

European ILC community meeting



📅 Wednesday 24 Aug 2022, 10:00 → 12:00 Europe/Zurich

Description <https://desy.zoom.us/j/99341718959>
Meeting ID: 993 4171 8959
Passcode: 190525

10:00 → 10:20 **Welcome**

🕒 20m



- Including impressions from Snowmass

Speaker: Steinar Stapnes (CERN)

10:25 → 10:45 **International discussions and IDT news**

🕒 20m



Speaker: Tatsuya Nakada (EPFL - Ecole Polytechnique Federale Lausanne (CH))

10:50 → 11:20 **European planning for priority WPs**

🕒 30m



Speaker: Steinar Stapnes (CERN)

11:20 → 11:40 **WG3, ECFA panels**

🕒 20m



WG2, WG3, Snowmass, ECFA panels and conference, Conferences

Speakers: Aidan Robson (University of Glasgow (GB)), Jenny List (Deutsches Elektronen-Synchrotron (DE))

11:40 → 11:50 **AOB and next meeting**

🕒 10m

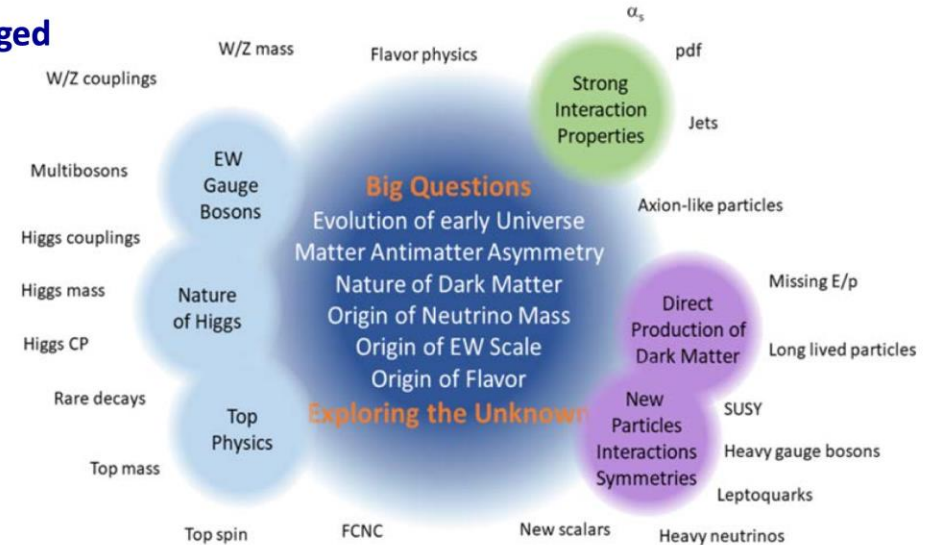


Snowmass

- Interesting compilation of accelerator options by Implementation Task force (T.Roser):
<https://indico.fnal.gov/event/22303/contributions/245261/attachments/157255/205819/2022%2007%2018%20ITF%20Snowmass%20talk.pdf> (some numbers still to be fixed – I hope).
- Summary of summaries: Energy Frontier (P.Cushman):
https://indico.fnal.gov/event/22303/contributions/246087/attachments/158149/207438/Cushman_Distillation.pdf
- Timeline from Energy Frontier talk (M.Narain):
https://indico.fnal.gov/event/22303/contributions/246084/subcontributions/8620/attachments/158144/207347/Narain_EF-LargeExperiments_CSS_July26-2022-final.pptx
- P5 next

Energy Frontier (Message)

- **Compared to Snowmass 2013 the physics landscape has significantly changed**
 - The program of measuring the Higgs boson properties is well underway at the LHC with growing precision
 - A broad range of searches have explored multiple BSM scenarios without convincing evidence of new physics
 - The HL-LHC is an approved project
- **Without a robust support for the HL-LHC and a clearly defined path towards a Higgs factory we leave critically important physics unchecked and crucial questions unanswered**
- **The EF community should be prepared to explore a broad range of BSM phenomena at the 10 TeV mass scale**



The Energy Frontier community voices a strong support for

1. HL-LHC operations and 3 ab^{-1} physics program, including auxiliary experiments
2. The fastest path towards an e^+e^- Higgs factory (linear or circular) in a global partnership
3. A vigorous R&D program for a multi-TeV collider (hadron or muon collider)

Energy Frontier

The Energy Frontier is >50% of the US HEP community, therefore the potential impact on CEF (governmental advocacy, workforce training, diversity and inclusion) are critical to the progress of HEP

The most surprising thing that emerged from Snowmass was an overwhelming sentiment to engage in hosting a future collider in the US

...and the public praising of EF by Michael Peskin for enabling a vigorous discussion on future multi-TeV colliders



July 26, 2022

Highlights and Messages from the Snowmass Summer Study.

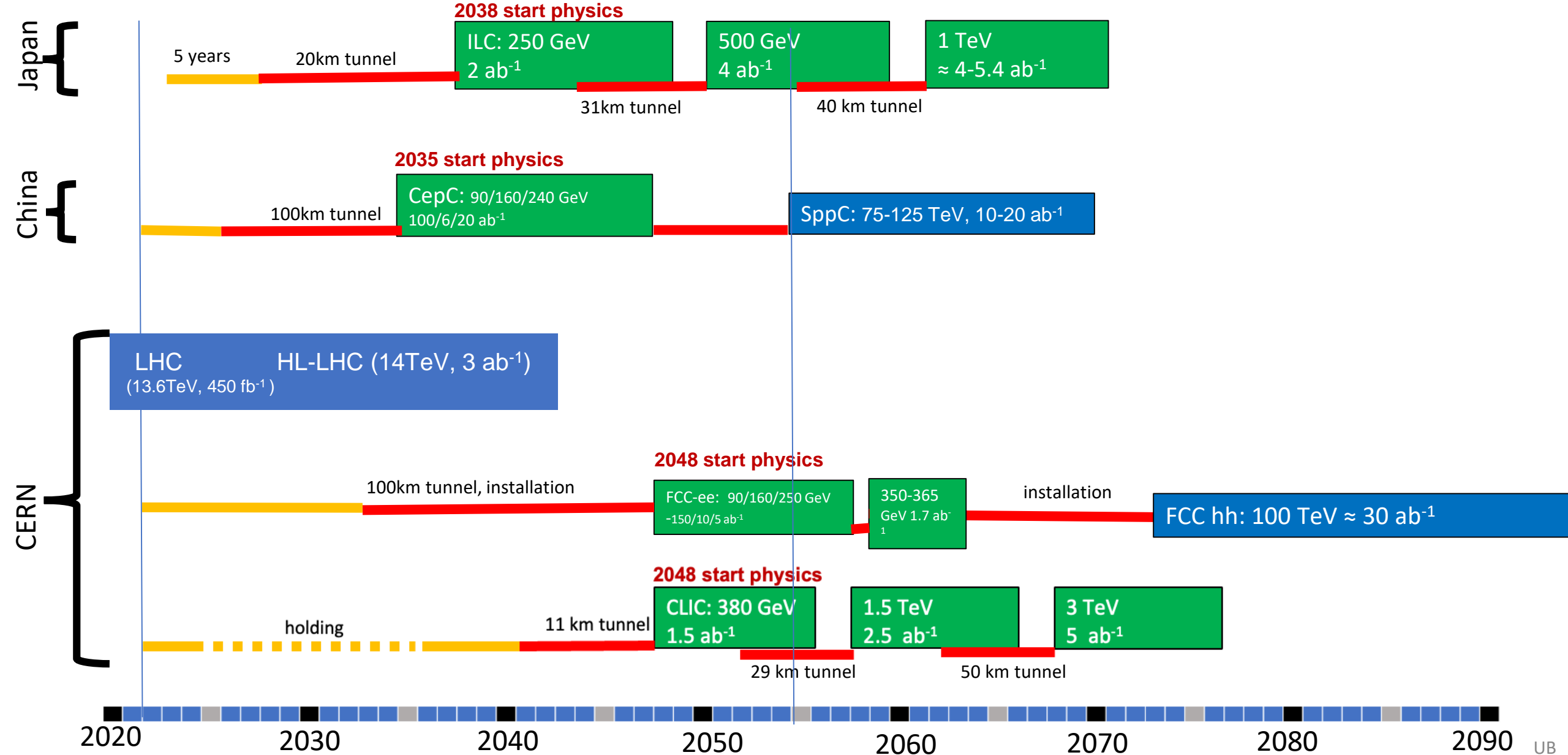
Prisca Cushman

Indicative scenarios of future colliders [considered by ESG]

- Proton collider
- Electron collider
- Muon collider

- Construction/Transformation
- Preparation / R&D

Original from ESG by UB
Updated July 25, 2022 by MN



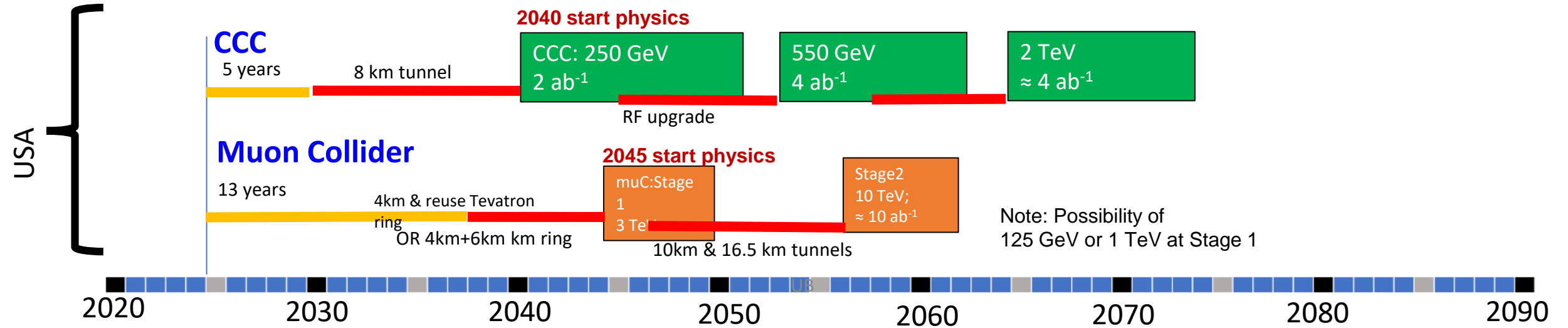
Possible scenarios of future colliders

■ Proton collider
■ Electron collider
■ Muon collider

— Construction/Transformation
— Preparation / R&D

Original from ESG by UB
Updated July 25, 2022 by MN

Proposals emerging from this Snowmass for a US based collider

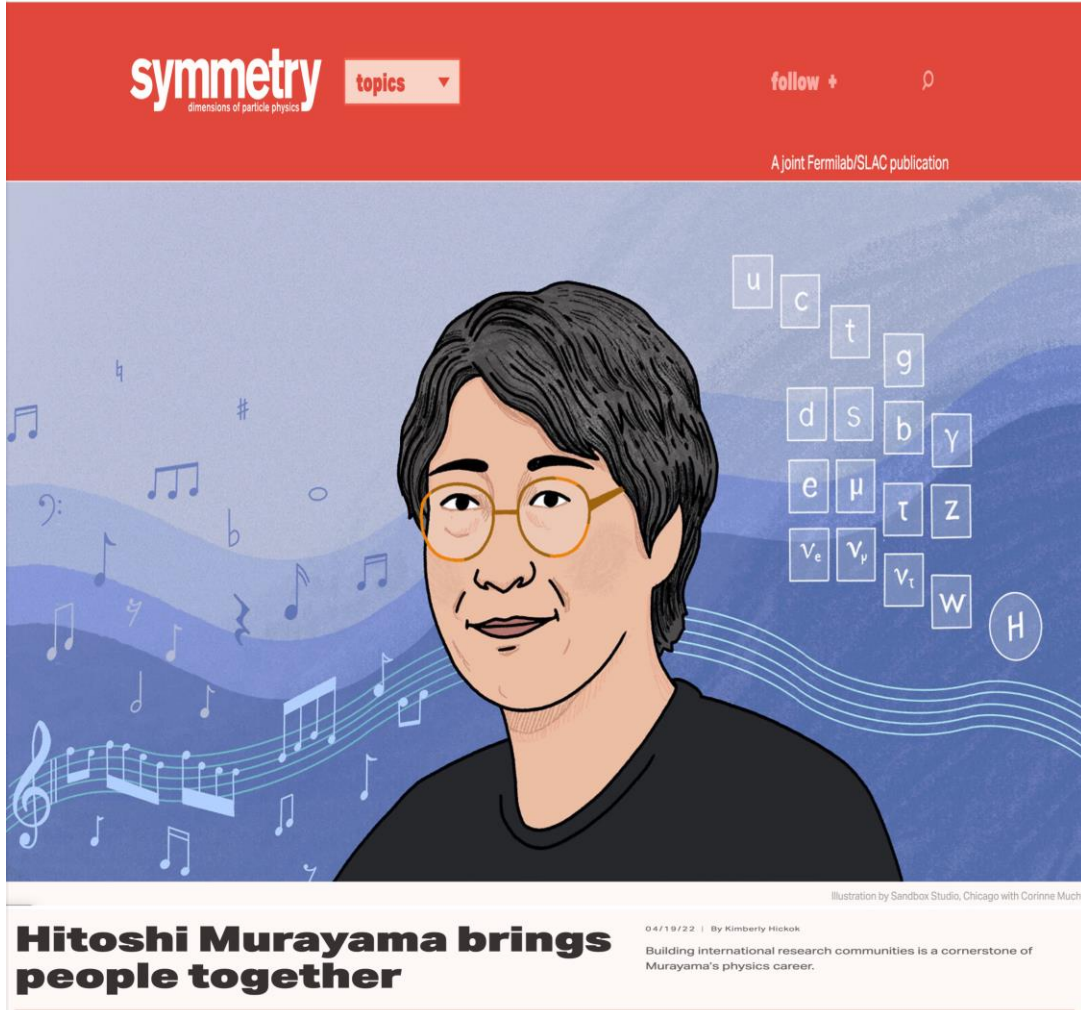


- **Timelines technologically limited**
- Uncertainties to be sorted out
 - Find a contact lab(s)
 - Successful R&D and feasibility demonstration for CCC and Muon Collider
 - Evaluate CCC progress in the international context, and consider proposing an ILC/CCC [ie CCC used as an upgrade of ILC] or a CCC only option in the US.
 - International Cost Sharing
- Consider proposing hosting ILC in the US.

P5 chair

Hitoshi Murayama

Put Captions Here



symmetry dimensions of particle physics topics follow +

A joint Fermilab/SLAC publication

Illustration by Sandbox Studio, Chicago with Corinne Mucha

Hitoshi Murayama brings people together

04/19/22 | By Kimberly Hickok
Building international research communities is a cornerstone of Murayama's physics career.

- MacAdams Professor of Physics at the University of California, Berkeley
- Faculty Senior Staff at Lawrence Berkeley National Lab
- University Professor, Kavli Institute for the Physics and Mathematics of the Universe, University of Tokyo
 - Member, American Academy of Arts and Sciences
 - Fellow, American Association for the Advancement of Science
 - Fellow, American Physical Society
 - Humboldt Research Prize
 - Breakthrough Prize (KamLAND)
 - Yukawa Commemoration Prize
 - Sloan Research Fellowship
 - Served on SLAC Policy Committee, HEPAP & subpanels, Fermilab Physics Advisory Committee, CERN Scientific Policy Committee, CEPC/SppC International Advisory Committee