

**Conference Report of the joint 2004
National Society for Black Physicists (NSBP)
National Society for Hispanic Physicists (NSHP)**

We recently returned from the 2004 annual conference of the joint National Society of Black Physicists (NSBP) and National Society of Hispanic Physicists (NSHP) held in Washington, DC on February 18-21. This year, due to the joint efforts of Drs. Paul Guèye (Hampton University, VA), Steven Avery (University of Pennsylvania, PA) and Chris Njeh (SAMC, CA), a new Medical Physics session was created. Proceedings from this session will be accessible at www.jlab.org/~gueye/NSBP/2004/MPBP04.html. One of the main objectives of this session was to expose young physicists to career opportunities in Medical Physics, and hopefully attract more minority physicists into this highly demanding field.

Although only one session was allotted to Medical Physics this year, we anticipate to receiving a larger contribution from the medical physics community around the country for next year's NSBP Conference. Consequently, Medical Physics will be extended to two sessions. Notwithstanding, the 2004 Medical Physics for Black Physicists (MPBP04) session was a real success. It was chaired by Dr. Steven Avery. Dr. Chris Njeh kicked off the session with a presentation entitled "what is Medical Physics?". Using some material supplied by Dr. Ken Hogstrom (AAPM chairman of the Public Education Committee), Dr. Njeh highlighted how varied, challenging and rewarding Medical Physics is. He identified some of the roles medical physicists play in radiation therapy, diagnosis and radiation safety. The pathways to becoming a practicing medical physicist were also discussed. Also presented was a new BS course in physics with a Medical Physics component offered by California State University, Fresno, Physics Department (contact Dr. Amir Huda: ahuda@csufresno.edu). This talk generated a lot of questions – like is a Ph.D. needed for a successful career in Medical Physics?

Dr. Steven Avery presented some of his research in hadron therapy. He argued that hadron therapy provides a powerful alternative to photon therapy, because of the ability to deposit all of their energy at the end of their track - the so-called Bragg peak distribution. However, he cautioned that in order to obtain full tumor dose coverage in cases where the tumor size is large, the hadrons have to be excited at different energies (giving different depths of the Bragg peak). This consequently results in higher entrance dose. However, more research is needed to answer question like the optimal fraction regime.

Mr. Lawrence Tynes, a Ph.D. graduate student from Hampton University, presented preliminary results on a research entitled "Beta based detector for intravascular brachytherapy". IVBT is now a widely used modality for the treatment of restenosis. However, there is no means of verifying the dose delivered to the arteries during treatment. Under the supervision of Dr. Guèye, Mr. Tynes and collaborators are trying to tackle this problem. They have developed a scintillating fiber based beta prototype detector for in vitro dosimetry. The preliminary results shown are quite promising.

Another undergraduate student, (?), Ms. Andujar from Puerto Rico, presented some of her work from a summer internship at Fermilab. She measured wedge factor effects for neutron therapy treatments. From her measurements, it was demonstrated that wedge factors should be

reviewed periodically because changes in the machine parameters could have a significant impact on the physical characteristics of the wedges.

We encourage more medical physicists to participate in next year's 2005 NSBP conference, which will be held in Florida. The significance of such interactions are three folds. First it will show to the physics community at large the exciting research carried out by Medical Physics. Secondly, it will generate cross-discipline interactions. Thirdly, this conference is highly attended by graduate students, hence an opportunity to attract young talents into the field and solve some of the shortage problems. We also would like to encourage more departments with M.S. and Ph.D. programs in Medical Physics to set up booths at forthcoming meetings.

Christopher F. Njeh Ph.D., Steven Avery Ph.D., and Paul Guèye Ph.D.