

ECFA EUROPEAN COMMITTEE FOR FUTURE ACCELERATORS

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Geneva, 23 March 2022

Dear Minister,

It was a great pleasure for the European Committee for Future Accelerators (ECFA) to visit Italy on 4 and 5 March 2022. The purpose of the ECFA visits, which are made to each of CERN's Member States in turn, is to assess particle physics and related disciplines in the country concerned and to suggest improvements. The recommendations made are addressed to both the physics community and the government.

Please find enclosed a brief summary of our recommendations together with a more extensive letter in which we elaborate on these points.

- Italy is a stronghold of particle physics in Europe, and ECFA is impressed by its vibrant community, broad science programme and many high-quality contributions to front-line research in particle, astroparticle and nuclear physics.
- The *Istituto Nazionale di Fisica Nucleare* (INFN) provides an excellent structure for fundamental research in particle physics. It is able to draw on 70 years of successful research in five important research lines. We appreciate, in particular, the excellent interplay between INFN and the universities and consider such a structure as a model for successful organisation of particle physics in countries of Italy's scale.

Nevertheless, we think that it would be helpful to improve the stability and continuity of budget allocations, which are important for long-term planning for large particle physics projects. In addition, INFN's efficiency would benefit from fewer bureaucratic hurdles, and we suggest that corresponding mitigation actions should be explored.

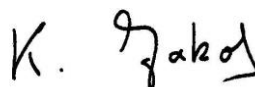
- The four national laboratories (Frascati (LNF), Gran Sasso (LNGS), Legnaro (LNL) and Sud (LNS)) provide excellent infrastructures to complement the particle, nuclear and astroparticle physics programme. Due to these strong laboratories, Italy has also been very successful in exploiting EU funding opportunities and attracting high-profile, large-scale EU science

programmes. Very substantial funding has been requested for a large national centre for high-performance computing, big data and quantum computing, as well as for large accelerator, astroparticle and technology projects. In this context, we support the anticipated upgrade plans of the national laboratories.

- A particular strength of the Italian particle physics community is its strong involvement in research and development projects on particle accelerators, detectors and computing. These areas complement the core research fields, foster innovative contributions and have important spin-offs for society, ranging from COVID-19-related activities and medical applications to big data and cultural heritage.
- We also appreciate the emerging INFN support for the next large accelerator project (the Future Circular Collider, FCC) at CERN.

In conclusion, ECFA is very impressed with the high quality of the activities of the Italian particle physics community and warmly acknowledges the government's ongoing support for those activities.

Yours sincerely,

Handwritten signature of Karl Jakobs in black ink.

Karl Jakobs
Chair of ECFA