

The Dialog

September 2003

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Fall Meeting: Our Galaxy Near & Far

The Fall meeting of the SOS/AAPT will be held at Xavier University on Saturday, October 11, 2003. It will be a joint meeting with the TriState Physics Teachers. The title of the meeting is "Our Galaxy Near and Far". We have two speakers lined up for this meeting. Dr. Fulvio Melia of the University of Arizona will present "The Black Hole at the Center of Our Galaxy". Here is the abstract of his paper:

Could Einstein have possibly anticipated directly testing the most captivating prediction of general relativity, that there exist isolated pockets of spacetime shielded completely from our own? Now, almost a century after that theory emerged, just such an entity, with mass of about three million suns, has been found lurking at the center of our galaxy, the Milky Way, in the form of a supermassive black hole. Excitement is mounting in the astronomical community with the growing realization that we are now on the verge of actually seeing this exotic object within the next few years.

Dr. Melia is a professor of astrophysics at the University of Arizona. He recently published a book on this topic. The book is written for general audience.

Dr. Heidrun Schmitzer of the Physics Department at Xavier will give a talk "Dark Sun – The Eclipse of the Sun and its Observation". Here is the abstract of her paper:

I observed the eclipse of the sun in August 1999 in Europe and since then wanted to experience this impressive moment again. This opportunity will arise in August 2017 when an eclipse will pass a little bit south of Ohio. This eclipse will be a "replica" of the eclipse I watched 18 years ago. Because of their periodicity eclipses can be predicted and, just as importantly, projected backwards in time and may help historians to date certain events in the time period before our calendar was introduced. I will also point out some optical phenomena which accompany each eclipse so you

are prepared for your own next eclipse adventure!

There will also be a session for contributed papers, so please think of something you would like to present. This could be the results of your current project, or something you and your students have been working on, or just some ideas you have about teaching physics. The typical format for contributed papers includes ten minutes for presentation and two minutes for questions. The Xavier Physics Department has overhead projectors, slide projectors, and an LCD projector with computer hook-up for Power Point presentations. You must submit an abstract of your paper by **October 3**. Please specify what A-V equipment you will need. You may send it to:

Stephen Yerian
Department of Physics
ML 4111
Xavier University
3800 Victory Parkway
Cincinnati, OH
45207-4111

You may also e-mail the abstract to yerian@xavier.edu

Your abstract must be in standard APS format. For

Fall Meeting Continued

more information on preparing abstracts, you may visit the SOS/AAPT web site at

www.physics.ohio-state.edu/~aubrecht/sosaapt.html

Because this is a joint meeting with the Tri-State Physics Teachers, there will be an extended "How I Do It" session in the afternoon. This is a time when college and high school teachers get together to share ideas, problems, demonstrations, and perhaps equipment. The Physics department just ordered a new *Segway HT*. If it arrives in time for the meeting, it will be the first demonstration in the "How I Do It" session. As an added incentive to high school teachers to attend the meeting, the registration fee for any high school physics teacher (or any other interested non-college teacher) will be paid by a grant from the Fred Hauck Fund. There will be no cost to attend if you are a high school physics (or other science) teacher! Please come and join us on this day.

The tentative agenda for the meeting is:

- 7:30 – 9:00 AM Registration and refreshments
- 9:00 – 10:00 AM Contributed paper session
- 10:00 – 11:00 AM Invited speaker: Fulvio Melia
- 11:00 – 11:59 AM Invited speaker: Heidrun Schmitzer
- 12:00 – 1:00 PM Lunch
- 1:00 – 1:30 PM Business Meeting
- 1:30 PM - ? How I Do It

We will not be providing box lunches. You may use the campus dining facilities (student cafeteria) which charges \$6 for all you can eat and is open from 11:00 AM to 2:30 PM on Saturdays. You may also go to Burger King which is in the new Gallagher Center (University Center) adjacent to the physics building. There are other fast food restaurants in nearby Norwood. You may also choose to bring your lunch.

If you plan to use the campus dining facilities, please let us know this ahead of time so that we may inform the dining staff of the approximate number for lunch (you can pay when you arrive at the meeting).

At this time, we are planning to hold the meeting in the Logan Chemistry building which is adjacent to the Lindner Physics building and easily accessible from it. We will register in Lindner so come to our building first. We are the last of the contiguous row of buildings along the east side of University Drive. A campus map can be found on Xavier's web site at www.xu.edu.

Directions to Xavier University

Traveling to Xavier going north on I-71

- Take exit #5 (Dana Avenue/Montgomery Road)
- Turn left onto Duck Creek Road
- At second traffic light, turn left onto Dana Avenue
- Go through four traffic lights, the last of which is at Ledge-wood/Woodburn
- As you proceed down the hill, turn right onto University Drive and park in the Faculty/Visitor's lot. You may obtain a visitor's permit at the Guard Gate
- The physics department is in Lindner Hall; please follow the

signs to SOS/AAPT.

Traveling to Xavier going south on I-71

- Take exit #5 (Dana Avenue/Montgomery Road)
- Turn right onto Dana Avenue
- Go through four traffic lights (including the exit light), the last of which is at Ledge-wood/Woodburn
- As you proceed down the hill turn right onto University Drive and park in the Faculty/Visitor's lot. You may obtain a visitor's permit at the Guard Gate
- Traveling to Xavier going north/south on I-75
- Take exit #7 (Route 562 Nor-

wood)

- Take 562 east to Route 42 exit (Reading Road)
- Take Reading Road south (right)
- At the third light turn left and then bear right onto Victory Parkway.
- Take Victory Parkway to Dana Avenue
- Take a left onto Dana Avenue
- As you proceed up the hill turn left onto University Drive and park in the Faculty/Visitor's lot. You may obtain a visitor's permit at the Guard Gate
- Traveling to Xavier going east on I-74
- Take I-75 north
- Follow directions above from I-75 north

Motel Accommodations

The nearest motel is the Quality Inn, Norwood. Ask for the Xavier courtesy rate (\$75). The Quality Inn is located at the intersection of SR 562 and Montgomery Road (SR 3).

Quality Hotel & Suites

4747 Montgomery Road

Cincinnati, OH 45212

513 351-6000

800 292-2079

<http://www.qualityhotelsandsuites.com>

Other motels can be found around the Cincinnati area within 20 minutes of the University.

If you have any questions, please call either Stephen Yerian at 513-745-3407 (yerian@xavier.edu) or Terrence Toepker at 513-745-3651 (toepker@xavier.edu)

Projectile Motion Seminar a Success

New Participation Record Set

By Jim Sullivan

The first annual SOS/AAPT Projectile Motion Seminar began at 9:00 AM on July 31, 2003 at North Latitude 39 degrees, 56.405 minutes West Longitude 83 degrees, 20.590 minutes (i.e. National Road Golf Course near West Jefferson, Ohio). Those involved gained valuable information about the flight patterns of small sphere in a viscous fluid near the Earth's surface.

Exact scores are, of course, protected information, but Don Garrett finished second, Jim Sullivan finished third, Ken Metz fourth, and organizer Gene Stoppenhagen came in third from last. Plans are already underway for the 2004 event, contact Gene Stoppenhagen (stoppenhagen@greenapple.com) to make him aware of your interest.

Spring Meeting Notes

The spring meeting was held at Sycamore High School on Sat. April 12, 2003. Cindy Parrott and Julie Haverkos were in charge of the meeting at the Sycamore end.

Contributed papers were given by W. H. Giles, Two Principles of Third Millennium Mechanics and Jeff Rodriguez, Electromagnetic Cascades in Lead due to Cosmic Rays.

Cindy Parrott spoke on the new Ohio Science Standards

and Julie Haverkos did a demonstration using a Blackboard website. Greg Presnall, also from Sycamore, showed how to use Examview test generating software.

Before a tasty boxed lunch, Bernie Clemens-Walatka, Lebanon High School, ran a session on Active Physics. Lunch was followed by Tim O'Donnell, Celina High School, demonstrating "The Train Problem" which uses a digital control circuit, a

Vernier LabPro, and remote control cars .

There was a business meeting followed by Cindy Parrott demonstrating Inspiration which is a computer program used to produce graphic organizers.

**SOUTHERN OHIO SECTION OF THE AMERICAN
ASSOCIATION OF PHYSICS TEACHERS**

The Dialog
c/o Cindy Parrott
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7400 Cornell Road
Cincinnati, OH 45242
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Fax: 513-489-7425
Email: parrottc@sycamoreschools.org

Please email your address as the Dialog is moving to an all electric format. The Dialog will be sent via email and can also be found at:

www.physics.ohio-state.edu/~adbrecht/sosaapt.html

When did you last pay your membership dues?

If you can't answer this question and are not a lifetime member, it is time to pay your \$10.00 dues to the SOS/AAPT.

Checks for membership can be made out to the SOS/AAPT and sent to the address at the left. Please ask teaching colleagues and valued friends to consider becoming a part of our organization. New members are always welcome and needed.

The executive board of SOS/AAPT are looking for volunteers to serve as at large members of the board. If interested please contact any of the officers list on page one.

News from the National AAPT

Deadline for new faculty workshop is September 26. The AAPT, in conjunction with AAS and APS, will be holding the 2003 Workshop for New Physics and Astronomy Faculty Nov. 6-9, 2003 at the American Center for Physics in College Park, MD. The target audience for the workshop is faculty in the first few years of their tenure track appointment at a four year college or university. This annual conference helps new faculty understand how students learn physics and astronomy, and suggests how this information can impact a new professor's teaching methods. Nominations o

Faculty at attend the workshop should be submitted by department heads before Sept. 26, 2003. Capacity is limited, and nominations are generally accepted in the order in which they are received. For more information, please go to www.aapt.org/Events/newfaculty.cfm

U.S. PHYSICS TEAM PLACES FIRST IN 2003 INTERNATIONAL PHYSICS OLYMPIAD

AAPT would like to congratulate the 2003 U.S. Physics team on their accomplishments at the 34th International Physics Olympiad Competition in Taiwan. Many awards were won, and for the first time ever, the United States garnered the top country, out of 54 countries, award. For more information and pictures see www.aapt.org/olympiad.2003/

Advance Registration Form
SOS/AAPT and TriState Physics Teachers
Fall Meeting, October 11, 2003
Xavier University
3800 Victory Parkway
Cincinnati, OH 45207-4111

Name _____

Affiliation _____

Address _____

Phone _____

Email: _____

Meeting Registration – SOS/AAPT Members	\$10.00	
Meeting Registration – Onsite or Nonmembers	\$15.00	
Meeting Registration – High School Member or Nonmember	Free	
Retired or Student	Free	
Lunch at Cafeteria (yes or no) (You will need \$6 on day of meeting)		
Total		

Please return registration by October 3, 2003

Make checks payable to: Xavier University

Return form to: **Stephen Yerian**
 Dept. of Physics ML 4111
 Xavier University
 3800 Victory Parkway
 Cincinnati, OH 45207-4111

Questions? **E-mail:** yerian@xavier.edu
 Phone: **513-745-3407**