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SPSC M/425

Date : March 11, 1986

MEMORANDUM

To : SPSC Committee

Copy to : C. Rubbia

J. Dowell

From : LAA Collaboration

R. Klapisch

Subject : Response of the LAA Collaboration to the memorandum from UA1 dated March 7, 1986, concerning the Lepton Asymmetry Analyser proposal (SPSC/P200, Addendum 1, March 3, 1986)

The answers to the above mentioned memorandum follow.

Points of disagreement:

1. To our knowledge, the present UA1 muon trigger is as follows: i) μ (single): $\theta \geq 32^\circ$; ii) $(\mu \bullet \text{jet})$: $\theta \geq 27^\circ$; iii) $(\mu \bullet \text{electron})$: $\theta \geq 21^\circ$; iv) $(\mu \bullet \mu)$: $\theta \geq 14^\circ$, at a luminosity $L \approx 2.5 \times 10^{29} \text{ cm}^{-2} \text{ sec}^{-1}$. With ACOL ($L \approx 4 \times 10^3 \text{ cm}^{-2} \text{ sec}^{-1}$) we are prepared to grant $(\mu \bullet \mu)$ trigger at $\theta \geq 14^\circ$. This is, after all, the only point where UA1 would loose with respect to the present configuration.
2. Figure 2.3 of our Addendum shows that the iron coverage provided by LAA is better than the present UA1 situation. For particles bent in such a way to cross only T1, the momentum is so low that they are excluded at the first trigger level. Therefore, the proposed iron configuration is optimal.

Conclusion: we do not see any point of disagreement.

Conditions of acceptance:

3. We agree: in fact, for us there is no "minimum" requirement. We want to be 100% ready for the first ACOL run. To our knowledge, this corresponds to October 1987. In any case, a proper staging of the LAA installation is under discussion [E.Radermacher (UA1), F.Rohrbach (LAA), J.B. Jannaret and B. Danner (SPS Division) and R.Klapisch (Research Board)].

4. To our knowledge, the need for new CALCOMs is a consequence of the LAA installation. We therefore agree that the money necessary (≈ 4 MSFr.) to provide UA1 with these new systems has to be considered an additional sum to be granted for LAA installation in LSS5.
5. In our Addendum we already foresee 50 KSFr. for the remounting of UA1 muon detector. The modifications on the fast trigger electronics, as far as we understand, seems to be a minor detail to be mutually agreed.
6. The new forward calorimetric system should be such as not to loose any of the present UA1 acceptance. This can be done without taking out any solid angle from our proposed set-up. We are prepared to discuss the details of this point.
7. R. Klapisch agreed to take care of this.
8. Our working hypotheses are that the UA1 data-taking rate will be of the order of 10 Hz, and our own of the order of 1 Hz.
The key point is, in any case, the dead time. LAA should be granted 10% of the data-taking power of UA1.
9. The basic agreement is that we provide UA1 with the LAA fully analyzed events triggered by them. UA1 will provide us their fully analyzed events triggered by LAA. Common triggers will be matter of discussion and collaboration.
10. We agree and we are glad to accept E. Radermacher to be in charge of this job.
11. If UA1 data-taking is continued for a reasonable amount of time (example: 1988+1991) we have no further claim on the UA1 detector.
12. The final agreement should be reached by the end of March at the latest. Otherwise, we are forced to withdraw our proposal, due to lack of time for LAA to be ready by October 1987.