

FEBRUARY 2001

PHYSICS ALUMNI NEWSLETTER

Department of Chemistry and Physics * 100 Campus Drive * Weatherford, OK 73096-3089

SPRING BANQUET 2001

The 20th annual **PHYSICS SPRING BANQUET** will be held in the SWOSU Ballroom at **7:00 p.m. on Saturday, April 21, 2001**. As usual, the program will include induction of the new members and presentation of scholarships and awards. This year will be special as we bid a fond farewell to Dr. Jones, who will be retiring in May. Please join us and bring your special memories of him both in and out of the classroom. The cost of the banquet is \$10 per person. You can call our secretary Vera Williams (580)-774-3266 or e-mail Dr. Jones at jonesr@swosu.edu for reservations.

PHYSICS CLUB OFFICERS

President: Jami Ward
Vice-President: Joanna Blevins
Secretary: Susanna Rogers
Treasurer: John Cowan
Historian: Aimee Slajer
Public Rel.: Jacob Weierman
Sponsor: Dr. Jones
Co-Sponsor: Dr. Robertson

DR. JONES TO RETIRE...

This May Dr. Ray Jones will retire after teaching at SWOSU for 32 years. Over that many years he has taught many of the alumni out there. He would be very pleased to see each of you at the Spring Banquet, 21 April 2001, or at the annual Shish Kebab, 5 May 2001 at 6 pm at Dr. Jones's house. This is the house that was so long being built. He has now been living in it for 12 years with his wife, Jill (professor in English), and he still has three daughters at home. He plans to finish and publish several physics projects that he has been working on. He also plans to bicycle more and continue a study begun last summer concerning the dynamics of dimpled spheres near and on large undulating grass-covered surfaces.

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Food, Fun, Food

The 2001 Annual **Physics Shish Kebab** is scheduled for **May 5, 2001**. The venue is the country estate of Dr. Jones where there's plenty of room to get away from it all. This is usually the most talked-about event of the year. The food is to die for, and there's always enough to eat yourself to death! The surroundings afford a chance for self-reflection as you take a stroll down Cedar Canyon or the opportunity to pit yourself against the all-too-young students in a game of volleyball. Old friends and new acquaintances provide plenty of conversation. And don't forget the awards ceremonies. These are the ones that we can't hand out in the more "civilized" setting of the annual banquet! Food service starts whenever it's ready-usually around 6 p.m. For more information or directions to the Jones Manor, give us a call or drop an e-mail request. Y'all come!

Contributions Needed

It's been a long time (a whole year!) since we appealed to you for money. Thanks to the generous support of alumni the Physics Department is fairly well funded to provide scholarships to deserving and/or needy students. Our endowments have provided sufficient earnings to fund this cause. However, the Physics "Unrestricted" Foundation funds are now depleted. We urgently need (tax exempt) donations into this fund. This fund has been used for such purposes as supplementing the university-provided travel expenses for potential new faculty, and purchasing the ACT information of prospective students for recruitment purposes. The cost of these needed activities cannot come from university funds.

It is hoped that alumni will appreciate the value of the education that they worked hard to obtain while in the SWOSU Physics Department and will help to continue this opportunity for future students. We need approximately \$1000 / year invested in this fund. If you can help please send your contribution to: SWOSU Foundation, 100 Campus Dr. Weatherford, OK 73096. Be sure to indicate "PHYSICS UNRESTRICTED", and don't forget to ask about matching funds from your employer!

Physics Club Float Wins First Prize

The Physics Club easily walked away with the first-prize money in the 2000 Homecoming parade competition. The theme for the floats was "Can't Cage the Rage." The seven competing floats did the obvious thing with a bulldog and a cage. Pryor junior, Jacob Weierman supplied the idea and much of the artwork for our float. The idea for the float was: The Bronchos (Central State) had captured Brandi while she was studying her physics and put her in the SWOSU Dogcatcher truck. Brandi's face could be seen through the barred side windows in the back of the truck. A sinister broncho who was driving was seen in the front side windows. The truck then broke open with the front half pitching forward and the back half pitching backward with the figures in the windows disappearing. A triumphant Brandi rises out through the broken truck top with the unconscious (or maybe dead) broncho held over her head. The action then reversed, repeating every 20 seconds. We also had appropriate (or maybe inappropriate) music playing. The trailer bed was a highway with road signs saying, "STOP the Bronchos" and "YIELD to DAWGS." Being the "Physics Club," others seemed to assume that the float was powered by all kinds of motors and gears. Actually, the power for the animation was supplied by six bio-mechanical units concealed within the truck. Coordination of the float movement consisted of interfacing the bio-mechanical units via low-level, bi-directional acoustic waves. (Last year we won second.) *To see an animation of the float, check out the club's web page at <http://www.swosu.edu/students/orgs/physclub/home.htm>*

Good judgment comes from experience. Unfortunately, experience usually comes from bad judgment.

Excising Holes

Dr. Robertson has joined forces with Dr. Darryl Leiter (of the Foreign Science and Technology Center, Charlottesville, VA) in excising event horizons from General Relativity. Their latest entry can be found on the Los Alamos electronic archive (affectionately known as the xxx files) at <http://arXiv.org/abs/gr-qc/0101025>. (A shorter version of the paper has been submitted to the journal, General Relativity and Gravitation.) They describe a bi-metric GR with an exponential metric. In this theory, each point of spacetime is endowed with a flat metric, which is the inertial frame of special relativity and Newtonian mechanics and a GR type metric that represents the curvature of spacetime due to gravitation and/or non-inertial frame effects. The combination permits local conservation of energy-momentum, which is not possible in conventional GR, and also eliminates event horizons and singularities from GR.

The motivation for these endeavors came from previous studies of neutron stars and black hole candidates in x-ray binary systems. Neutron stars clearly have strong magnetic fields and display numerous phenomena that depend on them. Black holes cannot possess such an attribute, but they nevertheless display the same spectral features. Robertson and Leiter are presently completing analyses of spectral data (obtained from the Chandra X-ray Observatory) that strongly support the hypothesis that the stellar mass black hole candidates possess intrinsic magnetic fields. Robertson will present the results at the April APS meeting in Washington, D.C. Researchers from other places have shown considerable interest in this work. Whether we are observing black holes, compact objects with no event horizons, or whether we ultimately will find

the whole idea of curved spacetime to be wrong are all mighty sobering thoughts. It is fun to think about it.

Murphy's Laws:

1. If anything can go wrong, it will.
2. Nothing is as easy as it looks.
3. Everything takes longer than you think.

2000 SPRING BANQUET

Dateline: April 1, 2000

Event: Physics Spring Banquet

Setting: SWOSU University Ballroom

Thirty-five students, faculty, alumni, friends, and family gathered for the annual feast. Attending alumni were **Thomas Turvaille** ('81), now living in Portland, OR, **Ron Wollmann** ('73) now living in Bessie, and **Terry Goforth** ('81) from Weatherford. As usual, a good time was had by all. This year's event saw the induction of three new Sigma Pi Sigma members into the SWOSU chapter, bringing the total number of lifetime members to 156. The "new millennium" inductees were **Joanna Blevins**, a sophomore from OKC, **Trevor Ellis**, a senior from El Reno, and **Jami Ward**, a junior from Memphis, TX. Other awards handed out during the evening included the Outstanding New Club Member, **Joanna Blevins**; the Leadership Award, **Aimee Slajer**, a senior from Noble; and the Distinguished Service Award, **Jami Ward**. \$4,500 in scholarships were presented to five very worthy students. **Joanna Blevins** received the Outstanding Midclassman in Physics award and its accompanying \$1,000 **Arthur McClelland Memorial Scholarship**, an award endowed by alumnus **Rick Pearson** ('78) in memory of his grandfather. **Jacob Weierman**, a junior from Pryor, received the **J.R. Pratt Scholarship** for \$1,000, and **John Cowan**, a junior from OKC, was awarded \$1,000 for the **Benny J. Hill Scholarship**. Two **Physics Alumni Scholarships** were presented as well: \$1,000 went to **Jami Ward**, and \$500 went to **Anthony Riffle**, a junior from Altus. *The physics students and faculty of SWOSU want to thank you, our physics alumni, for your generous support. Without you, we could not continue to give this much needed and appreciated assistance to our students. THANK YOU!*

Physics and Engineering Club President **Aimee Slajer** and Vice-President **Jami Ward** outlined the club's activities for the year including a video record of the club's visit to Argonne National Laboratory and the greater Chicago area. In a more "somber" moment, Dr. Ray Jones offered a "eulogy" to the retiring Dr. Garabed Armoudian, hitting just a few of the highlights from his years as a graduate student at LSU, as a post-doc at Columbia, and as a teacher and departmental chair at SWOSU. Dr. A was, of course, given equal time for rebuttal.

Thank you to everyone who attended for making the banquet a success, and to all our beloved alumni and friends, we'd love to see you at the 2001 event!

Oh, The Places We've Been!

The Physics and Engineering Club continues to be extremely active. Last spring (2000) we took a trip to Chicago (via van) to tour the Argonne National Lab. While there we

also visited museums and took in some good food and entertainment. A good informative time was had by all. Drs Robertson and Jones did the driving. The only big-city problem that we had was that the van's spare tire was stolen while we were parked downtown. We drove the 900 miles back without a spare.

In October 2000 the club traveled to Rice University, Houston, TX, for a joint meeting of SPS, and various other divisions of the American Institute of Physics. Two Students, Jami Ward and John Cowan presented papers on research that they had done the previous summer.

On 5-6 April 2000, we will be in the Denver, CO area to tour some labs, including the National Renewable Energy Laboratory. We will be staying at the Days Inn West near Golden. If you live in the area get in touch via e-mail now and we can try to make contact.

Jingle All the Way

Christmas 2000 saw a new fund raiser for the Club. Christmas balls were painted with various SWOSU themes. They sold for \$5 each, the cost of materials was about \$1 each, but quite a bit of labor and some waste was involved.

WE HEAR THAT...

Brad Flippin ('88) is living in Somerset County, England. He's still working on the Apache helicopter program for Boeing while getting a taste British culture.

Patrick Heys (attended late 80's) is working at Ernst and Young training new employees who provide support for internally developed software.

Tom Turvaville ('81) is an architect for Industrial Design Corporation where he designs fabs for microelectronics. companies worldwide

LET US KNOW WHAT'S UP WITH YOU!!!

We'd love to hear from you! Give us a call. Drop us an e-mail or a note. Better yet, come on by-to the banquet, to the shish kebab, or just any ol' time. We try to keep our records up-to-date, but we can't do it without your help. Let us know where you are and what you're doing these days. And if you know another alumnus who's been out of touch, send us his/her name and address-we'll do the rest!

WE'RE WAITING TO HEAR FROM YOU!!!

e-mail us at the addresses above, or drop us a line at 100 Campus Drive, Weatherford, OK 73096-3098, or call us at

Dr. Terry Goforth	(580) 774-3109	Dr. Stanley Robertson	(580) 774-3124
Dr. Ray Jones	(580) 774-3106	Dr. Charles Rogers	(580) 774-3108
Vera Williamson (Secretary, Department of Chemistry and Physics)			(580) 774-3264

ALUMNI e-mail ADDRESSES

If you are a SWOSU Physics Alumnus, drop us an e-mail at physics@swosu.edu and we'll send you the complete list of alumni e-mail addresses that we have on file.