



# Midwest Astrochemistry Meeting 2008

## Schedule

### Friday, 7 November 2008

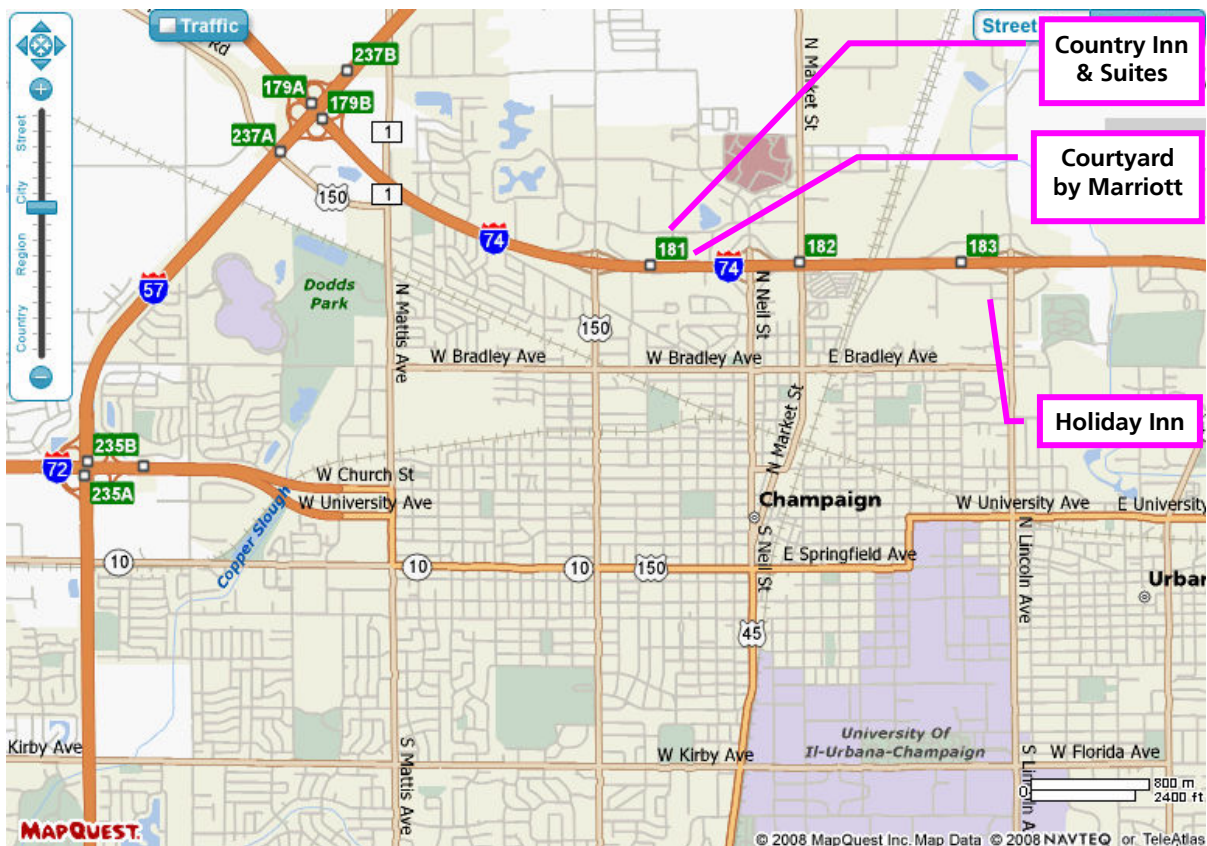
The poster session will be held in the lobby of the National Center for Supercomputing Applications (NCSA) building at the north end of the UIUC campus. The registration table will open at 5 PM, at which time posters can be hung. Pizza and beverages will be available starting around 6 PM. The poster session will begin whenever people are ready to begin!

### Saturday, 8 November 2008

The oral sessions will be held in room 116 of Roger Adams Laboratory on the east side of the central part of the UIUC campus. The building's northeast door will be unlocked by 8 AM. The first session will begin at 8:30 AM. There will be a break from 10:00-10:30 AM (with coffee and snacks), and lunch will be from 12:00-12:45 PM (box lunches provided). The meeting is scheduled to adjourn at 2:30 PM.

(see next two pages for maps)

## MWAMo8 – Area Map



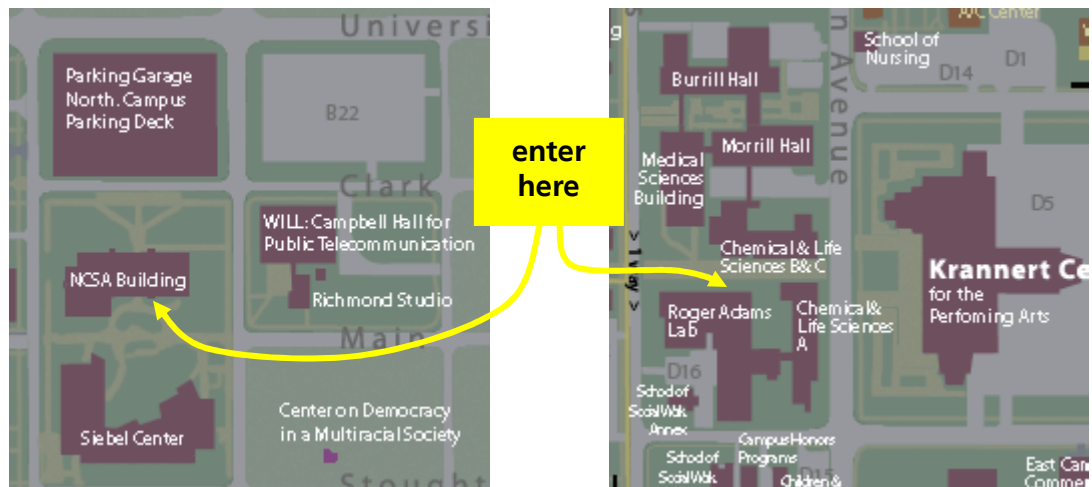
The quickest access to campus is to use exit 183 from I74 to Lincoln Ave.

To reach the NCSA building, drive south on Lincoln to University Ave. Turn right (west) on University, then left (south) onto Goodwin. You may park in the parking garage on the right (B4) and or Lot B22 on the left.

To reach Roger Adams Laboratory, take Lincoln south to Illinois St. Turn right (west) onto Illinois St. You may park in the Krannert Center garage (D5) or in Lot D1 at the northeast corner of Goodwin and Illinois.

***PARKING:*** Unless the sign for the lot says otherwise, campus lots are open to public parking after 5 PM and on the weekend. Don't park at a meter.

# MWAMo8 – Campus Maps



download full UIUC campus maps from <http://illinois.edu/ricker/CampusMap>

## Poster Session – 7 November 2008

- P01 **Analysis of Ices Surrounding YSOs in Taurus and Rho Ophiuchi**  
*K. A. Van Brunt, M. L. Pastorius, E. L. Gibb, and S. S. Shenoy*
- P02 **Anion Chemistry in the Cold Cloud TMC-1**  
*Nanase Harada and Eric Herbst*
- P03 **The  $^{12}\text{C}/^{13}\text{C}$  Ratio in Diffuse Molecular Clouds**  
*A. M. Ritchey, S. R. Federman, and D. L. Lambert*
- P04 **Comparison of a Column Dependent Cosmic Ray Ionization Rate to Constant Cosmic Ray Ionization Rates in Diffuse and Dense Media**  
*Paul Rimmer and Eric Herbst*
- P05 **A Continuous Supersonic Expansion Discharge Source for the Production of Cold Molecular Ions**  
*Kyle N. Crabtree, Carrie A. Kauffman, and Benjamin J. McCall*
- P06 **Further Observations of Dust/Gas Stratification in the Disks of Young Stellar Objects**  
*D. Horne, D. Blake, E. Gibb, T. Rettig, and S. Brittain*
- P07 **High Resolution Spectroscopy of Molecular Ions: Development of an Instrument**  
*Andrew Mills, Kyle Ford, and Benjamin J. McCall*
- P08 **Interstellar HNCO, HOCN, and HCNO: Gas-grain Modeling Approach**  
*Donghui Quan and Eric Herbst*
- P09 **Interstellar NH in Translucent Sight Lines**  
*D. E. Welty, S. R. Federman, and N. P. Abel*
- P10 **A Laboratory Search for the Carriers of the Diffuse Interstellar Bands**  
*M. H. Stockett, M. P. Wood, and J. E. Lawler*
- P11 **Magnetized PDRs: M17 and the Orion Bar**  
*Eric Pellegrini, Jack Baldwin, and Gary Ferland*
- P12 **Matrix-Isolation Spectroscopy of Reactive Organic Species: Molecules and Reactions of Relevance to Interstellar Space**  
*Nicola J. Burrmann, Philip S. Thomas, Nathan P. Bowling, Laura A. Kopff, Caroline R. Pharr, and Robert J. McMahon*

- P13 **Millimeter-wave Rotational Spectroscopy of Polar Aromatic Compounds: Phenyl Radical ( $C_6H_5$ ), *ortho*-Benzyne (*o*- $C_6H_4$ ), Protonated Benzene ( $C_6H_7^+$ )**  
*Brian J. Esselman, Mitchell A. Daane, Jeffrey M. Slosarczyk, R. Claude Woods, and Robert J. McMahon*
- P14 **PDR Diagnostics with CLOUDY**  
*R. Xue and M. Huang*
- P15 **Quantum Chemical Studies of Ice-Bounds Reactions of Carbonyl-Containing Species (Formaldehyde, Acetaldehyde, and Acetone) with Ammonia**  
*David E. Woon, Lina Chen, and Dorothy J. Miller*
- P16 **A Survey of  $H_2$ ,  $^{12}CO$ , and  $^{13}CO$  in Diffuse Molecular Clouds**  
*Y. Sheffer, M. Rogers, S. R. Federman, N. P. Abel, R. Gredl, D. L. Lambert, and G. Shaw*
- P17 **Towards Acquisition of a High-Resolution Gas Phase Spectrum of  $C_{60}$  ~8.5  $\mu m$**   
*Brian E. Brumfield, Brian Siller, and Benjamin J. McCall*

## Schedule for Oral Sessions – 8 November 2008

- 8:30-8:35            **WELCOME**
- SESSION ONE — Chair:**
- 8:35-9:15        T01    **INVITED TALK – The Future of Astrochemistry**  
*Eric Herbst*
- 9:15-9:30        T02    **Chemistry of a Protoplanetary Disk with Grain  
Settling and Lyman  $\alpha$  Radiation**  
*Jeffrey Fogel, Tom Bethell, and Edwin Bergin*
- 9:30-9:45        T03    **Formation and Evolution of Molecules in Dense  
Clouds Formation Behind Shocks**  
*George Hassel, Eric Herbst, and Edwin Bergin*
- 9:45-10:00      T04    **The  $H_3^+$  +  $H_2$  Reaction: A Possible Mechanism for *para*-  
 $H_3^+$  Enrichment in the Diffuse Interstellar Medium**  
*Brian A. Tom, Michael B. Wiczer, Andrew A. Mills, Kyle  
N. Crabtree, and Benjamin J. McCall*
- 10:00-10:30      **BREAK**
- SESSION TWO — Chair:**
- 10:30-10:45      T05    **High Resolution Observations of Orion-KL: Insight  
into Its Chemical Complexity**  
*Douglas N. Friedel and Susanna L. Widicus Weaver*
- 10:45-11:00      T06    **The Implications of a High Cosmic-Ray Ionization Rate  
in Diffuse Interstellar Clouds**  
*Nick Indriolo, Brian D. Fields, and Benjamin J. McCall*
- 11:00-11:15      T07    **Photodesorption of Ices**  
*Karin Öberg, Ruud Visser, Ewine van Dishoeck, and  
Harold Linnartz*
- 11:15-11:30      T08    **Prebiotic Synthesis of Adenine. Hydrogen Atom  
Tunneling in the Virtual [1,7]-Sigmatropic  
Rearrangement of Monocyclic HCN-Pentamer**  
*Rainer Glaser, Jian Yin, Jingjing Zheng, and Donald G.  
Truhlar*

- 11:30-11:45 T09 **The Rotating Bipolar Outflow and Disk Structure of L1448 IRS2**  
*Woojin Kwon and Leslie W. Looney*
- 11:45-12:00 T10 **A Search for Interstellar Urea with CARMA**  
*H.-L. Kuo, L. E. Snyder, D. N. Friedel, L. W. Looney, B. J. McCall, A. J. Remijan, F. J. Lovas, and J. M. Hollis*
- 12:00-12:45 **LUNCH**
- SESSION THREE — Chair:**
- 12:45-1:15 **The Midwest Astrochemistry Consortium: Year One**
- 1:15-1:30 T11 **Studies of Cyanoacetylene Oligomers: Cyano-Substituted Cyclobutadienes, Dewar-Benzenes, and Benzenes**  
*Jessica L. Menke, Robert J. McMahon, Henning Hopf, and Jens-Uwe Grabow*
- 1:30-1:45 T12 **Synthesis and Spectroscopy of Highly-Unsaturated Carbon Chain Molecules: Species of Relevance to the Interstellar Medium and to Titan**  
*Christopher J. Shaffer and Robert J. McMahon*
- 1:45-2:00 T13 **3-D Submillimeter Spectroscopy for Astrophysics and Spectral Assignment**  
*Sara Fortman, Christopher Neese, Ivan R. Medvedev, and Frank C. De Lucia*
- 2:00-2:15 T14 **Using Long-Range TST for Predicting the Rate Constants of Barrierless Reactions at Low Temperatures**  
*Yuri Georgievskii and Stephen J. Klippenstein*
- 2:15-2:30 T15 **The Water D/H Ratio in Molecular Outflows in Orion BN/KL**  
*Shiya Wang, Edwin A. Bergin, and René Plume*