

• *University of Washington* • *Department of Physics* •

PHYSICS COLLOQUIUM, partially funded by the GSFEI

**Steven Girvin**

Yale University

**“Circuit QED: Atomic Physics and Quantum Optics with Superconducting Electrical Circuits”**

**Monday, 5/14**

4:00 P.M., Ronald Geballe Auditorium, A-102, PAA

Reception at 3:45 P.M. in the lobby

**Abstract:**

Recent experimental breakthroughs have led to the construction of artificial superconducting ‘atoms’: nanoscale objects containing nearly one trillion aluminum atoms coherently acting in concert. When placed inside a resonant cavity, these ‘atoms’ can strongly interact with microwaves and can be used to detect and generate individual microwave quanta. This talk will give an elementary introduction to recent remarkable experiments in the Schoelkopf and Devoret labs at Yale. In addition to being a new test bed for quantum mechanics and quantum optics in the ultra-strong coupling regime, this system has many promising features for quantum computation.

**Monday, 5/14**

**INT Seminar** Brian Fujikawa, Lawrence Berkeley Laboratory  
10:30 A.M., Rm. C-421, PAT “Measurement of the Superallowed Strength of  $^{10}\text{C}$ ”

**Physics General Exam** Eric Thrane, UW Physics  
1:30 P.M., Rm. C-520, PAT

**Tuesday, 5/15**

**INT Seminar** Brian Fisher, National Institute of Standards and Technology  
9:30 A.M., Rm. C-421, PAT “First Observation of the Radioactive Decay of the Neutron”

**Physics General Exam** Baruch Feldman, UW Physics  
10:00 A.M., Rm. C-520, PAT

**INT Seminar** Tim Chupp, University of Michigan  
11:00 A.M., Rm. C-421, PAT “Cold Neutron Beam, Measurements of Polarized Neutron Decay Asymmetries”

**Particle Astrophysics Seminar** Kaustubh Agashe, Syracuse University  
2:30 P.M., Rm. C-421, PAT “Warped Compactifications: Flavor, Unification and Dark Matter”

**Condensed Matter (CMA) Seminar** David Cobden, UW Physics  
4:00 P.M., Rm. C-421, PAT “Metal-Insulator Transition in Vanadium Oxide Nanostructures”

**Chalkboard Club Seminar** Subramanian Ramachandran, UW Physics  
5:00 P.M., Rm. C-520, PAT “Thermodynamics of Ne Adsorbed on Carbon Nanotube Bundles”

**Wednesday, 5/16**

**INT Seminar** Fred Wietfeldt, Tulane University  
10:30 A.M., Rm. C-421, PAT “aCORN: a Precision Measurement of the Electron-Antineutrino Correlation in Neutron Decay”

**Thursday, 5/17**

**INT Seminar** Zhen-Tian Lu, Argonne National Laboratory  
9:30 A.M., Rm. C-421, PAT “Laser Trapping of  $^6\text{He}$  – a Study of Nuclear Structure and Decay”

**INT Seminar** Ferenc Glueck, University of Karlsruhe  
11:00 A.M., Rm. C-421, PAT “ $O\alpha$  Radiative Correction Calculations to Neutron and Nuclear Beta Decay”

**Astronomy Colloquium** Rogier Windhorst, Arizona State University  
4:00 P.M., Rm. A-102, PAT “Galaxy Assembly and Super Massive Black Hole Growth: Did They Go Hand-in Hand and Who Ended Reionization?”

**Friday, 5/18**

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*seminars*

*May 14-18, 2007*

**University of Washington Physics Seminars Continued...**

**Friday, 5/18**

**Physics Final Exam**                      Michael Endres, UW Physics  
8:30 A.M., Rm. C-520, PAT    “Topics in Lattice Field Theory”

**INT Seminar**                              Jerry Miller, UW Physics  
10:30 A.M., Rm. C-421, PAT    “Charge Density of the Neutron”

**Physics General Exam**                  Can Kozcas, UW Physics  
11:30 A.M., Rm. C-520, PAT

**Condensed Matter (CMA) Seminar**    Ethan Minot, Oregon State  
2:00 P.M., Rm. C-421, PAT    “Biosensing with Carbon Nanotube Devices in Solution”