



## Our charge

The Strategy Group has been set up on the initiative of the CERN Council to prepare a Draft Strategy Document aiming for unanimous approval by the CERN Council.

This strategy should address the main lines of Particle Physics in Europe, accelerator-based and non-accelerator based, including R&D for novel accelerator and detector technologies.

The strategy should also address the visibility of the field, the collaboration between the European laboratories, the coordinated European participation in world projects and knowledge transfer beyond our field.

The complete mandate is available [here](#).



## Information on the C.E.R.N. strategy group

<http://council-strategygroup.web.cern.ch/council-strategygroup/>

The membership consists of

chairs: Ken Peach (SPC), Torsten Akesson (ECFA)

1. a preparatory group constituted of 8 scientists selected 'ad hominem'
2. representatives from the member states
3. representatives of the main institutions/laboratories

The aim of the strategy group is to establish a document to be voted by C.E.R.N. council (i.e. having the value of an international treaty!) describing the strategy for particle physics in Europe in general and at CERN in particular.

Non-member states (USA, Russia, Japan, etc.. ) have observer status.

This statement could contain statements similar to the previous one (ECFA 2001) commitment to LHC completion and exploitation, recommendations for the linear collider, neutrino program, increased R&D on accelerators/detectors or the need for inter-European or global collaboration on design studies for new facilities, recall the interest of non-accelerator programs, etc.

The difference with previous exercise is the very official character (binding to the member states) that this one will take.



30 September 2005	Timetable of meetings of the Preparatory Group agreed
15 October 2005	Publication of the Strategy Group web page Deadline for proposals for the location of the Symposium <sup>1</sup>
25 October 2005	Selection of the location for the Symposium <sup>1</sup>
1 November 2005	Public announcement of the Strategy Group symposium
30 November 2005	Draft programme for the Strategy Group Meeting
December 2005	Progress Reports to SPC and ECFA
January/February 2006	Strategy Group Symposium (see below)
March 2006	Progress Reports to ECFA and SPC
31 March 2006	Briefing Book available to members of the Strategy Group Final Programme for the Strategy Group Meeting



The process will have three major milestones

1. 30 jan.06 -- 1 feb.06 in ORSAY: a public Symposium (similar to a 'town meeting') involving a presentations by young European physicists organized around the main particle physics themes. The programme is being prepared by the preparatory group.

From this symposium the preparatory group will produce a "briefing book" which will serve as basis for:

2. the workshop of the strategy group itself, which will take place in Zeuthen (Berlin) from 2-6 May 2006. This will be essentially a week long closed meeting, in which the 40+ members of the strategy group will be preparing a statement and supporting documents to be endorsed by council in an:

3. exceptional C.E.R.N. council meeting in July 2006 in Lisbon.

in the above CERN means 'the lab in Meyrin+Prevessin'  
and C.E.R.N. means the "European Organization for Particle Physics"



- **1030-1045: Welcome** K and/or T
  - **1045-1300: 1. Overviews** Chairperson: B. Webber
    - The field of EPP: Where are we and which are the questions? **Gian Giudice**
    - The infrastructure stage: Where are we, and which are the options? **John Womersley**
  - **1300-1400: LUNCH**
  - **1400-1700: 2. High Energy Frontier**
    - **2a. Physics of the High Energy Frontier:** Chairperson R. Heuer
      - LHC
      - LHC upgrade
      - ILC and CLIC
      - Muon Collider
    - **1530-1600: COFFEE**
    - **2b. Accelerators for the High Energy Frontier** Chairperson: R. Aleksan
      - LHC upgrade
      - ILC
      - CLIC
      - Muon Collider
      - Generic accelerator developments
  - **1700-1830: 3. Theory and phenomenology** Chairperson: M. Mangano
    - Activities and performance in Europe
      - Internal variation in Europe
      - Performance compared with other regions
    - Structural issues for the future
- **END OF DAY ONE** -----



- **0900-1030: 4. Flavour Physics** Chairperson: E. Rondio
    - Factories
    - Rare decays
  - **1030-1100: COFFEE**
  - **1100-1230: 5. Physics using neutrinos** Chairperson: A. Blondel
    - Physics overview
    - Infrastructure
      - $\nu$  factory
      - $\beta$ -beam and super beam
      - Experiments using reactors
- Patrick Huber, Anselmo Cervera,  
Mauro Mezzetto (sc. secretary)
- **1230-1400: LUNCH**
- **1400-1530: 6. Precision measurements** Chairperson: F. Linde
  - $\nu_e$  mass measurements (Tritium) (here despite that it is non acc. and  $\nu$ )
  - $\nu$ -less double  $\beta$ -decay (here despite that it is non acc. and  $\nu$ )
  - g-2 (here despite that it impacts  $\nu$ )
  - edm  $\mu \rightarrow e\gamma$ 
    - neutron source
    - storage ring
- **1530-1600: COFFEE**
- **1600-1730: 7. Non-accelerator EPP and astroparticles** Chairperson: M. Cavalli
  - Dark matter searches
  - Physics of future proton decay experiments
  - EPP of astroparticle physics infrastructure
  - Non-EPP of astroparticle physics infrastructure
- **1730-1830: 8. QCD studies** Chairperson: S. Bertolucci
  - Heavy Ions
  - DIS (also using future  $\nu$ -beams)
  - Others
- **END OF DAY TWO** -----
- **Summarizing session on last day** Chairpersons: K and/or T
    - Chairpersons of previous days summarize the outcome of respective session
  - **Closing** K and/or T
    - Explain next steps
    - Thank everyone

**afternoon: de-briefing with full strategy group**



# SCOPE

'what is particle physics' vs what is 'nuclear physics'  
and 'what is Astroparticle physics'

In other words,  
what is in the garden of ApPEC?  
what is in the garden of NUPECC?

Overlaps will be kept

nuclear physics related issues treated here:

high energy heavy ion collisions  
neutrinoless double beta decay  
neutrino mass measurements  
neutron edm

Astroparticle physics issues treated here

dark matter searches  
oscillation neutrino physics from extraterrestrial sources:  
solar, atmospheric, supernovae  
etc..

but no: « dark energy », gravitational waves, and other astrophysical and  
cosmological issues.



## neutrino oscillation physics session

1. should lead to a clear proposal  
'support for a precision neutrino infrastructure in the next decade'
  - that could be situated in Europe
  - R&D!
  
2. please give information as you see fit to the speakers  
(cc: Mezzetto and myself)
  
3. discussion should be lively, but not messy.
  - 3.1 I suggest we have a rehearsal session a few days before the meeting (Video)
  
  - 3.2 I would suggest a few prepared interventions from the floor in forms or content that could not be given by the speakers.





## Documents for the Briefing book:

The briefing book should contain the appropriate documentation so as to allow good and *\*digestable\** information to the strategy group members.

on the neutrino-oscillation side:

- neutrino fundamentals
- nuclear reactor expts
- accelerator expts.
  - physics possibilities
  - accelerator possibilities
  - detector possibilities

→ plan to have a brief statement from each of the subgroups of ISS so as to

serve as input

→ other brief, well written and crisp information will be welcome!