

Minnesota Microscopy Society

Local affiliate of the *Microscopy Society of America*
and the *Microbeam Analysis Society*



Newsletter

October 2009

Minnesota Microscopy Society – Sigma Zeta Joint Meeting

Date Tuesday, October 27, 2009

**“NASA’s Genesis and Stardust Missions:
Bringing the Sun and Comets to Earth”**

Dr. Russ Palma, Professor

Schedule

- 4:30 – 5:30 PM Social hour with nibbles
- 5:30 – 6:15 PM Dinner – Buffet
- 6:15 – 6:30 PM “About” Sigma Zeta & MMS
- 6:30 – 7:30 PM Speaker



Location

Bethel University
Eastlund Room, Community Life Center
3900 Bethel Drive, St. Paul, MN 55112

Directions

See newsletter Pages 3-4, or go to...

http://www.bethel.edu/special-events/campus_map.htm

Buffet

- | | |
|--|---|
| Italian Sausage Lasagna | Punch Royale |
| Breadsticks and Butter | 2% and Skim Milk available upon request |
| Tossed Garden Salad | Iced Water |
| Fresh Fruit Platter | Regular & Decaf Coffee |
| Dutch Apple, Blueberry, French Silk Pies | |

Registration:

The cost of the meeting will be \$25 for MMS members, \$35 for nonmembers, or \$25 when joining MMS as part of meeting attendance. **Reservations must be made no later than 11:59pm, Wednesday, October 21st.** Register by e-mail (preferred), to Bede Willenbring at reservations@mnmicroscopy.org, or by phone at 651-236-5470. Include your name, company, phone number, and email address.



***“NASA’s Genesis and Stardust Missions:
Bringing the Sun and Comets to Earth”***

Dr. Russ Palma, Professor

**Department of Physics and Astronomy,
Minnesota State University Mankato**

School of Physics and Astronomy, University of Minnesota

Abstract:

Understanding the solar system's origin and evolution requires knowledge of the nebular starting composition. NASA has had two recent sample return missions (the first since Apollo 17 in 1972) addressing this question. The Genesis Mission employed materials optimized to collect solar wind ions for over two years, returning to Earth more dramatically than intended on September 8, 2004. NASA’s Stardust Mission traveled through the tail of Comet Wild-2, successfully returning collected particles in an extraordinarily low density material, aerogel, on January 15, 2006. In this talk I will present an overview of these two missions, the role of my research group, and the exciting discoveries being reported.

Bio:

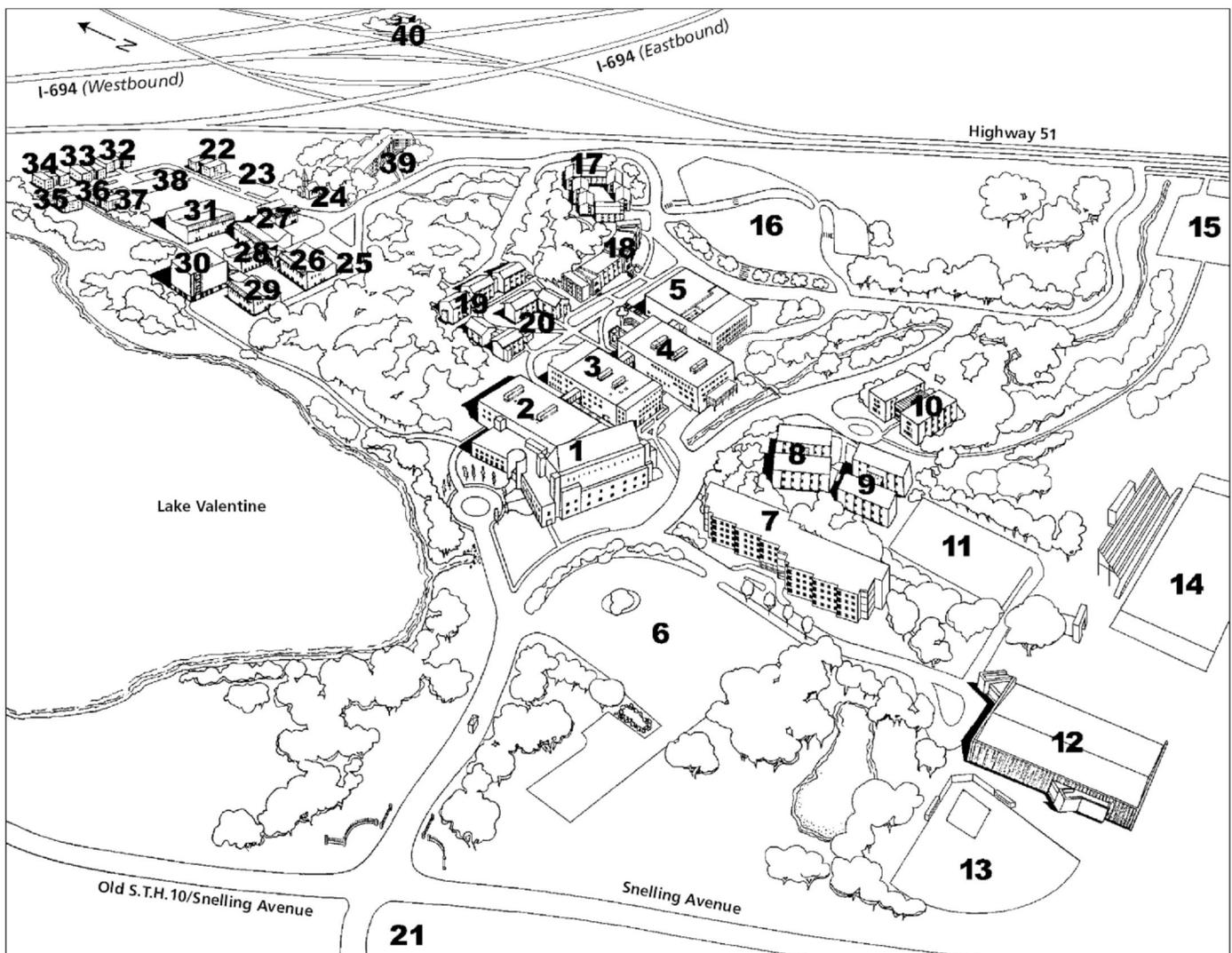
Dr. Russell Palma received his B.S. in astrophysics from Indiana University magna cum laude and Phi Beta Kappa in 1974. His Ph. D. in Space Physics and Astronomy is from Rice University in Houston where he did research with lunar samples and meteorites at NASA-Johnson Space Center. In 1980 he joined the faculty at Sam Houston State University in Huntsville, TX and was an adjunct faculty at Texas A&M University. He eventually became Professor and Chairman of the Department of Physics at Sam Houston State for 8 years before research sabbaticals at UC San Diego and the University of Minnesota. In 2004 he accepted positions as Professor of Physics and Astronomy at Minnesota State University in Mankato, MN and as adjunct Professor of Physics at the University of Minnesota. His research involves analysis of a variety of extraterrestrial materials, and he is a member of the team that recently announced the discovery of a new mineral in an interplanetary dust particle. He is coauthor on over 60 publications, the recipient of many grants, and a member of the international consortia of scientists working on the NASA/JPL Genesis and Stardust Missions that are the topics of his presentation today.



Campus Map

Bethel University
3900 Bethel Drive
St. Paul, Minnesota 55112-6999

**BETHEL
UNIVERSITY**



Welcome to Bethel

Bethel University is located on a 231-acre lakeside campus of wooded, rolling hills in Arden Hills, Minnesota, a suburb of St. Paul. The campus has easy access to freeways and to the Minneapolis and St. Paul metropolitan area.

South End of Campus

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 Community Life Center
Benson Great Hall 2 Academic Center (AC) 3 Clauson Center (CC) 4 Hagstrom Student Services Center (HC) 5 Robertson Physical Education Center (RC) 6 West Parking Lot 7 Heritage Hall 8 Edgren Residence 9 Bodien Residence 10 Getsch Residence | <ul style="list-style-type: none"> 11 Heritage Hall Parking Lot 12 Sports and Recreation Center (SRC) 13 Hargis Park 14 Bremer Field/Royal Stadium 15 SoHo Parking Lot 16 East Parking Lots 17 Arden Village East Residences 18 Nelson Residence 19 Arden Village West Residences 20 Townhouse H Offices:
Health Services, Counseling Center 21 Ona Orth Athletic Complex |
|---|--|

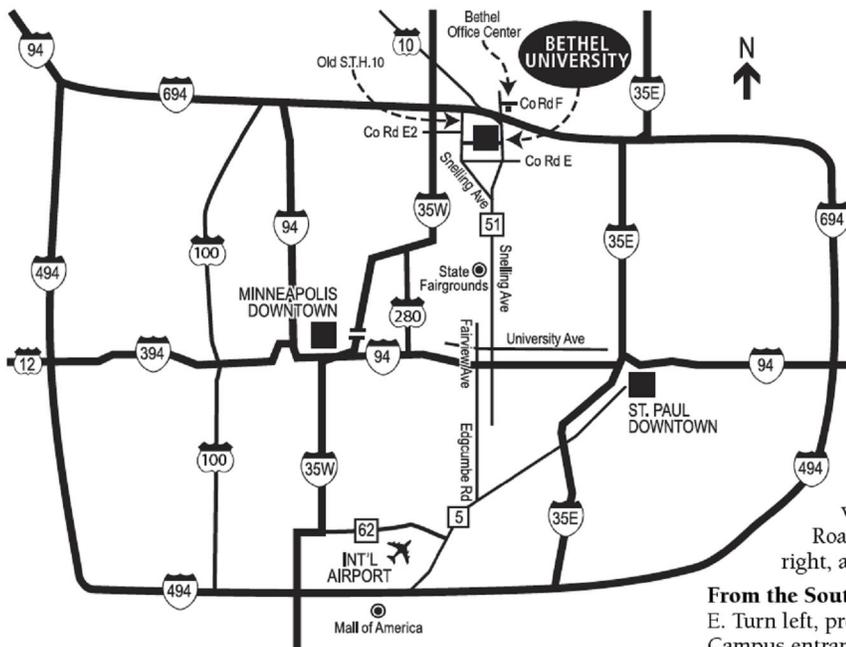
North End of Campus

- | | |
|---|--|
| <ul style="list-style-type: none"> 22 Chalberg Residence 23 Student and Visitor Parking 24 Scandia Church 25 Seminary Faculty Parking 26 Seminary Classroom Hall 27 Lundquist Library 28 Seminary Faculty Hall 29 Seminary Campus Center 30 Seminary Chapel 31 Recreation Hall 32 Turnwall Residence | <ul style="list-style-type: none"> 33 Danielson Residence 34 Wessman Residence 35 Widen Residence 36 Wingblade Residence 37 Child Development Center (CDC) 38 Resident Parking 39 Lissner Hall 40 Bethel Office Center
1306 West County Road F |
|---|--|

"Maps and directions to Bethel University" on other side.

Maps to Bethel University

Twin Cities Area Map



To Reach Bethel

From the North: Take I-35W south to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take the first left into campus. Or take I-694 east to the Snelling Ave. (Highway 51) turnoff and proceed to campus entrance on the right, one-quarter mile south. Note that Old U.S. Highway 10 connects with I-694 just west of the Snelling Ave. (Highway 51) turnoff.

From the West: During daytime hours, take I-694 east to the Snelling Ave. (Highway 51) turnoff and proceed to campus entrance on the right, one-quarter mile south. During evening hours, take I-694 east; turn south onto I-35W. Take I-35W to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

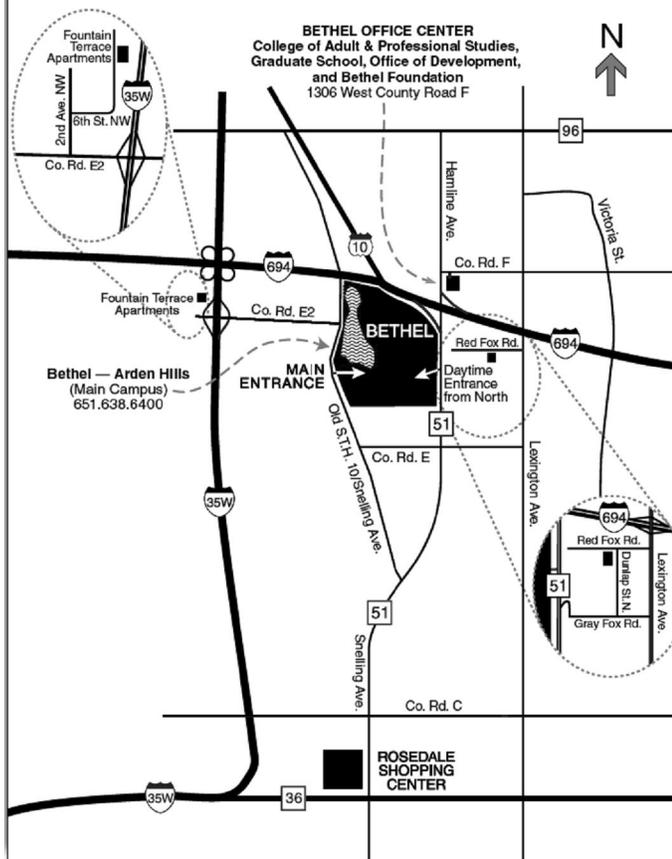
From the East: During daytime hours, take I-694 west to Snelling Ave. (Highway 51) exit, then make immediate left at the turn-around to go south onto Snelling Ave./Highway 51. Campus entrance is one-half mile on the right. During evening hours, take I-694 west; turn south onto I-35W. Take I-35W to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

From the South: Take Snelling Ave. north and exit at County Road E. Turn left, proceed to Old S.T.H. 10 (Snelling Ave.), and turn right. Campus entrance is on the right. Or take I-35W north to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

From Downtown St. Paul: Take I-35E north, go west on I-694 (see instructions for From the East).

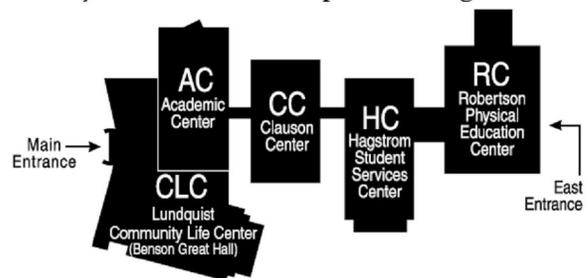
From Downtown Minneapolis: Take 94 east. Exit 280 north to 35W north. Take 35W north to the County Road E2 exit. Go east to Old S.T.H.10 (Snelling Ave.), turn right, and take first left into campus.

Local Area Map

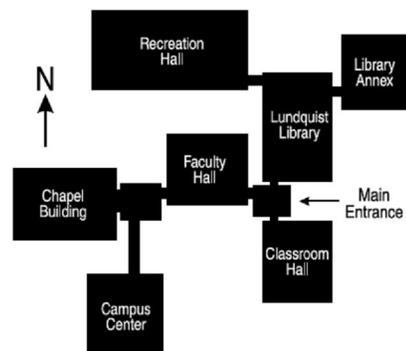


Main Building Layouts

University South End of Campus Buildings



Seminary Buildings (North End of Campus)



Volunteers Needed...

Science Museum of Minnesota Microscope Day!

Date: Saturday, November 14, 2009
Time: 1:00 to 4:00pm
Place: Science Museum of Minnesota
120 W. Kellogg Blvd., St. Paul, MN 55102
www.smm.org



The Science Museum and MMS have teamed up to create Microscope Day at the museum on Saturday, November 14, 2009 from 1:00 to 4:00 pm. The museum will advertise this event to the public. There are plans to have 10-12 microscope activities for public visitors, distributed among the core galleries throughout the museum. Activities might include magnifying water life, sand, microfossils, and everyday cool stuff.

Thank you to the ten MMS Members who have already chosen to volunteer! Five to ten more volunteers are needed to help museum visitors with activities. Would you consider demonstrating a microscope from your company? A Table-top SEM and special light microscopes would be amazing for public visitors to see and experience. Heather Cox (Science Museum Coordinator) is looking into museum security to help protect/store your equipment if you wish to bring it on Friday.

All MMS Volunteers receive free parking, free museum admission, and free vouchers (a museum thank you gift) that day. Also, please tell us if you have any other ideas for Microscope Day.

Thank you for helping to celebrate microscopy at the Science Museum and inspire future microscopists! No experience necessary. If interested in volunteering, please contact Ann T. Palmer (email: palme003@umn.edu; phone (w): 612-626-3708).





**5th Annual Minnesota Nanotechnology Conference
University of Minnesota
November 17th-18th**

The 5th Annual Minnesota Nanotechnology Conference is happening November 17-18. This year's event offers presentations and discussions on topics including materials, magnetic structures & devices, spintronics, novel techniques in characterization, and organic photovoltaics as well as a reception and poster session after Tuesday's talks. The reception will be a wonderful opportunity to network, enjoy refreshments and view the poster exhibit while talking one-on-one with researchers about their work.

Registration is required to attend this conference. For complete details, schedule, and how to register visit <http://www.nano.umn.edu/conference2009/>.



**Tour of Boston Scientific Corporation
CRM Division**

Boston Scientific will be hosting a tour for MMS members on **Thursday, February 18th, 2010**. Our tour will be followed by a meal catered by Marinos (www.eatmarinos.com). Watch future MMS newsletters for additional info!

**Boston
Scientific**
Delivering what's next.™

Upcoming Events

October 27th

MMS/Sigma Zeta Joint Meeting, Bethel University

November 14th

Microscope Day, Science Museum of Minnesota

November 17th-18th

5th Annual Minnesota Nanotechnology Conference, U of M

February 18th

Boston Scientific (former Guidant in Arden Hills) Tour

March 18

MinnTS, Medtronic

May 7th

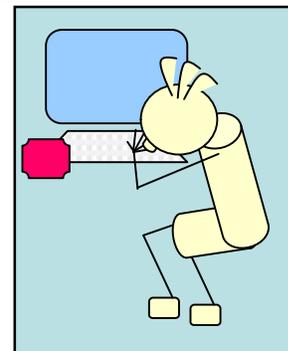
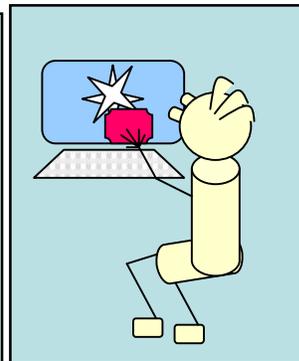
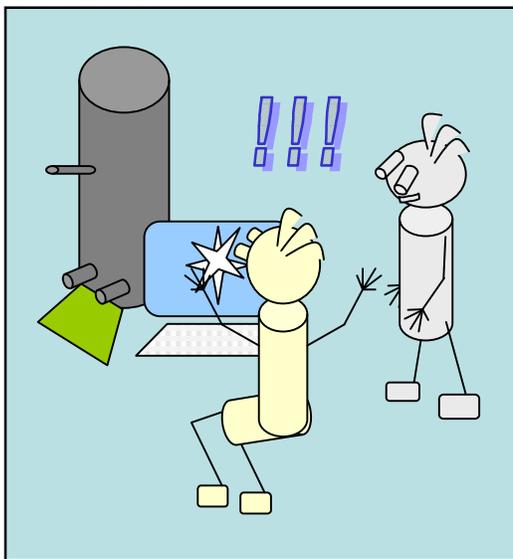
MMS Spring Symposium, Science Museum



Vendor Announcements:

If you are a local vendor with information to share, please contact either Jason Heffelfinger (jason.r.heffelfinger@medtronic.com) or Kathy Hough (katiu@frontiernet.net) for deadline and content guidelines.

Little Lab Laffs





Sustaining Members

Sustaining members are the backbone of financial support for the Society. These members make it possible for the Society to support Project Micro and to cover many expenses of the regular meetings and the Spring Symposium. We greatly appreciate the continued support of these individuals and corporations. To become a Sustaining Member, complete and return the MMS membership form at the end of the newsletter.

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Ted Weldon	Leeds Precision Instruments	612-546-8575

If any Sustaining Members are missing from this list, *please* contact either:

Jason Heffelfinger (763-514-1021, jason.r.heffelfinger@medtronic.com)

or Kathy Hough (651-353-8458, katiu@frontiernet.net).



MMS Patron Members

The Minnesota Microscopy Society would like to express sincere thanks to our Patron Members. These members provide financial support to the organization above the standard membership fee. This additional support makes it possible for MMS to maintain its financial well being. To become a Patron Member, complete and return the MMS membership form at the end of the newsletter.

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Reminder: Membership in MMS runs from January through December. Have you paid your 2009 dues?

Please visit the MMS website, www.MNmicroscopy.org, for a fill-and-print pdf version of the membership form...

Minnesota Microscopy Society – Membership Form

All microscopists are urged to support their Society at one of the membership levels offered below. Often, supervisors will support MMS memberships out of their project budget because they recognize that it is a very inexpensive way to maintain and increase the skills of their microscopists. If you have been a member over the years and recognize the value of MMS to the community of microscopists it serves, consider upgrading your membership this year to the patron or sustaining level. Thank you.

Name _____ **Dr** _____ **Mr** _____ **Ms** _____ **Phone** (____) _____

Affiliation _____ **Position** _____

Address _____ **ZIP** _____

E-mail address _____

***A legible e-mail address is critical for delivery of your newsletter.
 Newsletters are sent via email only.**

Check here _____ if you do NOT want your name and address to appear in the Society directory.

Are you an MSA member? _____ MAS Member? _____ Other Professional groups? _____

Student (\$5) _____ Basic (\$10-\$24) _____ Patron (\$25-\$99) _____ Corporate Sustaining (\$100-) _____

Payment: _____ Check _____ Visa _____ Mastercard _____ American Express

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Signature (for credit card payment): _____

Make checks payable to MMS and mail to our Treasurer:

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