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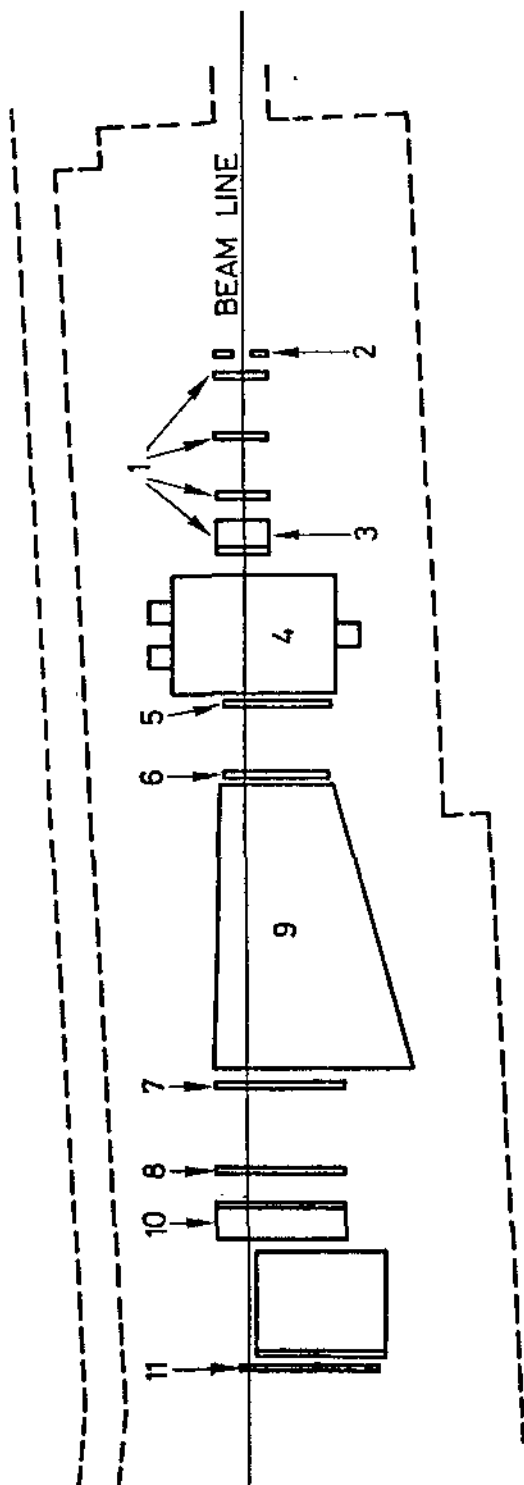
PROPOSAL TO STUDY  $\Omega^-$  DECAYS AND  
THE  $\Sigma^- \rightarrow ne\bar{\nu}$  DECAY MODE IN THE HYPERON BEAM

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SUMMARY

We propose to run the hyperon beam to study  $\Omega^-$  decays in the WA2 apparatus. With about 20 days of data taking we expect to collect  $750 \pm 250 \Omega^- \rightarrow \Lambda^0 K^-$  and  $200 \pm 60 \Omega^- \rightarrow \Xi \pi$ . We also propose a 10 day run on the decay  $\Sigma^- \rightarrow ne\bar{\nu}$  which would yield about 5000 leptonic decays.



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|---------------------------------|----------------------------------|
| 1 FRONT DRIFT CHAMBER TELESCOPE | 5-8 BACK DRIFT CHAMBER TELESCOPE |
| 2 GAMMA HODOSCOPE               | 9 GAS CERENKOV                   |
| 3 TRANSITION RADIATION DETECTOR | 10 LEAD GLASS DETECTOR           |
| 4 SPECTROMETER MAGNET           | 11 MUON CHAMBER                  |

Experiment WA2: Leptonic Decays of Hyperons