

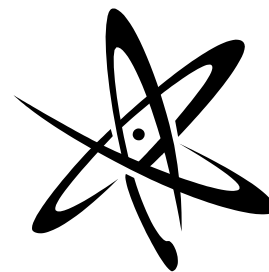
University of Washington • Department of Physics

PHYSICS COLLOQUIUM

Dan Stamper-Kurn (UC Berkeley)

“Magnetic phases of a dipolar spin-1 quantum gas ”

Seminars



Nov 17th-21st

Monday, November 17th, 2008

4:00 PM, Ronald Geballe Auditorium, Rm. A-102

Abstract: A spinor Bose gas, composed of atoms which can occupy all states of a non-zero hyperfine spin, can manifest both the phenomena of magnetism and of superfluidity, both of which result from long-range coherence of the spinor wavefunction and also result from symmetry breaking. Having developed techniques for sensitive in-situ measurements of the magnetization in a spin-1 rubidium gas, we have explored both its dynamic and static properties. Our findings include the observation of spontaneous symmetry-breaking upon the traversal of a quantum phase transition, the characterization of a near-quantum-limited spin amplifier based on coherent atomic scattering, the establishment of the importance of magnetic dipole interactions, and, finally, the discovery of an unforeseen low-temperature crystalline phase of this quantum gas.

Tuesday, November 18th, 2008

CMA Seminar

4:00 PM, Rm. C-421, PAT

Michael Elbaum, Weizmann Institute

“Getting to the center of the cell: a thermodynamic path to the nucleus, or, how to build a pump with no moving parts ”

Wednesday, November 19th, 2008

General Exam

8:00 AM, Rm. C-520, PAT

Jonathan Walsh, UW Physics

Thursday, November 20th, 2008

Center for Theoretical Quantum Dynamics

11:00 AM, Rm. B-417, PAB

John Lawson, NASA Ames

“Simulations of Amorphous Carbon”

Astronomy Colloquium

4:00 PM, Rm. A-102, PAA

Crystal Brogan, NRAO

“Searching for the Secrets of Massive Star Birth”

Friday, November 21st, 2008

Particle Astrophysics Seminar

3:30 PM, Rm. A-114, PAA

R.J. Wilkes, UW Physics

“Super-K and T2K updates ”

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