

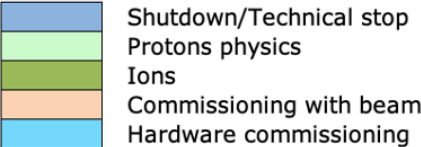
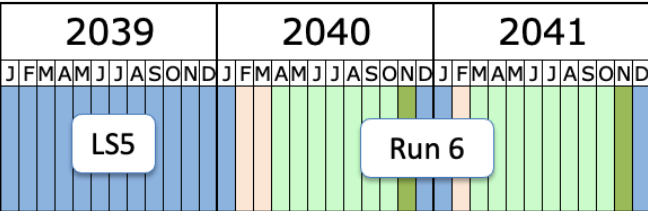
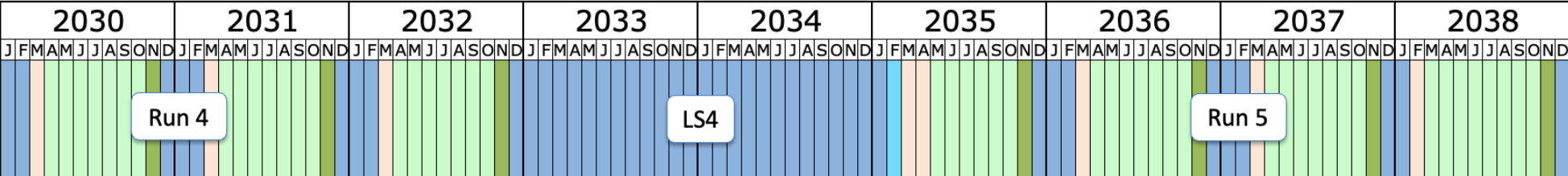
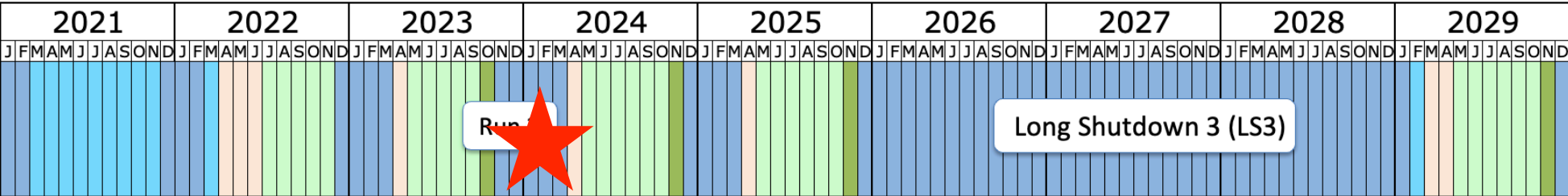
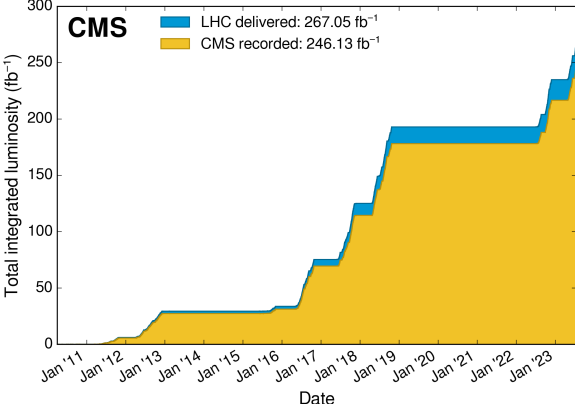
# CERN - Time for Decisions 2024++

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Jochen Schieck

# LHC - The CERN Flagship

- first collisions in 2009 - about half-time
- about 250 fb<sup>-1</sup> collected - 3000 fb<sup>-1</sup> planned



Last update: April 2023

# Proposals for New Projects in the North Area

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- Proposal for new experiments using the SPS beam in the North Area underground cavern (ECN3)
  - HIKE (High Intensity Kaon Experiment)
  - SHADOWS (Search for Hidden And Dark Objects with the SPS) - can run in parallel with HIKE
  - SHiP (Search for Hidden Particles)

# Future Projects at HL-LHC

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- Major upgrades in LS4 - ready in Run 5
  - ALICE 3 - a next-generation heavy-ion experiment
  - LHCb Upgrade II
- LHC Forward Physics Facility
  - FASER2, FASERv2, Advanced SND, FLArE, FORMOSA

# The new Flagship - the Future Circular Collider

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- 91 km circular collider with an  $e^+e^-$ -collider as the first phase (Z,H,WW,tt), followed by a pp-Collider
- 2021-2025 FCC feasibility study - midterm review just finalized - final report expected for next year → EPPSU
- similar experiment under study in China (CEPC), decision expected for 2024 → impact for CERN's decision?
- Austria's particle physics community should get involved / familiar with the physics program of FCC

# Upcoming Decisions related to CERN

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- Launch of Update of the European Strategy for Particle Physics expected soon
  - Election of Strategy Secretary of EPPSU
- Election of new CERN DG - start date 2026
- The outcome of the FCC Feasibility Study
- New (s)election scheme for SPC members
- (Approval of FCC as major new Flagship Project at CERN)

# CERN - Quo Vadis?

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- Several significant decisions related to particle physics at CERN are immanent
- Be aware of the possible implications and timescales
- Several Community events will take place to discuss (i.e. EPPSU Town Hall Meeting)

# Some more CERN related dates

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- 2024: 70th Anniversary of CERN
  - Celebration at CERN: Oct 1<sup>st</sup> 2024
  - Science Week @ Museumsquartier Vienna: June 13<sup>th</sup>-19<sup>th</sup> (organized by HEPHY, everybody is welcome to contribute)
  - Lange Nacht der Forschung, May 24<sup>th</sup> with CERN DG Fabiola Gianotti



Quelle: <https://commons.wikimedia.org>

# PARTICLE ACCELERATORS AS MICROSCOPES THE LEGACY OF BRUNO TOUSCHEK. FROM VIENNA TO ROME

FEBRUARY 29, 2024

START: 19:00

AUSTRIAN ACADEMY OF SCIENCES, FESTIVE HALL  
DR. IGNAZ SEIPEL-PLATZ 2, 1010 VIENNA

## LECTURE

*Bruno Touschek – a master's legacy to elementary particle science*

**Giulia Pancheri** | INFN Frascati National Laboratory, Bruno Touschek's biographer

## PANEL DISCUSSION

*Accelerators for Particle Physics and beyonds*

**Michael Benedikt** | CERN and TU Wien, Head of Future Circular Collider (FCC) feasibility study

**Luciano Maiani** | former CERN Director General and CNR and INFN President

**Giulia Pancheri** | INFN Frascati National Laboratory, Bruno Touschek's biographer

Please register at:

[www.oeaw.ac.at/en/events/registration/bruno-touschek](http://www.oeaw.ac.at/en/events/registration/bruno-touschek)

For more information: [www.oeaw.ac.at](http://www.oeaw.ac.at)

