Mississippi Association of Physicists

The Mississippi Section of the

American Association of Physics Teachers

March **No. 064**

NEWSLETTER

http://webphysics.ph.msstate.edu/map

Spring Meeting
University of Southern
Hattiesburg, MS
March 31, 2001

Agenda

8:30 – 9:00
Registration and Refreshments

9:00 – 10:00
Welcome. Business Meeting: Treasurers report,

10:00 – 12.00
Presentations on Research Topics

12:00
Lunch

President's Message

The flowers are blooming and the bees are buzzing, so it must be time for the MAP spring meeting. The University of Southern Mississippi has graciously offered to host this meeting. The theme for this meeting is "Industrial Processes and How They Apply Physics Concepts". We are looking forward to presentations from high school physics teachers and industry representatives covering these topics.

Last fall, I asked everyone to bring "someone new" to the meeting, or at least encourage past members who have not come lately to join us. I would like to issue this challenge again. At the fall joint meeting with SESAPS and MAP, we discussed obtaining the list from the Mississippi Department of Education for all the teachers of physics in the state. We have obtained this list and are sending newsletters to these teachers. I would like to extend a special invitation to all teachers who have never attended a MAP meeting before. MAP provides a much-needed venue for professional contacts and camaraderie for physics teachers at all levels in the state. I hope that we will see many new faces among the crowd at this spring's meeting.

Membership in MAP
Mississippi Association of Physicist

If you are a physicist, physics teacher, or physical scientist, you are eligible for regular membership in MAP. If you are a physics student or someone who is interested in the physical sciences, you are eligible for associate membership (non-voting). Dues are paid for a calendar year January 1 – December 31.

The dues schedule is as follows:

Individual	$ 5.00
Institutional:	
Community/Junior Colleges	$20.00
4 year Colleges	$35.00
Universities	$60.00

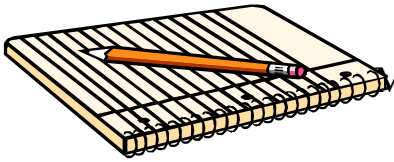
If you are unable to attend the MAP meetings, you can still pay your yearly dues by mail to this address:

Al Deaton
P. O. Box 451
Decatur, MS 39327-0451

Check on your schedule for the upcoming MAP meetings, being held at three different locations, on where to sign up to be a member and pay your yearly dues.

Outstanding Physics Teacher 2000-2001

MAP is proud to recognize Mr. Ken Wester, of the Mississippi School for Math and Science, as this year's recipient of the Outstanding Physics Award. Ken has been very active in the physics education community for the past several years, both in the state of Mississippi and nationally. He has conducted numerous workshops for teachers around our state, directed the Regional Science Bowl competition and taught many talented math and science students. His energy and commitment to physics is tremendous. The condition of physics education would be much better if we could clone him and distribute him throughout the state, but that is biology, and we don't do that. Congratulations Ken, and keep up the good work!



Minutes for Fall meeting
Mississippi Association of Physicists
November 4, 2000

The Mississippi Association of Physicists met on November 4, 2000 at Mississippi State University. This meeting was held in conjunction with the SESAPS meeting. The meeting was called to order by David Carter. Taha Mzoughi provided the welcome by MSU. Changes to the agenda was made and approved. Al Deaton provided the treasurers report, which was approved. A recommendation was made to obtain a list of physics teachers from the state department to help us get more participation. Nominations for Outstanding Teacher of the Year are requested. A committee consisting of the past president, current president, and previous winner will make the final selection. The award will be presented during our spring meeting. Our spring meeting will be held at the University of Southern Mississippi. The suggested theme is "Industrial Processes and How They Apply Physics Concepts". It was recommended that members invite industry leaders to join us for this spring meeting. March 31, 2001 is the tentative date for this meeting. Announcements: The MSU physics competition will be held between February 17-19, 2001. The business meeting was followed by special presentations. Brian Jones of Colorado State University shared his experiences and several demonstrations he gained by creating the Little Shop of Physics program. This presentation was followed by a Pasco Workshop lead by Alen Brown. MAP members enjoyed a special anniversary luncheon and concluded the meeting by participating in a Vernier Workshop presented by David Carter and Chris Kaldahl.

Executive Board Members

Current Officers:	President – David Carter*****
	Vice-President – Taha Mzoughi*****
	Secretary – April Fowler*****
	Treasure – Al Deaton
	Section Representative – Sandra Harpole
	Webmaster – Taha Mzoughi
	Newletter Editor – Jim Sabatier
Executive Board Members:	4 yr. colleges – Taha Mzoughi
	David Carter*
	2 yr. colleges – Manaf Ali
	Jason Pugh*
	High Schools – Mike Harthcock
	April Fowler*
	At Large – Thomas Jamerson
	Fran Burkett*

Officer Positions to be Filled denoted by *
Executive Board Expiring Terms denoted by *

NEWS

Delta Area
Applied Mathematics and Physical Sciences Project

Summer 2001 Programs

Phase 1 – MSCC – July 9 - 27, 2001
Phase 2 – DSU – June 11 - 29, 2001

NEW for 2001
Middle School – MVSU – July 9 - 27, 2001

This project immerses teachers in intensive, inquiry-based laboratory experiments in which participants collect and mathematically analyze real world data using a broad array of sensors. These state-of-the-art activities make extensive use of Calculator Based Rangers (CBR)™, Calculator Based Laboratories (CBL™), Graphing Calculators, and computers as a means to study fundamental concepts in math and science. Teaching methods that foster the integration of mathematics and science learning are an important aspect of this program.

The Phase I Workshop provides HIGH SCHOOL TEACHERS with a review of concepts involving motion, forces, Newton's Laws, energy and momentum. This workshop assists teachers in the development of demonstration apparatus and laboratory materials for use in their individual classroom. Participants become proficient in using the TI Graphing Calculator ™, Calculator Based Laboratory (CBL)™, Calculator Based Ranger (CBR)™, and computers with Graphical Analysis software.

The Phase II Workshop provides TEACHERS WHO HAVE ALREADY PARTICIPATED IN PHASE I with a review of concepts involving electricity, magnetism, optics and wave motion. Emphasis continues to be placed on "learning by doing" teaching strategies. Teachers continue to develop demonstrations and laboratory activities that integrate these topics into the subject matter they teach.

The Middle School Workshop provides MIDDLE GRADE TEACHERS WHO HAVE NOT PARTICIPATED IN AN EISENHOWER SUMMER PROGRAM IN THE PAST with a review of content from both the Phase I and Phase II workshops, but at levels appropriate for middle grade instruction. Participants will use the TI Graphing Calculator ™, Calculator Based Laboratory (CBL)™, Calculator Based Ranger (CBR)™, and computers to collect and analyze data.

Teachers will be expected to apply as a team - one teacher of a physical science (physics, chemistry and/or physical science) and one mathematics teacher, grades 5-12, from the same school. These participants agree to return to their respective schools to teach in the subject areas covered in the workshops the following academic year. In addition, **participants commit to participation in Teacher Alliance meetings during the 2001-2 academic year**. The Alliance meetings provide follow-up and support for teachers as they implement workshop materials and ideas into their individual curricula.

Instructional Materials used in the workshops, such as the TI Graphing Calculator, CBL and CBR, will be provided for teachers to take back to their classrooms.

Stipends and Mileage
Workshop participants receive a stipend of $75 per day plus limited mileage reimbursement. (Team carpooling expected)

Workshop Credit
Participants receive 10 CEU's for attending or may choose to take the workshop as a course to receive 3 hours of graduate credit.

Applications for this workshop are available from the following sources:

ONLINE:
http://www.olemiss.edu/projects/eisenhower

OR CONTACT:
Chris Kaldahl (work) 662-915-1544
108 Lewis Hall fax) 662-915-5045
University, MS 38677
c_kaldahl@yahoo.com

This program seeks to address the needs of physical sciences and mathematics instructors at the middle school and high school level in the Mississippi Delta. It is our firm belief that improvements in education occur when teachers are provided intensive, relevant professional development activities and ongoing support of their efforts in the classroom. We are offering three workshops during the Summer of 2001 to meet the needs of these teachers.

This project is a collaborative effort of the following organizations:

- The Mississippi Valley State University College of Education, Science Department, and Institute for Effective Teaching Practices
- The Delta State University Department of Physical Sciences
- The Mississippi Delta Community College Department of Science
- The University of Mississippi Department of Physics and Astronomy

Bridging The Gap Between The World Of Industry And The Classroom

Research Experiences In Industry

A project funded by The National Science Foundation (ESI-9911885) and Mississippi State University

Today's Industry
☆ Highly Technologically
☆ Rapidly Changing Work environment

Do you know what skills your students' need for today's workforce?
Do you know what is involved in getting a product to market?

Twenty-two secondary (7^{th} – 12^{th} grade) science, mathematics and technology teachers, along with two community college teachers, will be selected to participate in "Research Experiences in Industry" this summer.

Summer 2001

	June 4 – 8, 2001
Industry	June 11 - 15, 2001
Site	June 18 – 22, 2001
Mississippi State University	June 25 – 29, 2001
Local Internship	3 days in industry

During The Workshop you will:

1. Experience the manufacturing world. Develop applications of your industry experiences to be utilized in your classroom.
2. Make plans for your local industry internship
3. Begin preparations to provide in-service training and mentoring

During the academic year you **MUST** agree to:

1. Participate in a three-day internship in an industry in your local community
2. Participate in a one-day follow-up session at Mississippi State University
3. Provide 60 hours of mentoring or professional development in the two following years.

For each full day of participation you will receive:
☆ Reimbursement for travel-up to $200 per week* and/or transportation in MSU vehicles.
☆ Professional fee - $60 per day*
☆ Meal allowance – up to $30 per day*
☆ Dormitory or hotel housing
***** Paid after workshop conclusion

INTERESTED
YES!!! HOW DO I APPLY?

1. Complete and application
2. Provide a letter of support from your principal and/pr superintendent
   ☆ Supporting in-service training and mentoring for others
   ☆ Allowing applications of industry experiences in the classroom
   ☆ Allowing attendance at follow-up meetings
3. Provide a letter of support from your local industry
   ☆ Allowing a three-day internship
   ☆ Interaction with students during academic year through class visits and industry field trips

Application materials are available from the Center for Science, Mathematics and Technology
(662)-325-2922

For more information, please contact:
Dr. Sandra Harpole, Director
Center for Science, mathematics and Technology and Professor of Physics
Mississippi State University
P. O. Box 6347
Mississippi State, MS 39762
sharpole@ra.msstate.edu
http://csmt.msstate.edu/

AAPT NEWS

Chautauqua Short Courses: Promoting Active Learning in Introductory Physics Courses I and II.
Instructors: Priscilla Laws, Dickinson College; David Sokoloff, University of Oregon; and Ronald Thornton, Tufts University.

Course I: First Semester Topics--May 10-12, 2001, Dickinson College, Carlisle, Pennsylvania.

Course II: Second Semester Topics--August 3-5, 2001, University of Oregon, Eugene, Oregon. (Note: Course I is not prerequisite to Course II.)

These NSF-sponsored Chautauqua courses are designed for those interested in making major changes in introductory physics courses or in other introductory science courses. The focus will be on giving participants direct experience with methods for promoting active student involvement in the learning process through activity-based physics strategies using computers and the research-based RealTime Physics, Workshop Physics, Tools for Scientific Thinking and Interactive Lecture Demonstrations curricula. (Copies of these curricula will be distributed to participants.) The microcomputer-based tools used are available for Macintosh, Windows and MS-DOS computers. Open to teachers of undergraduate students in institutions of higher education in the U.S. High school teachers and faculty from outside the U.S. are also admitted if space is available. There is a small application fee, but no tuition. Participants are responsible for their transportation, lodging and meals. Reasonably-priced accommodations in dormitories and hotels will be arranged.

For more information contact: David Sokoloff, Department of Physics, 1274 University of Oregon, Eugene, OR 97403-1274, E-mail: sokoloff@oregon.uoregon.edu, Phone: (541) 346-4755, Fax: (541) 346-5861.

AAPT MODELING WORKSHOPS – NATIONWIDE

1) At most workshops, in-state teachers can get financial support.
2) All other teachers should ask their principal for Eisenhower funds (from next year's budget or this year's budget) for reimbursement.
3) At present, participants must pay at ASU's workshop and the 3 Pasco-organized 1-week workshops; however, a pending grant may defray costs at ASU's workshop.

MODELING WORKSHOPS NATIONWIDE:
Modeling Workshops in physics and physical science (for high school and jr high teachers) will be held this summer in Arizona, California,m Florida, Illinois, Maine, Missouri, North Carolina, Ohio, Pennsylvania, South Dakota, and Utah. Graduate credit is available at most locations. In 2001 the U.S. Department of Education designated the Modeling Instruction Program as an exemplary K-12 science education programs. For information on all Modeling Workshops, visit http://modeling.asu.edu.
Locations of Modeling Workshops that accept teachers beyond commuting distance are:

EASTERN STATES:

University of Akron in Ohio, June 18-29. Greg Townsend, gmt@physics.uakron.edu, (330) 972-8028

Appalachian State University, June 18-July 6, and University of North Carolina at Greensboro, July 9-26. Teachers in NC & adjoining states can be supported. Nancy Murray, nmmurray@curie.uncg.edu, (336) 377-9864, http://epc.uncg.edu/wkspinfo.html

Widener University near Philadelphia, PA, July 30-Aug. 3; Florida Atlantic University (north campus), Aug. 6-10. For both of these, visit http://www2.pasco.com/training/

University of New England near Portland, Maine, Aug 12-18. Teachers from New England can apply for financial support. James Vesenka, jvesenka@une.edu, (207) 283-0170 ext 2560. http://faculty.une.edu/cas/jvesenka/index.htm

MIDWESTERN STATES:

Southwest Missouri State University, June 18-July 13. Mani Manivannan, kam319f@smsu.edu, (417) 836-6425

Illinois State University in Normal, July 9-20. Carl Wenning, wenning@phy.ilstu.edu, (309) 438-8756.

Black Hills State University in Spearfish SD, July 9-13. Rena Faye Norby RenaFayeNorby@BHSU.EDU.

WESTERN STATES:

Arizona State University in Tempe, June 11-29. Jane.Jackson@asu.edu, (480) 965-8438. http://modeling.asu.edu

Emery High School in Castle Dale, Utah, June 25-29. Duane Merrell, merrelld@main.ehs.emery.k12.ut.us, (435) 381-2689

Woodcreek High School near Sacramento, CA, July 30-Aug. 3. Visit http://www2.pasco.com/training/

Jane Jackson, Co-Director, Modeling Instruction Program, Box 871504, Department of Physics & Astronomy, ASU, Tempe, AZ 85287 480-965-8438/fax:965-7331 http://modeling.asu.edu

Directions to the Chain Technology Building

Approaching Hattiesburg on Interstate 59 south (from Meridian)

1. Exit off I-59 onto US49 south
2. Drive on US49 south (approx. 2 miles) and pass under the railroad bridge with the USM logo.
3. Turn right off US49 onto the service road (the service road is parallel to US49) and make an immediate right (you are now traveling north).
4. Make a left at the signal light onto 4 th street.
5. Turn left at the next signal light onto Sunset Drive (entering USM's campus)
6. Travel south on Sunset Drive and turn left at the first 3-way stop.
7. The building on the right is Johnson Science Tower (10 stories) and the building on the left is the Bobby Chain Technology Building.
8. Enter the Chain Technology building through the front glass doors and room 106 is on the left past the elevators.

Approaching Hattiesburg on US49 south (from Jackson)

1. After passing under the I-59 overpass continue on US49 south for approx. 2 miles.
2. After passing under the railroad bridge with the USM logo, turn right off US49 onto the service road (the service road is parallel to US49) and make an immediate right (you are now traveling north).
3. Make a left at the signal light onto 4 th street.
4. Turn left at the next signal light onto Sunset Drive (entering USM's campus)
5. Travel south on Sunset Drive and turn left at the first 3-way stop.
6. The building on the right is Johnson Science Tower (10 stories) and the building on the left is the Bobby Chain Technology Building.
7. Enter the Chain Technology building through the front glass doors and room 106 is on the left past the elevators.

Approaching Hattiesburg I-59 north from Picayune)

1. Exit off I-59 at the Hardy St./ Columbia exit
2. Travel east on Hardy St.
3. Drive through 4 traffic signals
4. Turn left on 31st avenue (just past the McDonalds and Bancorp South)
5. Travel north onf 31st avenue to the 3 way stop (approximately two blocks) and turn right.
6. Travel east and make a left turn at the 3-way stop (one block) (This is Sunset Drive)
7. Travel north on Sunset Drive for one block and turn right at the 3-way stop.
8. The building on the right is Johnson Science Tower (10 stories) and the building on the left is the Bobby Chain Technology Building.
9. Enter the Chain Technology building through the front glass doors and room 106 is on the left past the elevators.

Approaching Hattiesburg on US49 north from Gulf Coast)

1. After passing Forrest General Hospital (on the left)
2. Make a left onto Hardy street at the next traffic signal (there is a usm electronic sign on the northwest corner of this intersection.

3. Travel west on Hardy Street thru 3 signal lights. (The USM main entrance is on your right. **Do Not Enter**)
4. Turn right onto 31st avenue (on short block past the third traffic signal).
5. Travel north on 31st avenue to the 3 way stop (approximately two blocks) and turn right.
6. Travel east and make a left turn at the 3-way stop (one block) (This is Sunset Drive)
7. Travel north on Sunset Drive for one block and turn right at the 3-way stop.
8. The building on the right is Johnson Science Tower (10 stories) and the building on the left is the Bobby Chain Technology Building.
9. Enter the Chain Technology building through the front glass doors and room 106 is on the left past the elevators.

Hattiesburg Motel Accommodations

Location	Motel	Phone	Single	Double
Hattiesburg	**B.W.Northgate Inn**	**268-8816**	**$49.05**	**$55.59**
Hattiesburg	**Comfort Inn**	**268-2170**	**$54.50**	**$54.50**
Hattiesburg	**Days Inn**	**544-6300**	**$38.15**	**$41.42**
Hattiesburg	**Holiday Inn University**	**268-2850**	**$54.50**	**$54.50**
Hattiesburg	**Howard Johnson Lodge**	**268-2251**	**$54.50**	**$54.50**