

Mandate of POFPA

- the definition of the physics opportunities that could be provided by the possible development and upgrades of the present Proton Accelerator Complex
- composed of a convener and seven other members: **ATLAS, muons (Eichler →), heavy ions?**
- The group may create working teams on specific physics topics: **sLHC, K**
- The group reports to the DG; its findings will be discussed in the Executive Board

To be based upon ...

- SPSC Villars
- the previous analysis of physics opportunities with an upgrade of the LHC luminosity (hep-ph/0204087)
- opportunities in neutrino, muon and kaon physics with a high-intensity proton driver made by the ECFA/CERN Study Group: **Megawatt proceedings, NUFACT05, ISS@CERN Sept 22/23/24**
- opportunities in nuclear physics, based on the programme that will be recommended by the INTC: **NuPAC@CERN Oct 10/11/12**
- Close liaison with the PAF Working Group

SPL @ CERN Wish List

USER	CERN COMMITMENT *	USERS' WISHES	
	Short term	Medium term [~ asap !]	Long term [beyond 2014]
LHC	Planned beams	Ultimate luminosity	Luminosity upgrades
Fixed Target (COMPASS)	4.3×10^5 spills/y ?	6×10^5 spills/y	
CNGS	4.5×10^{19} p/year	Upgrade ~ $\times 2$	
ISOLDE	1.92 μ A **	Upgrade ~ $\times 5$	
Future beams			> 2 GeV / 4 MW
EURISOL			1-2 GeV / 5 MW

Specific charges

- Assess the likely physics objectives of LHC upgrades and non-collider experiments from 2010 onwards, taking into account the likely objectives of other physics laboratories
- Analyse the capabilities of the various development and upgrade options of the overall CERN proton complex discussed by PAF to address these physics objectives, for each option and physics programme separately
- Identify any detector R&D that would be needed if these experimental objectives are to be realized
- Identify synergies of R&D with other CERN studies and projects, as well as with activities outside CERN

Reporting

- Report to the DG results from the above studies before the end of 2005. Subsequent discussions in the Executive Board should be helpful to define a priority orientation: **Clarify**
- Define a preferred scenario together with a suggested implementation schedule, staged in time, and provide a preliminary estimate of the necessary resources (budget, man-power and expertise) needed to carry out the corresponding experiments. A first presentation is expected by mid 2006 as an input for the critical decisions by the management in 2006 on a possible LINAC4. will initially be rather tentative and will ultimately be formulated, around 2010, using the findings of this working group and taking into account the global status of high-energy physics plans and projects
- To which should be added the Council Working Group on a possible roadmap for the future of European Particle Physics: **Symposium in February, Meeting in May**

To be discussed

- Our webpage:
<http://mlm.home.cern.ch/mlm/POFPA>
- Relations with other studies, e.g., ISS
- SPC (Peach)/RECFA(Akesson): Cavalli-Sforza, Webber, Heuer, Blondel, Bertolucci, Linde, Rondio, Aleksan, (Mangano)
- Dates: Oct 4th (Aymar), Sept 15th (Mangano re Villars@2pm), Oct 4th @ 2pm