

Toward Integrating Accelerator RTD in Europe

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The General framework

The role of ECFA is the Long-range planning of European high-energy facilities- accelerators, large-scale facilities and equipment - adequate for the conduct of a valid high-energy research programme. To this end, ECFA

- evaluates the scientific case for future accelerators via study groups
- promotes the construction of the projects that it deems important for the field
- promotes the RTD of advanced accelerator concepts possibly leading to future projects

In our recent report ECFA/01/213, ECFA has identified the main research directions beyond the LHC.

In the medium term:

- ❑ **the construction of a high-luminosity e+e- Linear Accelerator with an energy range exceeding 400 GeV**

and for the longer term:

- ❑ **a coordinated collaborative R&D effort toward a neutrino factory based on a high-intensity muon storage ring, including as a first step the construction of a neutrino beam emanating from high-intensity proton beams**
- ❑ **a coordinated collaborative R&D effort toward the development of a multi-TeV e+e- Linear Accelerator, a very large hadron collider and a muon collider**

Furthermore ECFA has underlined the necessity for

- **an improved educational programme in the field of accelerator physics**
- **an increased support for accelerator R&D activity in European universities, national facilities and CERN.**

The construction of future accelerator for particle physics is likely to be only possible through large international collaboration, setting up more formally the basis of such collaboration already at the accelerator RTD level might be a useful step toward this direction.

ECFA wishes and can play an important role in these area by supporting specific actions

In particular, it has recently

- set up an ECFA/DESY workshop for Linear Colliders (continuation is under discussion)
- set up a European Linear Collider Steering Committee
- recommended a coordinated European effort for the study of neutrino factories

FP6 is a unique opportunity for particle physics laboratories involved in accelerator R&D to launch a coordinated and integrated European R&D activity.

with the creation of a
European Network for Advanced and Novel Accelerators Studies

EuroNANAS

ECFA could serve as an advisory body in this matter

Can FP6 be of help to us ?

FP6 includes 3 Groups of action

1. Focusing and Integrating Community Research (13345 MEuros)

Essentially **aimed at supporting 7 thematic priorities** (does not include subatomic physics) and specific activities covering a wider field of research
Main instruments are *Network of Excellence* and *Integrated Projects*

2. Structuring the European Research Area (2605 MEuros)

Four categories of activity

1. Research and innovation
2. **Human resources**
3. **Research infrastructures**
4. Science and Society

Main instruments are

- *Specific targeted research and innovative projects*
- *Actions to promote human resources and mobility (MC)*
- *Support for Infrastructures*

3. Strengthening the foundations of the European Research Area (320 MEuros)

1. Support for the coordination of activities
2. Coherent development of research and innovation policies (evaluation, benchmarking, administration ...)

Support for infrastructures

1. Transnational Access

aimed at providing access to a single given infrastructure for research teams

- by contributing to a user fee
- by contributing to the service fees
- by supporting travel and subsistence costs related to visits

2. Integrated Infrastructure Initiative (I3)

aimed at supporting the integrated provision of infrastructure-related services to the research community at a European level

- by supporting Networking Activities (good project mandatory to be accepted)
- by supporting Transnational Access
- by supporting Joint Research Activities

3. Communication Network Development (CND)

aimed at creating a denser communication network between related initiatives

- by establishing a high capacity and high-speed communication network for all researchers in Europe and test-beds (GRIDs)

4. Design Study (DS)

aimed at contributing to studies related to future facilities of European or World-wide significance

- by supporting feasibility studies
- by supporting technical preparatory work (development and testing of critical components, subsystems ...)

5. Construction of New Infrastructure (CNI)

aimed at providing support toward optimising the European nature of key new approved infrastructures of Europe-wide interest.

- by “topping up” the project on some particular aspects

250Meuros
Calls ~12/02
Deadlines for
Bids ~3/03
Start contract end 03

200Meuros
Calls in 11/02
Deadlines for
Bids 3/03

200Meuros
Calls ~3/02
Deadlines for
Bids ~6/03
Start contract early 04

Conclusions

FP6 is a unique opportunity to get funded for accelerator R&D

A useful document to get more information on the particular FP6 programme for which we can apply is : <http://europa.eu.int/comm/research/fp6/pdf/fp6-infrastructures-final.pdf>

A European Steering Group is being set up to coordinate European Accelerator R&D with the objective of submitting coordinated bids at FP6

Many questions still unclear ...

... however time is very short and it is important to start getting prepared

A first task is to identify all the projects that we want to include in the FP6 proposal(s)

You can help