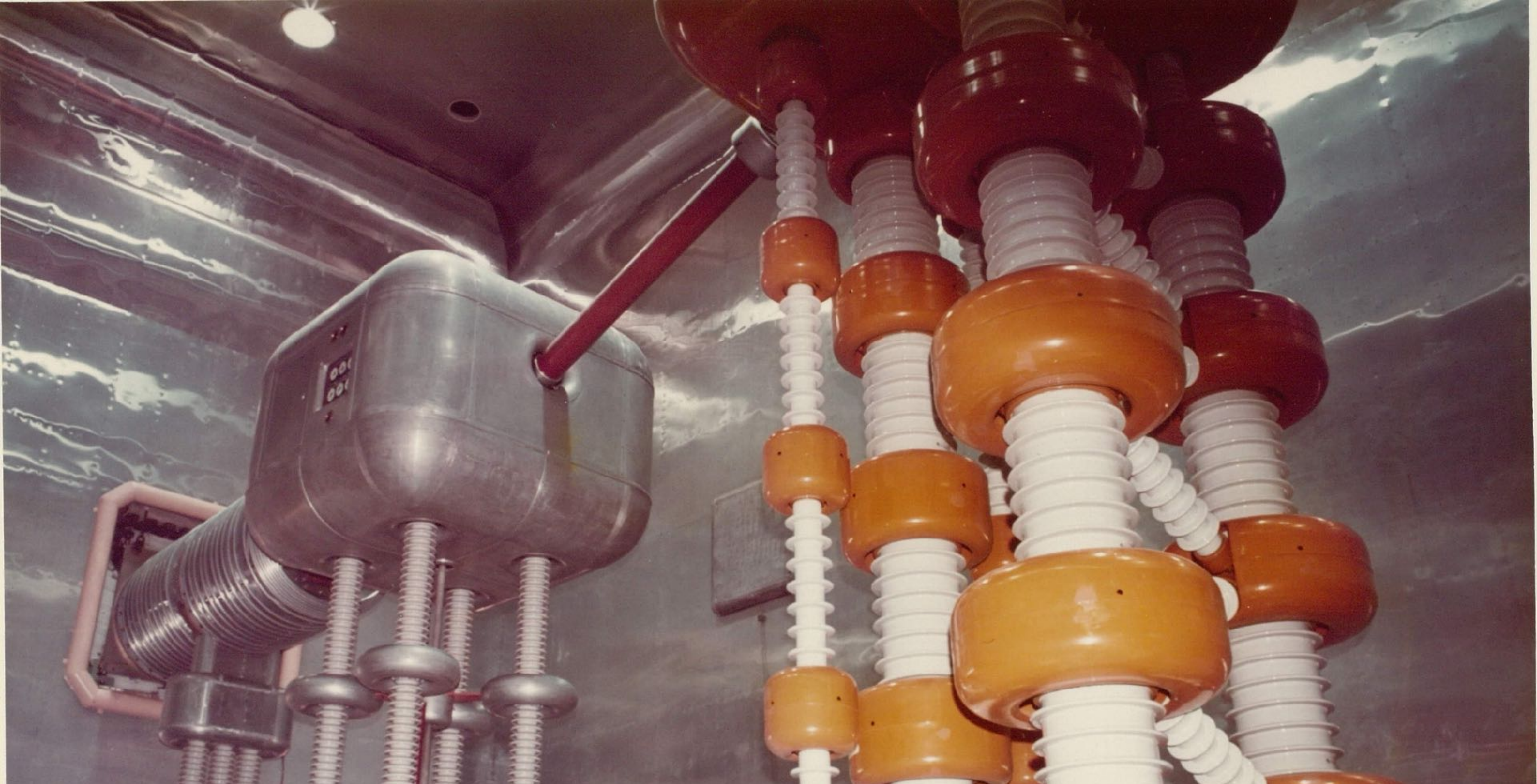


Look back KEK in photos





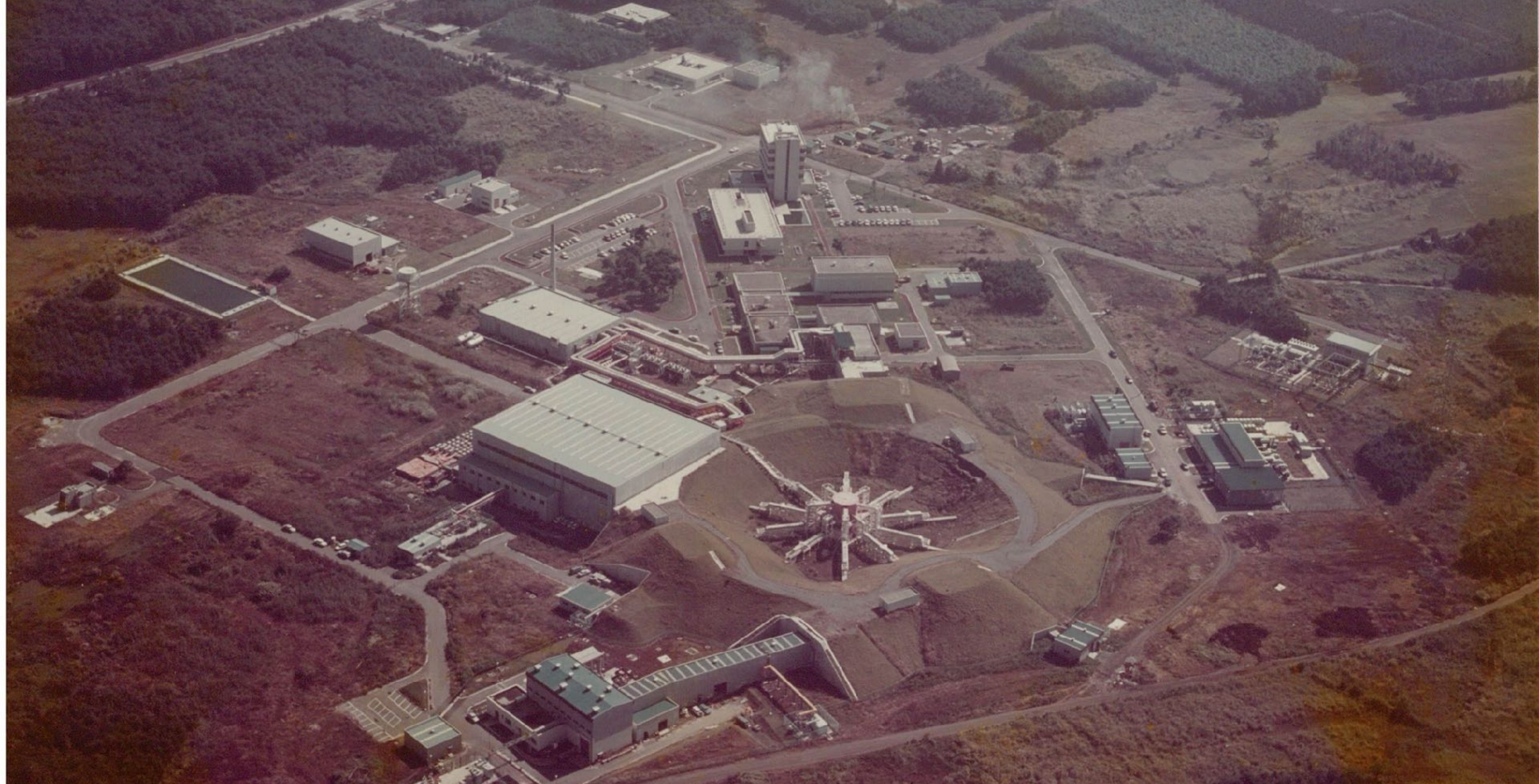
Site visit by committee members (1971)



750keV Cockcroft-Walton accelerator



Celebrates 8GeV proton acceleration (1975)



KEK Overview (1975)

高エネルギー物理学研究所陽子加速器完成記念式



Ceremony for the completion of proton synchrotron (1976)



TRISTAN achieved 50GeV collision (1986)

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