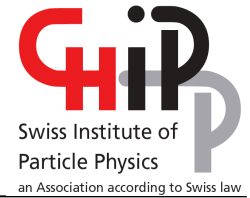




CHIPP plenary meeting
EPFL
August 28, 2018



News from CERN and CERN Council (since summer 2017)

Olivier Schneider

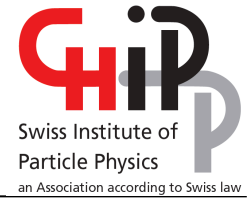


ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Olivier.Schneider@epfl.ch



Swiss delegation



❑ Delegation from Switzerland to CERN Council:

- H.E. Amb. **Bruno Moor** (SERI = State Secretariat for Education, Research & Innovation)
- Prof. **Olivier Schneider** (EPFL)
 - also attending meetings of the Scientific Policy Committee

❑ Swiss members of Finance Committee:

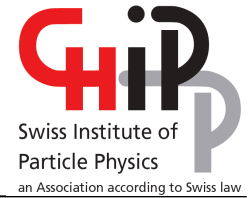
- Mr **Xavier Reymond** (SERI = State Secretariat for Education, Research & Innovation)
- Ms **Mélanie Golliard** (FFA = Federal Finance Administration)

❑ Advisors:

- Mr **Jacques Ducrest** (FDFA = Federal Department of Foreign Affairs)
- Mr **Patrick Pardo** (« Swiss mission », FDFA = Federal Department of Foreign Affairs)
 - also Swiss representative in CERN's Tripartite Employment Conditions Forum (TREF)
- ...



Main elections/appointments



— CERN management:

- Employment contract and appointment of Dr **Frédéric Bordry** (FR) as **Director for Accelerators and Technology** extended from Jul 18, 2019 to Dec 31, 2020

— Council:

- Prof. **Sijbrand de Jong** (NL) re-elected as **president** for a 3rd one-year term starting in Jan 2018
- Prof. **Eliezer Rabinovici** (IL) and Prof. **Jens Gaardhøje** (DK) re-elected as **vice-presidents** for a 3rd one-year term starting in Jan 2018 and Jul 2018, respectively

— Scientific policy committee:

- Prof. **Keith Ellis** (UK) re-appointed as **chair** for a 2nd one-year mandate starting on Jan 2018
- 2+2 other SPC members, **R. Cousins** (USA) and **M.-H. Schune** (FR), **G. Martinelli** (IT) and **H. Schellman** (USA), appointed or reappointed for a three-year period starting on Jan 2018
 - NB: currently one SPC member, Prof. Laura Baudi (2016-2018), is also a CHIPP member

— Finance committee:

- Mr **Ossi Malmberg** (FI) re-elected as **chair** for a 2nd one-year mandate starting in Jan 2018
- Mr **Umberto Dosselli** (IT) re-elected as **vice-chair** for a 2nd one-year mandate starting in Jan 2018

— Tripartite Employment conditions Forum (TREF):

- Prof. **Barbro Åsman** (SE) appointed as **chair** for a period of three years as of Jan 1, 2018
- Ms **Sarah Verth** (UK) appointed as vice-chair for a period of three years as of July 1, 2018

❑ **New member:**

Lithuania is Associate Member State since Jan 8, 2018



❑ **Current membership**

(with new members since start of enlargement process in 2010)

22 Member States

Israel 2014, Romania 2017

+ 3 Associate Member States in the pre-stage to membership

Serbia 2012, Cyprus 2016, Slovenia 2017

+ 5 Associate Member States

Turkey 2015, Pakistan 2015, Ukraine 2016, India 2017, Lithuania 2018

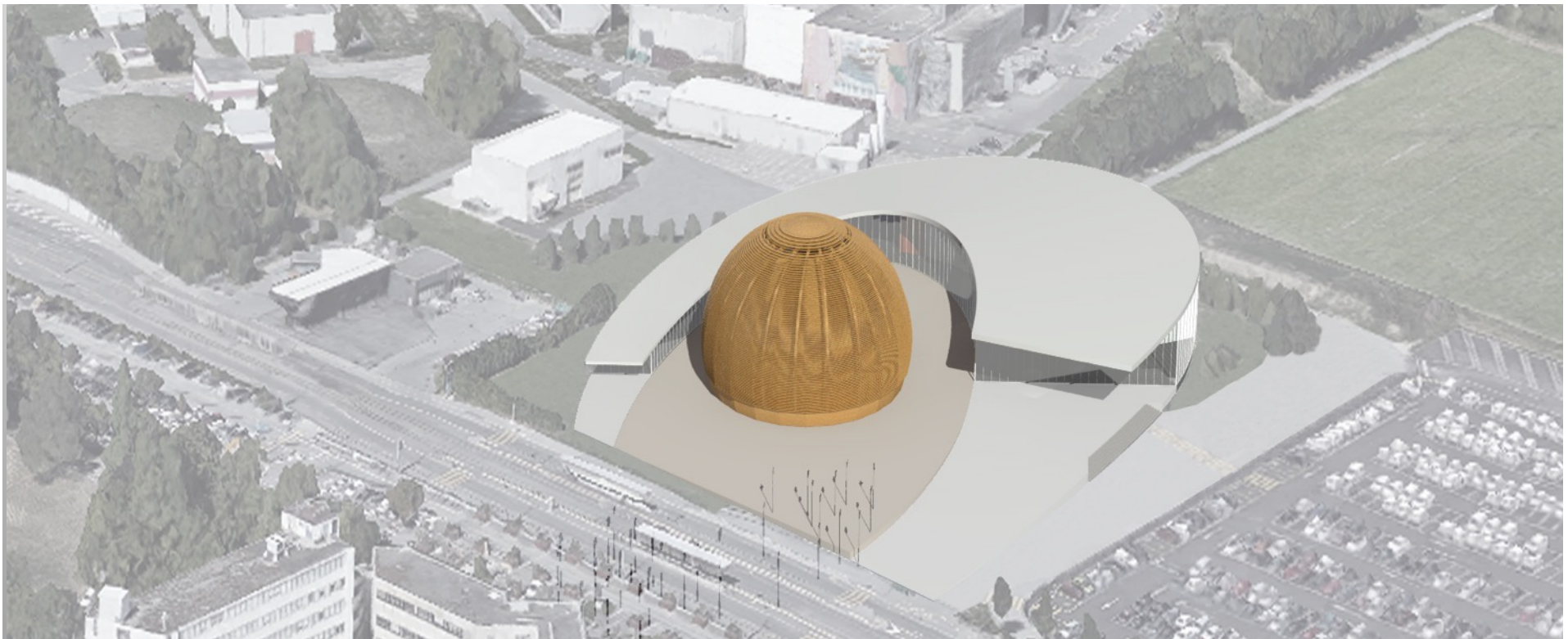
+ 6 Observers (3 states and 3 organisations)

JINR 2014

- ❑ **Associate Member State progressing towards Membership:**
 - **Serbia** (associate member since 2012): task force visited country in March 2018
- ❑ **States progressing towards Associate Membership:**
 - **Croatia**: applied in May 2014, task force visited country in May 2018
 - **Brazil**: model agreement sent by CERN in 2013, no recent progress
- ❑ **Recent contacts in view of possible applications:**
 - **Australia, Canada, Estonia, Ireland, Latvia, South Korea**
- ❑ **New International Cooperation Agreements (ICA):**
 - **Philippines, Russian Federation, Thailand**
- ❑ **Council decided to set up a working group to review certain aspects of the geographical enlargement policy of 2010**
 - mandate includes policy, financial and procedural issues

■ New CERN project/dream:

- a hub for education, training and outreach, to be built around the Globe, aiming at satisfying the $> 300'000$ visit requests per year
- 7000 m², incl. 1000-seat auditorium, 50–70 MCHF to be covered fully from donations
- CERN looking for sponsors, received already 10 MCHF from private foundation

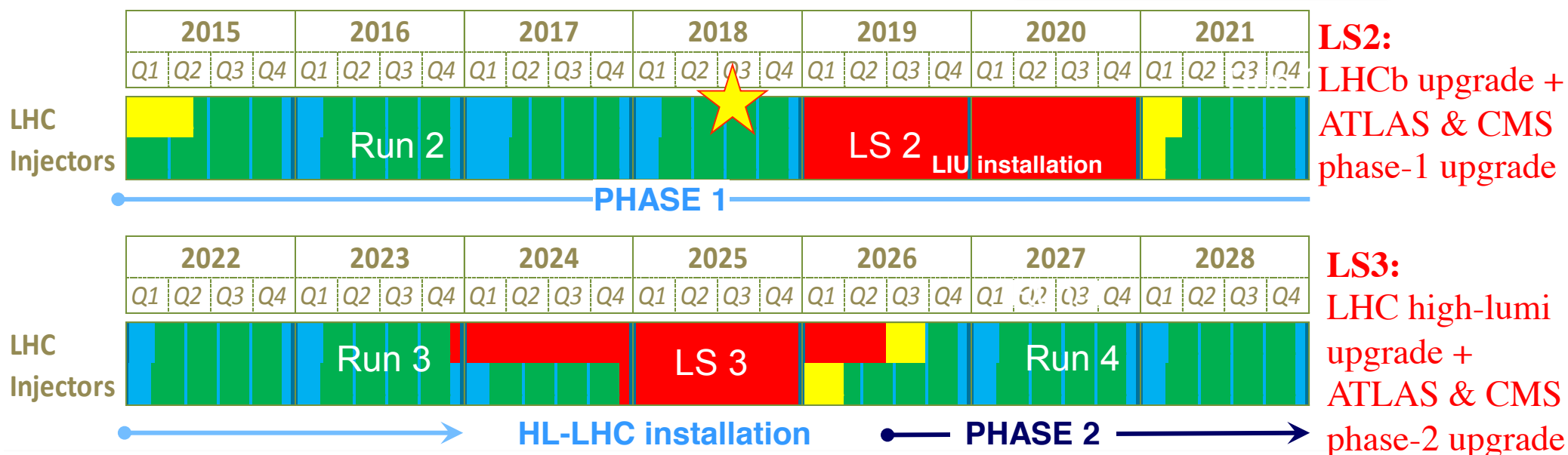
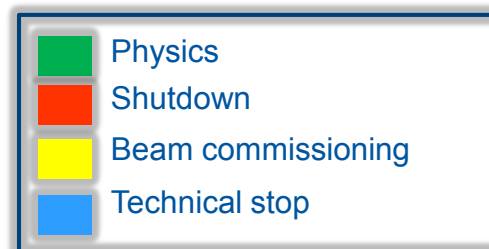


2017: record lumi = $2.2 \times 10^{34} \text{ cm}^{-2}\text{s}^{-1}$

– 50 fb⁻¹ to ATLAS/CMS, 1.8 fb⁻¹ to LHCb

2018: last year of Run 2 data-taking

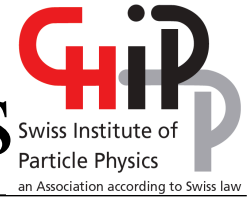
– goal: 60 fb⁻¹ in ATLAS/CMS, 2 fb⁻¹ in LHCb



Luminosity goals:
 — 300 fb⁻¹ by LS3, 3000 fb⁻¹ by ~2037



Upgrades of the LHC experiments

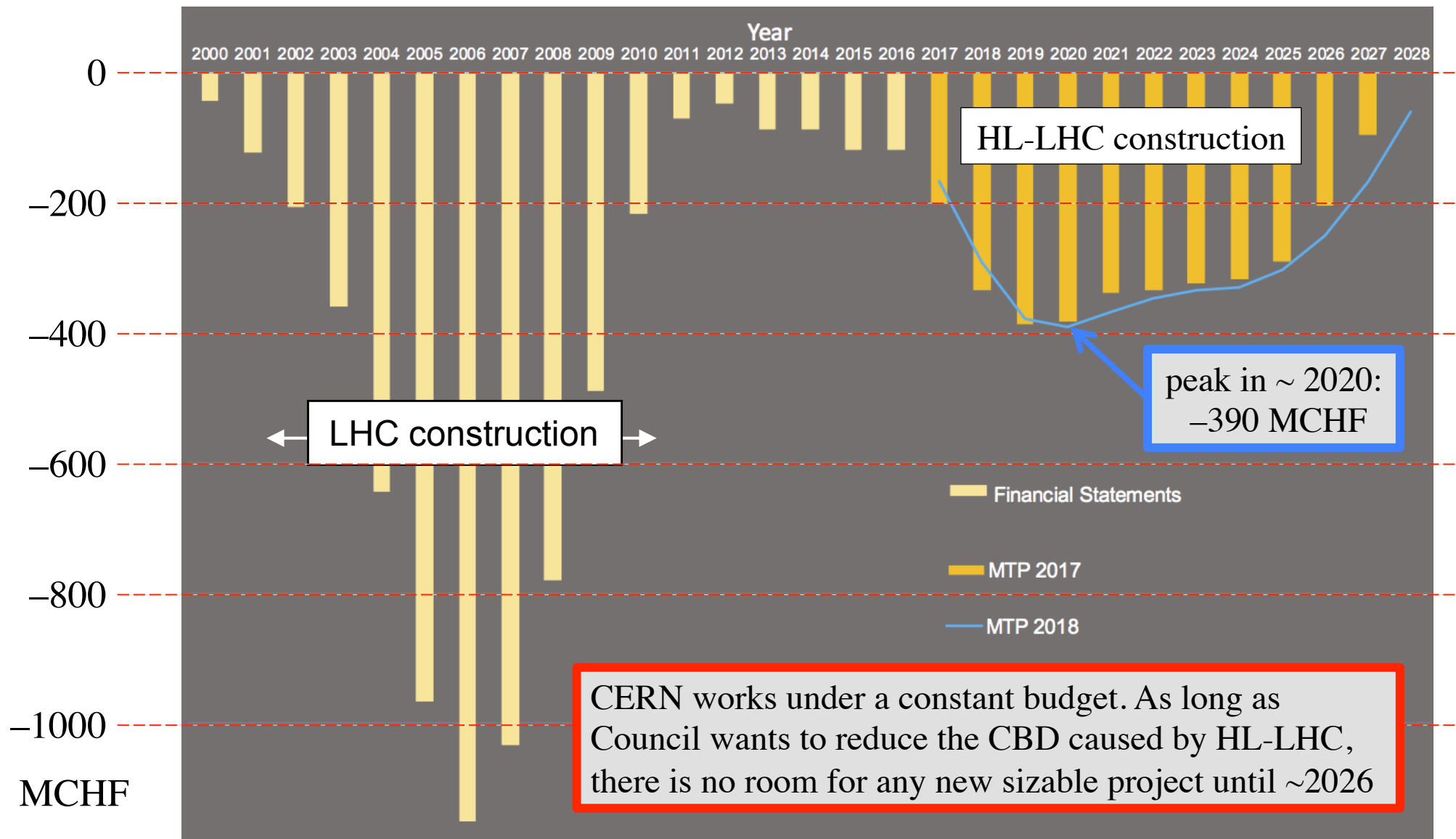


- ❑ **LS2 (2019–2020): ATLAS, CMS, LHCb and ALICE upgrades**
 - construction in full swing (new CMS pixel detector installed since early 2017)

- ❑ **LS3 (2024–2026): ATLAS and CMS Phase-2 upgrades**
 - 10 Technical Design Reports submitted (end 2016–end 2017)
 - Review process (involving 106 reviewers) concluded in April 2018
 - Global and detailed view of required resources now available
 - **total cost: ATLAS = 267 MCHF, CMS = 279 MCHF**
 - Share of investment responsibilities by sub-detector system and by country (« money matrix ») will be finalized by October 2018

- ❑ **LS4 (~2030): possible LHCb upgrade II**
 - Expression of interest submitted (Feb 2017), physics document in prep. (2018), TDR (≥ 2020)

Cumulative Budget Deficit



■ Official first-stone ceremony on June 15, 2018

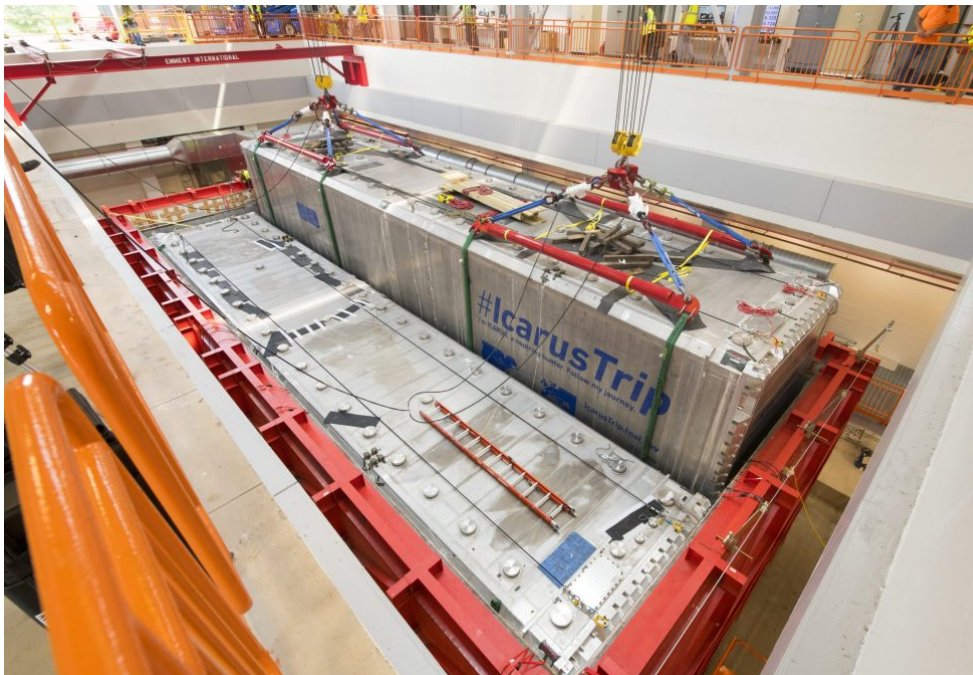


Point 5



Point 1

- ❑ ... detectors built at the CERN neutrino platform are installed in neutrino beams in the US and Japan



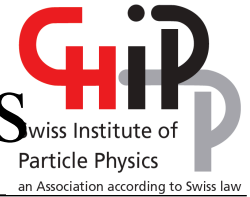
ICARUS detector installed at Fermilab, Aug 14, 2018
(shipped from CERN to US, Jun–Jul 2017)



Baby-MIND detector installed at J-PARC
(shipped from CERN to Japan, Oct–Dec 2017)



European Strategy for Particle Physics



❑ Initial ESPP in 2006 + first update in 2013

- <http://council-strategygroup.web.cern.ch/council-strategygroup/>
- <http://europeanstrategygroup.web.cern.ch/EuropeanStrategyGroup/>

❑ Next update of ESPP in 2020

— will be driven by the following **Strategy Secretariat**, appointed by Council:

- **Prof. Halina Abramowicz, Strategy Secretary**
- Prof. Keith Ellis (as chair of CERN Scientific Policy Committee)
- Prof. Jorgen D'Hondt (as chair of ECFA)
- Prof. Leonid Rivkin (as chair of the European Laboratory Directors group)

Physics Preparatory Group (PPG)

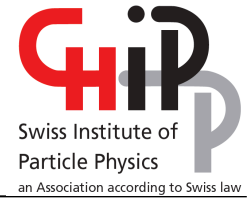
- strategy secretariat
- 4 + 4 members appointed by Council
on recommendation of SPC + ECFA
- 1 CERN representative
- 2 + 2 representatives from Americas + Asia

European Strategy Group (PPG)

- strategy secretariat
- 1 representative per Member State
- 1 representative per european lab
- CERN DG
- + invitees / 64+ people in total



Timeline for next ESPP update



☐ September 2018

- Council to **launch Strategy update process**, and establish the Physics Preparatory Group (PPG) and the European Strategy Group (ESG)

☐ 18 December 2018

- Deadline for **submissions of input from community**

☐ 13–16 May 2019

- 4-day **open symposium**, Granada, Spain

**your chance to
contribute and
participate !**

☐ September 2019

- Submission to the ESG of the **Physics Briefing Book** prepared by the PPG

☐ 20–24 January 2020

- **One-week strategy update drafting session** by the ESG, Bad Honnef, Germany

☐ March 2020:

- **Final draft of strategy update** submitted to Council

☐ May 2020:

- **Strategy update adopted** by Council

❑ October 27, 2017: Visit of CERN DG to Switzerland (Bern)

- Meeting with Federal Councillor Johan Schneider-Ammann
- Roundtable at SNSF about funding of particle physics in CH with representatives of
 - SERI (Dell’Ambrogio), ETH Board (Schiesser, Käppeli, Mesot), swissuniversities (Leuman), SNSF (Egger, Kalt), CHIPP (Nakada), CH delegation to CERN Council (Reymond, Schneider) + observers
- Meeting with representatives of CH industry
- Meeting with representatives of Federal Department of Foreign Affairs

❑ June 21, 2018: Visit of Swiss President Alain Berset to CERN

- ... included meeting of 12 young Swiss researchers and engineers



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