

Minutes of the 2nd PAF working group meeting

04. July 2005

***** FINAL VERSION *****

Participants:

M. Benedikt, J. Ellis, R. Garoby (convener), R. Ostojic, F. Ruggiero, J. Wenninger.

R. Garoby presented the table of competences, where PAF is (without surprise) weak on FFAGs, and to a lesser extent on RCS.

The PAF webpage will hold all the links to CARE, HHH, EURISOL and others activities. A link to POFPA should also be present.

Last week J. Ellis was nominated as convener for POFPA. Presently only 3 others members of POFPA are already known : G. Rolandi (LHC upgrade), A. Ceccucci (Kaon physics) and M. Mangano (scient. Secr).

The installation meeting for PAF and POFPA took place on 28th June. The DG announced that the CERN council would from now on take an active role in guiding not only CERN but also the European high energy physics program. A strategy group of around 30 persons with representatives of the SPSC, LHCC, ECFA and member state representatives will be created. This group should also provide guidelines for the EU programs. The DG also repeated his priorities for CERN: first priority is the LHC including its potential luminosity upgrade, second priority is ILC / CLIC, third priority is the possible alternative scenario (neutrino facility, EURISOL, ...) if no linear collider is built at CERN. The outcome and recommendations of PAF/POFPA will be essential to guide decisions for all matters inside their mandates. The DG also insisted that it is important to provide staged scenarios based on regular funding. During the meeting R. Garoby insisted that a meeting should be organized with all members of PAF (and possibly POFPA), a proposal to which the DG agreed. R. Garoby also pointed out that some resources (financial and personal) would be required. The DG agreed to it within reasonable limits. After the meeting R. Garoby discussed this point with J.P. Delahaye and a special budget code will be made available for PAF.

F. Ruggiero announced the LUMI05 workshop (CARE-HHH-APD) that will address the LHC luminosity and injector upgrades. The workshop will take place from August 31st to September 3rd in Italy. W. Scandale, F. Ruggiero (organizers) and possibly R. Garoby will attend the WS.

R. Garoby gave a short summary of the NuFACT05 workshop.

1. β -beams: a lot of pressure builds up to go to a higher γ ($>$ SPS reach) which is detrimental to the Frejus experiment which is not far enough.
2. p-driver for nufact : a recent optimization yields an optimum energy of 5-10 GeV (s. Brooks – RAL). However, this depends strongly upon the pion production cross-section and certainly also from the scheme used in the muon front-end. HARP results, which are promised for the second half of 2005, should help clarify the first part of the analysis.
3. FFAG: there is a lot of activity around FFAGs. Some people even try to use it for high intensity proton machines, but it is not so clear where the advantage really is compared to more conventional accelerators.
4. “Ordinary” neutrino beams are still mobilizing a lot of particle physicists.
5. A scoping study to define the basic parameters of a NUFACT (p-driver, FFAG potential...) is starting now (http://www.lnf.infn.it/conference/nufact05/talks/Plenary/Dornan_Plenary.ppt), involving all interested participants in the world CERN has no resources to put into this study, except maybe the possibility to re-frame the work done on targets, radiation... It is likely that the US proposal will emerge from this study. R. Garoby is the linkman at CERN for the scoping study. β -beams are not part of the scoping study.

Concerning the work organization of PAF, R. Garoby suggests to first set the basics:

1. revisit the SPSC recommendations from Villars 04 (M. Mangano ?)
2. revisit the conclusions of the HIP WG (M. Benedikt).
3. review the (alarming !) status of the magnets in the existing accelerators (KH Mess).
4. recall the motivations for a 1 TeV injector (F. Ruggiero, after LUMI05).
5. recall the ‘wishes’ of the LHC physics community (G. Rolandi).

Some of those topics may be discussed in joint meetings of POFPA and PAF, in particular concerning the LHC upgrade.

Miscellaneous:

- The next meetings will take place on 18th July and 15th August (16:00).