

## PHYSICS COLLOQUIUM

*Partially funded by the GSFEI*

Joop Schaye

Institute for Advanced Study

“THE CHEMICAL ENRICHMENT OF  
THE INTERGALACTIC MEDIUM”

**SEMINARS**  
*January 26-30, 2004*

### Monday, January 26, 2004

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

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

**Abstract:** The enrichment of the intergalactic medium (IGM) with heavy elements provides us with a fossil record of past star formation and a unique laboratory to study galactic feedback processes. I will present some results from numerical simulations of enrichment by galaxies, but the focus of my talk will be on the observed distribution of intergalactic metals. We have developed new statistical techniques for analyzing quasar absorption spectra and applied them to an unprecedented sample of high-quality observations. I will present results from this new study, including the first measurements of the distribution of metals in the diffuse IGM as a function of density and redshift. Finally, I will present evidence for the existence of a very large population of compact, highly enriched gas clouds.

### Tuesday, January 27, 2004

#### **Particle Theory Seminar**

2:30 P.M., Rm. C-421, PAT

Daniel Z. Freedman, MIT

“FAKE SUPERGRAVITY AND DOMAIN WALL  
STABILITY”

### Thursday, January 29, 2004

#### **Special Particle Theory Seminar**

1:30 P.M., Rm. C-421, PAT

James Bjorken, SLAC

“THE CLASSIFICATION OF UNIVERSES”

#### **Astronomy Colloquium**

4:00 P.M., Rm. A-102, PAA

Walter Lewin, MIT - X-Ray Astronomy Group

“X-RAY ASTRONOMY- THE EARLY PIONEERING  
YEARS”

#### **Career Development Org (CDO) Seminar**

4:30 P.M., Rm. C-520, PAT

Philipp K. Janert, UW Physics PhD  
& General Specialist for Non-Trivial Problems at Amazon.com  
“FROM THE TRENCHES”

### Friday, January 30, 2004

#### **Particle Astrophysics Seminar**

3:30 P.M., A-110 PAA

TBA