WG1-SRCH working meeting on

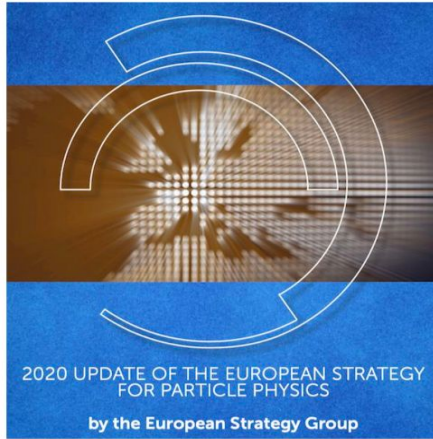**Heavy Neutral Lepton search potential of future HET factories**

Introduction

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February 17, 2023

◆ **ECFA study is a key input for the next European Strategy Update**
 –> should be coherent with the European Strategy timeline

2020 UPDATE OF THE EUROPEAN STRATEGY FOR PARTICLE PHYSICS
by the European Strategy Group

◆ For the 2020 Update:
 – project inputs: December 2018
 – open community meeting: Granada, May 2019
 – drafting session: Bad Honnef, January 2020
 – strategy presented later in 2020

◆ The next European Strategy Update is provisionally expected in **2026–27**
 –> provisionally expect strategy inputs to be due in late 2025

◆ ECFA study should coordinate with project inputs and timelines,
 e.g.FCC Feasibility Study report is scheduled for end 2025, writing from 2025Q2

◆ ECFA report should be available as reference for projects' individual ESPP inputs

–> target spring 2025 for ECFA study final report

Scenarios for the final ECFA Higgs factory report

For the WG1-SRCH part, we identified possible "areas of interest", which could be covered in the final ECFA study report:

- **Heavy Neutral Leptons**

- **Scenarios with light scalars**

- **Exotic Higgs Boson decays**

- **Light SUSY scenarios**

- **Axion-Like Particles, dark photons, other light mediator scenarios**

- **…** (new ideas still welcome)

We do want to cover as wide scope as possible in the final report…

Topical meetings

We would like to organize focused working meetings for each of the "areas of interest" which we consider relevant for the final workshop report in 2024.

Today we have our first meeting on **Heavy Neutral Leptons**

The main goals of the meeting are to:

- review the work which has already been done,

- identify tasks and plan work towards the HNL section in the final ECFA report (to be completed by the end of 2024).

Your participation and contribution is crucial. Please put all suggestions and remarks into HNL discussion document (also linked in indico)