

African American Women: Still Many “Firsts” in Physics

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If someone asked, “Who is Willie Hobbs Moore?”, most people would answer that she was the first African American woman to earn a PhD in Physics from the University of Michigan in 1972. Did you know she was also the first African American woman to graduate in engineering from the University of Michigan? The unfortunate moral of this story is that the first PhD in Physics earned by a minority woman at the University of Michigan came more than 54 years after the first African American male earned one in 1918.

If someone asked, “Who is Apriel Hodari, Elaine Lalanne, Jami Valentine or Martha-Elizabeth Baylor,” what would you guess? Would you guess that each of these African American women were the first to earn PhD’s in Physics from their respective universities more than 20 years after Dr. Willie Hobbs Moore? While it seems unreal, each of their stories is unique. Not only was Dr. Apriel Hodari the first African American woman to receive her PhD in Physics from Hampton University in 1998, she was part of the first class of physics PhD students to graduate from Hampton University. “It seemed natural that I’d be in the first class to finish,” she noted. The class was comprised of about 30 graduate students who were 90-95% African American and 50% female. Hampton University is now one of the leading producers of African American PhD’s in Physics, thanks to Dr. Hodari and other trailblazers who have opened doors for others to follow. She currently works for the Center for Naval Analyses, serves on the Executive Board for the National Society of Black Physicists, and is a member of the Committee on the Status of Women in Physics.

Dr. Elaine Lalanne is a Research Associate at the Center for Advanced Studies in Photonics Research, University of Maryland, Baltimore County. Dr. Lalanne was the first African American female to earn a PhD in Physics in 2003 from the New Jersey Institute of Technology (NJIT)/Rutgers-Newark and, in her humility, modestly omits the fact that she was the only African American woman in the United States to receive a PhD in Physics that year. When asked what it feels like to be the “first,” Dr. Lalanne responds, “[I felt] isolated and did not have support with respect to studying until the African students arrived two years later into the programs. Having an African American advisor, [Dr.] Anthony Johnson [then Chair of the NJIT Physics Department], was instrumental in my success in making it through the program.”

Dr. Jami Valentine, who graduated from John Hopkins University (JHU) in 2007, made history as the first African American woman to receive a PhD in Physics from JHU and the second African American ever in physics, with the first receiving his doctorate from this distinguished university in the 1970’s. When she

thinks of being a “first,” she says she is, “very proud to be the first African American woman from Hopkins (and the second in the state of MD). It’s still amazing to me that in a city more than 65% African American (Baltimore), there’s still such a small percentage of African American students at JHU. [Based on my experience], I feel that I’m able to relate to the students that I meet through various mentoring/outreach programs in a more meaningful way.” Before graduating in 2007, Dr. Valentine was a member of the U.S. Delegation to the International Pure and Applied Physics Women in Physics Conference in Rio de Janeiro, Brazil, and she is profiled in the book, *Cool Careers in Physics* by John Johnson, Jr. She is currently employed at the United States Patent and Trademark office.

Dr. Marty Elizabeth Baylor, or “Marty” to some, graduated in December 2007 with a PhD in Physics from the University of Colorado, which, prior to her tenure, only had one other minority student, a Hispanic male. She recalls a handful of women but definitely no other African Americans. Dr. Baylor says, “In fact, I was the first Black women in the state of Colorado to obtain a PhD in physics and probably the first or second African American at the University of Colorado to get a PhD in Physics.” When asked how she felt about being the only African American, Dr. Baylor says, “being the only African American in the program didn’t bother me. I was just myself and did what I needed to do to succeed... I do think that being a first generation PhD in science caused me to start at a disadvantage and that at times I probably received some poor mentoring. However, I don’t think that was because I was African American. I think it is because some people are better mentors than others.” Dr. Baylor is currently a Post-doctoral Fellow in the Department of Electrical and Computer Engineering at the University of Colorado.

Each of these women is amazing in their own right. What is more amazing is that they aren’t the only ones who are “first.” There are others who don’t want recognition and would prefer not to be mentioned or associated with the title of “first African American” anything. As for me, I am proud that I will be the first African American, as well as the first in my family, to earn a Material Science/Physics PhD from the University of Alabama in December 2010. I am disappointed that there still are no other African Americans in the program and, unfortunately, I may be the only one for some time to come.

Nevertheless, this does show that there is change no matter how long it takes and that with change is the hope that one day the only “firsts” we will be highlighting in Physics will be the discoveries made in laboratories. ■