Interest from the CEA (technical divisions)

Antoine Chance

On behalf of

Department of Accelerators, Cryogenics and Magnetism

and

Low Temperature Systems Department
High-energy Collider Design

- Lattice design and beam dynamics
- High-energy accelerator, the collider ring or a combined accelerator and collider ring.

Several FTEs already involved in collider design (FCC-hh) and booster (FCC-ee).

Proton-based Muon Source.

- Design of the proton linac (ion source, RFQ, linac)
- Development of new simulation tools (within TraceWin).
  
  RFQ of ESS
  Simulation of IFMIF with TraceWin
Magnets

- HTS solenoids (> 30 T)
- High-field magnets

**NOUGAT:** 32.5T obtained
Diameter 50 mm
(14.5T created by the HTS insert with a background field of 18T @ LCNMI Grenoble).

**FRESCA2**

**Strong synergy with CEA activities on magnets**


Other Technologies

- Cryogenics (efficient cooling).
Radio Frequency Technology

- Superconducting RF for high energy acceleration
- RF cavity design (warm and SC).

R&D at Saclay on thin films

Strong activity on RF cavities and cryomodule integration.

First medium β cryomodule in the test bunker at CEA Saclay.