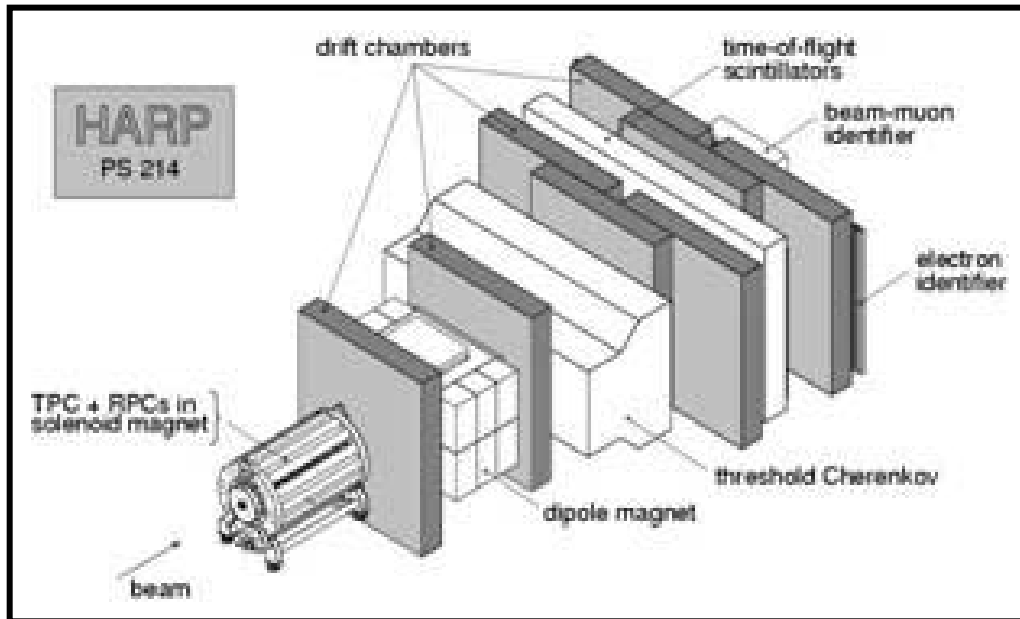
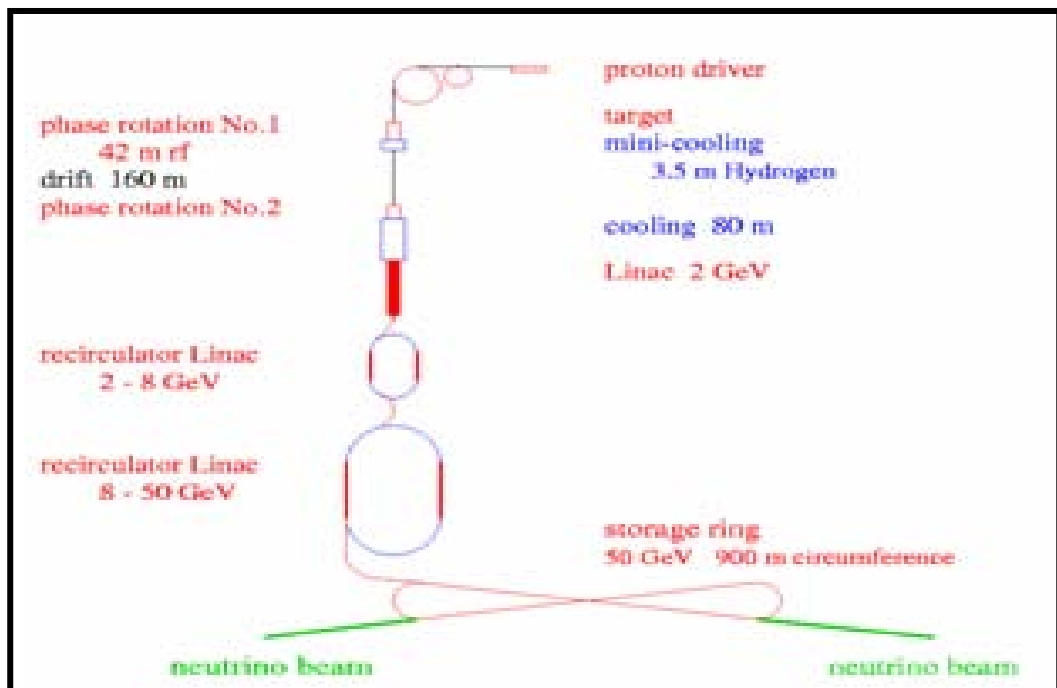


Oxford is participating in the HARP experiment at the CERN PS. This will measure secondary hadron production by protons of 2 to 15 GeV in a variety of nuclear targets. These data are essential for the design of a future Neutrino Factory.



The future Neutrino Factory will accelerate muons, produced in the decay of pions, to an energy of approximately 50 GeV, when they will be stored and allowed to decay, thus producing an intense neutrino beam.



The muons produced in the pion decays have too large a spread in energy and angle to match the input of the accelerator. They must therefore be “cooled”. The only feasible technique seems to be ionisation cooling. The drawing shows a potential layout for the International Muon Cooling Experiment (MICE) in which Oxford is participating. Reduction in angular spread is obtained by slowing down of the muons in liquid hydrogen, followed by acceleration in Radio Frequency cavities.

