LKB

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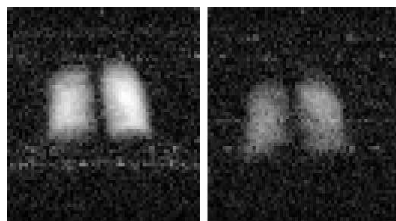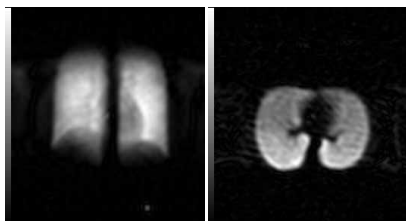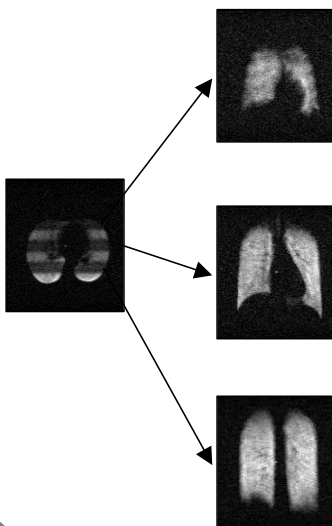and Their Applications

PHIL (FP5)

Lung imaging (0.1T, U2R2M)

RARE
(single echo train)
¬ 1997
8 cm^3 He3, M~5%

¬ 1999
20 cm^3 He3, M~10%

FLASH
¬ 2001(3 cm)
75 cm^3 He3, M~20%

400 cm^3 He3, M~12%
2002 (1 cm) ↓

Other applications

• Polarised neutron spin filters :
a simple system may produce large M
in He3-He4 mixtures
Peristaltic compression OK up to
    2 bar (1 stage) or >5 bar (2 stages)
  …remains to be tested with polarised gas

• Diffusion in porous materials
(other than lungs!)
e.g. silica aerogels, model systems to study phase
transitions in mildly confined / disordered media
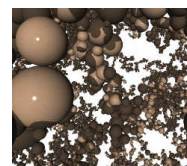
Porosity 98%
Density 39.6 g/l
Surface 22.9 m^2/cm^3