

MAR07-2006-000502

Abstract for an Invited Paper  
for the MAR07 Meeting of  
the American Physical Society

### **Superfluidity of grain boundaries and supersolid behavior**

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We have found that, at the liquid-solid equilibrium pressure  $P_m$ , supersolid behavior is due to the superfluidity of grain boundaries in solid helium [1]. After describing this experiment and reviewing some of the related theoretical work [2], we discuss the possibility that, at larger pressure ( $P > P_m$ ), grain boundaries could also explain the supersolid behavior which was observed with torsional oscillators [3-6].

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