

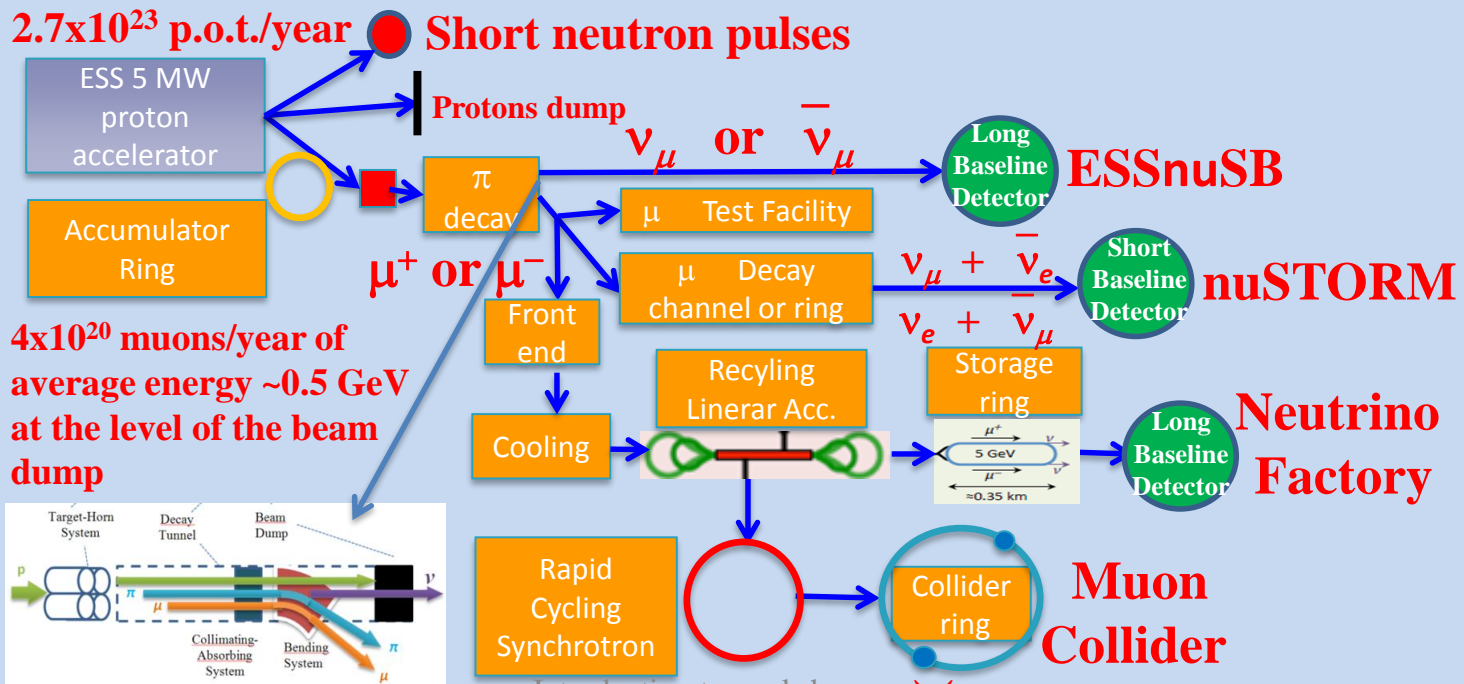
Prospects for Intensity Frontier Particle Physics

with Compressed Pulses from the ESS Linac

Open workshop at Uppsala University
2-3 March 2020



Program and registration at: <https://indico.cern.ch/event/849674/>



Introduction to workshop

Tord Ekelöf, Uppsala University

Programme of the workshop "Prospects for Intensity Frontier Particle Physics with Compressed Pulses from the ESS Linac"

Uppsala University 2-3 March 2020.

Venue: Lägerhyddsvägen 2, Department of Information Technology, 3rd floor, Room ITC 1311

Monday March 2

9:30 — 10:00 **COFFEE and Registration**

10:00 — 10:15 **Welcome and Introduction**
Tord Ekelöf, Uppsala University

10:15 — 10:55 **The use of the ESS linac to create a Muon Collider**
Carlo Rubbia, Gran Sasso Science Institute

10:55 — 11:25 **The ESS neutrino Super Beam Design Study**
Marcos Dracos, CNRS

11:25 — 11:55 **Short Pulses for neutron Physics at ESS**
Ken Andersen, ORNL

11:55 — 12:30 **Discussion**

12:30 — 14:00 **LUNCH**
Eklundshof

14:00 — 14:30 **Why are we interested in measuring the CP angle with high precision?**
Monojit Gosh, KTH

14:30 — 15:00 **The prospects for nuSTORM at ESS**
Sam Tygier, University of Manchester

15:00 — 15:30 **The prospects for an ESS based Neutrino Factory**
Jaroslav Pasternak, Imperial College London

15:30 — 16:00 **COFFEE**

16:00 — 16:30 **The possibilities of Decay-at-Rest experiments at ESS**
Adrien Hourlier, MIT

16:30 — 17:00 **Discussion**

17:00 — 17:30 **Guided visit to the FREIA laboratory**

19:00 — 23:00 **Social Dinner**
*Stockholm Nation
Drottninggatan 11*

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Tuesday March 3

9:00 — 9:30 **The COHERENT experiment - progress report**
Connor Awe, Duke University

9:30 — 10:00 **Opportunities for coherent neutrino scattering at ESS**
Juan Collar, University of Chicago

10:00 — 10:30 **Discussion**

10:30 — 11:00 **COFFEE**

11:00 — 11:30 **The ESS Linac Modifications Required for the Different Proposals**
Björn Gålnander, ESS

11:30 — 12:00 **High intensity accumulator rings**
Nicholas Evans, ORNL

12:00 — 12:30 **The design of the ESSnuSB accumulator and its synergies with the different proposals presented**
Ye Zou, Uppsala University

12:30 — 14:00 **LUNCH**
Eklundshof

14:00 — 14:30 **Target Synergies and Differences for the Different Proposals**
Eric Baussan, CNRS

14:30 — 15:00 **Space available at the ESS site for the new installations**
Boris Kildetoft, Sweco/ESS

15:00 — 15:30 **Discussions on an ERC Synergy Grant Application**
Tord Ekelöf, Uppsala University

15:30 — 16:00 **COFFEE**

16:00 — 16:30 **Discussion: Conclusions and Closing**
Tord Ekelöf, Uppsala University

ERC SYNERGY GRANTS

next call will be in Sept 2021, the dead-line in Nov 2021 and spending could start around autumn 2022

Who can apply?

A group of **two to maximum four Principal Investigators (PIs)** – of which one will be designated as the corresponding PI (cPI) – working together and bringing different skills and resources to tackle ambitious research problems. **No specific eligibility criteria regarding the academic training** are foreseen for ERC Synergy Grants. PIs must present an **early achievement track-record** or a **ten-year track-record**, whichever is most appropriate. Proposals will be evaluated on the **sole criterion of scientific excellence** which, in the case the ERC Synergy Grants, takes on the additional meaning of **outstanding intrinsic synergetic effect**.

Criteria

Applications can be made in **any field of research**. The ERC's grants operate on a 'bottom-up' basis without predetermined priorities. In the case of the ERC Synergy Grants, applications must demonstrate that the proposed research **cannot be carried out by a single PI working alone**.

How much?

Synergy Grants can be up to a **maximum of € 10 million for a period of 6 years** (*pro rata* for projects of shorter duration). An ERC grant can cover up to **100% of the total eligible direct costs** of the research plus a contribution of 25% of the total eligible costs towards indirect costs.

Evaluation process

Proposals are evaluated by selected **international peer reviewers** who evaluate proposals on the basis of **excellence** as the **sole criterion**. It will be applied to the evaluation of **both the research project and the Principal Investigators**, taking into account the **synergetic aspects** of the proposed research.

FET OPEN Challenging Current Thinking -

call published 7 Nov 2019, dead-line 16 May 2020 and spending could start in spring 2021

Specific Challenge: to lay the foundations for **radically new future technologies** of any kind from visionary interdisciplinary collaborations that dissolve the traditional boundaries between sciences and disciplines, including the social sciences and humanities. This topic also encourages the driving role of new actors in research and innovation, including excellent young researchers, ambitious high-tech SMEs and first-time participants to FET under Horizon 2020 from across Europe.

Scope: proposals are sought for cutting-edge **high-risk / high-impact interdisciplinary research with all of the following essential characteristics** ("FET gatekeepers"):

❓ *Radical vision*: the project must address a clear and radical vision, enabled by a new technology concept that challenges current paradigms. In particular, research to advance on the roadmap of a well-established technological paradigm, even if high-risk, will not be funded.

❓ *Breakthrough technological target*: the project must target a novel and ambitious science-to-technology breakthrough as a first proof of concept for its vision. In particular, blue-sky exploratory research without a clear technological objective will not be funded.

❓ *Ambitious interdisciplinary research* for achieving the technological breakthrough and that opens up new areas of investigation. In particular, projects with only low-risk incremental research, even if interdisciplinary, will not be funded.

Funding in 2020 is 354.20 MEUR for applications with dead-lines 16 May 2018, 24 Jan 2019, 18 Sep 2019, 13 May 2020 . Out of 800 eligible proposals at the last deadline in September 2015, only 11 proposals, i.e. 1.4 %, were accepted.