LLR Palaiseau (contact R. Salerno)

People involved :

R. Salerno, C. Ochando, Y. Sirois (+few others express interest)

Physicists involved in other e^+e^- FC : V. Boudry, J-C Brient, F. Jimenez Morales, H. Videau

Activities, Goals :

Work on fast/full simulations

Optimisation of the detector properties for optimal physics reach

Physics interest :

Study the EWSB (Scalar sector, Higgs self-coupling, VBS)

Algorithms interest, sub-detector interest :

high-granularity Si-based calorimeter

Particle Flow event reconstruction

Future R&D :

high-granularity Si-based calorimeter (continuous operation, timing)

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SnowMass2021

"Measurement of Higgs parameters at FCC-ee"

- **the total e+e− → ZH cross section σ_{HZ}** at two energies to achieve a model-independent demonstration of the existence of the trilinear Higgs boson self-coupling
- **the Higgs boson total decay width Γ_H** focus on the requirements on the detector design (Si-based calorimeter) and on jet clustering algorithms to achieve an effective separation between the H → ZZ and H → WW

Requests for 2021 :

1K€ for missions

1K€ for functioning (M1 or M2 stage during spring 2021)