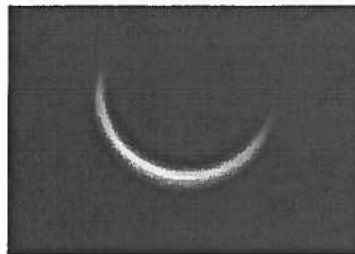




WEEKLY CALENDAR

23 January 2006

Department of Physics and Astronomy
202 Nicholson Hall
Louisiana State University and A&M College
Baton Rouge, Louisiana 70803-4001
Tel: 225-578-2261 / Fax: 225-578-5855
<http://www.phys.lsu.edu>



MAX GOODRICH DISTINGUISHED SPEAKER SERIES

Hosts: Drs. Ilya Vekhter & Phil Adams

DOUGLAS D. OSHEROFF, PhD
Stanford University
1996 Nobel Laureate in Physics

Public Lecture:

4:00PM / Monday, 23 January 2006 / Room 130 Howe-Russell
please note change in room number

"How Advances in Science are Made"

Special General Seminar:

3:40PM / Tuesday, 24 January 2006 / Room 109 Nicholson
[Refreshments served at 3:15pm in Room 229 Nicholson]

"The Effects of Impurities on the Superfluid ^3He Phase Diagram"

Impurity scattering does little to s-wave BCS states (superconductors), but the same is not true for unconventional BCS states in which the Cooper pairs possess a non-zero orbital angular momentum. To complicate matters, a manifold of BCS states with a particular value of the orbital angular momentum is infinitely degenerate at T_c , and the effects of impurity scattering can, in principle, stabilize a state which is not stable in the bulk. All this is generally irrelevant to superconductors because the ordered state generally must have the same symmetry as the background lattice, but in the case of superfluid ^3He , there is no background lattice. The speaker will describe a series of experiments which suggest that the presence of even very low density silica aerogels does indeed stabilize a new phase near to T_c , whose identity has yet to be determined.

Publications:

J.A. Heras and R.F. O'Connell, "Generalization of the Schott energy in electrodynamic radiation theory." *Am. J. Phys.* 74, pp. 150-151 (Feb. 2006).

Announcement:

The Steering Committee meeting has been rescheduled for January 31st, at 3:40pm in Room 201 Nicholson.