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CERN LIBRARIES, GENEVA

M E M O R A N D U M

CM-P00040503

To: ISR Committee  
From: G. Giacomelli - University of Bologna  
Subject: Future running at I4

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Our approved experiment R420 involves comparison of proton-proton and antiproton-proton interactions at several energies with reasonable luminosities. It is essential that the detector be kept as nearly identical as possible from run to run to make a really good comparison.

The data taken in October 1981 were satisfactory for elastic scattering at small  $t$  and for a study of "quasi"-minimum bias events (67% of the whole solid angle). We are presently analyzing these events at CERN and in Bologna.

Relatively high antiproton-proton luminosities are needed to perform the approved program of elastic scattering around  $t = 2 \text{ (GeV/c)}^2$ , for real minimum bias trigger and for special triggers.

We are also involved in some physics aspects of R419, which require a large enough sample of data, many still to be taken in 1982.

We request that these requirements are kept in mind by the committee when allocating ISR time.