LKB

HELION 02
International Workshop on Polarized 3He Beams and Gas Targets and Their Applications

PHIL (FP5)

Principle of gas polarisation for MRI:

- ultra-pure ^{3}He gas is flown through OP cell (acquires nuclear polarisation M_{OP})
- polarised gas is extracted from OP cell and accumulated at increasing pressure $P_{acc} \propto t$
  ideally (i.e. with no relaxation losses) : $M_{acc}=M_{OP}$
- when required ^{3}He ***dose*** is obtained, it is:
  1- mixed with neutral gas if desired (e.g. 0.5 litre N_2)
  2- extracted into the bag (reversing compressor rotation)
  3- delivered to be inhaled from the bag