

Abstract Submitted
for the DAMOP07 Meeting of
The American Physical Society

An open-access, low-field MRI system for human lung imaging with hyperpolarized ^3He LEO TSAI, MATTHEW ROSEN, CHIH-HAO LI, ANA BATRACHENKO, ROSS MAIR, RONALD WALSWORTH, Harvard-Smithsonian — The human lung is exquisitely sensitive to gravity and posture. However, conventional high-field magnets used for hyperpolarized noble gas MRI of the human lung restrict subjects to lying horizontally. We have built an open-access, low-magnetic-field (<5 mT) MRI instrument which allows freedom of body positioning while providing high-resolution lung images. We have performed ^3He lung MRI of human subjects in both the supine and upright positions; and used these images to make the first-ever maps of the heterogeneous distribution of oxygen in the human lung in an upright position.

Ronald Walsworth

Date submitted: 02 Feb 2007

Electronic form version 1.4