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CM-P00057621

For E.C.C.

11th January 1966

PROPOSALFOR THE SEARCH FOR UNSTABLE BOSONS IN THE MASS RANGE 2.3 - 3 GeV  
USING THE EXISTING BOSON SPECTROMETER IN IMPROVED d<sub>21</sub> BEAM

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By the end of January 1966, the spectrum of bosons up to  $M = 2.3$  GeV will probably have been investigated for peaks of  $\sigma \geq 50$  microbarns. Higher masses cannot be studied with the present 12 GeV/c d<sub>21</sub> beam; the beam has been originally designed for 10 GeV/c.

WE PROPOSE:

- 1) to try to improve the d - beam intensity during the month of February, so as to obtain about  $5 \times 10^4 \pi$  /burst in the momentum range 15 to 18 GeV/c;
- 2) to run two weeks before the shutdown with the aim of obtaining 500,000 triggers (100,000 events in mass histograms) in the boson mass range  $2.3 < M < 3.0$  GeV. These statistics will be possible if we have an integrated number of  $1 \times 10^{17}$  protons on target 1 during the two foreseen weeks for the counter experiments in March;
- 3) we would appreciate it very much if the PS machine time could be allocated in terms of the above integrated number of protons, rather than the number of shifts.