

First black female astrophysicist is visiting professor

By JOYA WESLEY
Special to THE CHRONICLE

GREENSBORO — Dr. Reva Kay Williams, the nation's first black female astrophysicist, had a plan when she came to North Carolina A&T State University this year as a visiting professor. And it wasn't just to teach physics, which she was hired to do.

"I like to share my knowledge and try to inspire the students," she said during a recent interview. "That's my main reason for being here - to find out what the students are doing and to inspire them in any way I can, particularly to become astrophysicists."

She certainly is inspiring. Not only is she a pioneer, she also has distinguished herself in her field by becoming the first to solve a major astronomical theory that scientists around the world tried to figure out for more than two decades.

The theory is the Penrose mechanism, the 1968 brainchild of English math and physics professor Roger Penrose of Oxford University. It explains how to extract energy from black holes. A black hole is the result of a burned out star, where strong gravitational forces prevent anything from escaping, even light.

"It was a thought experiment that he had," Williams said of Penrose. "He just mentioned how to do it, but he hadn't worked out the physics or anything."

Since then, scientists all over



Dr. Reva Kay Williams

the world have tried to make it work. None were research on black holes and how they are responsible for fueling quasars. Quasars, the most distant objects in the universe, also have the greatest energy output of any object.

The work was too deep for the Indiana faculty.

"No one was doing relativity so they had to call some people in to assist me," Williams says.

Completing her Ph.D. was the culmination of a journey Williams started when she decided to leave her job at an insurance company and go back to school. She got an associate's degree from Malcolm X Junior College in Chicago, where she won the graduate of the year

award.

"I knew I wanted to be a scientist, but I didn't know what field," she recalls. "I knew that math was the foundation, so until I found the specific field that I wanted, I majored in math."

Williams, who was born in Memphis and raised in Chicago, said she read several books on science in an effort to find her field.

"When I came to cosmology - because I'm very religious - I decided I wanted to learn about God's universe and the origins of it," she says.

She narrowed down her research area after more study and after being inspired by a woman astronomer who spoke at an open house for women in science at Northwestern University. With the help of an admissions counselor there, she was admitted and granted a scholarship. She majored in astronomy and minored in physics.

After finishing her Ph.D. in Indiana University's astrophysics program, Williams won a Ford Minority Post-Doctoral Fellowship and went to the University of Florida, which she described as the No. 2 university in relativistic astrophysics, after the California Institute of Technology. She spent three years in Florida,

doing post-doctoral.

Today, after having her work published in prestigious journals and making presentations at international conferences, Williams has earned the esteem of colleagues around the world, including Roger Penrose himself, whom she first met at a conference in 1988.

"When I first met him I told him I was working on the Penrose mechanism and I asked him some questions," she said.

In 1992, she saw him again in California: "I gave him a copy of my dissertation and I told him that it worked."

In June, Williams was invited to speak at a conference in Israel. Penrose was there, too.

"I saw him while I was getting some coffee, and this time he came up to me and said that he had gotten my letter, which I had sent a year earlier, and that made me feel good."

She now is applying for new grants and feels optimistic about a National Science Foundation grant that will allow her to return to the University of Florida and continue her research.

Williams' success is a part of her larger plan - to tell people about God and to generate attention for a book she's writing about God.

"I wanted to do something big in astronomy to make myself known," she says, so that people will listen to me."

Fraternity holds health fair for youth

On Jan. 31, Kappa Alpha Psi (a local fraternity) had its annual Health Fair.

The event was held at the Winston Lake YMCA from 9:00 a.m. to 1:00 p.m. The fraternity members had requested that the Winston Salem Chapter of Top Teens of America attend the health fair and serve as volunteers. Luckily, 10 teens showed up and 3 Top Ladies were present.

The Top Teens were Teen President Alfred White, Teen Vice-President LaCoya Martin, Teen

Secretary Lauren Chavis, Teen Reporter Jon Allen. Other members present were Octavius Fulton, Vannette Tetterton Stefanie Ramsey, Ciji Hairston, and Aisha Crayton. The Top Ladies present were Teen Advisor Daisy Staten, Lady Minnie Ervin, and Lady Wilma Wheeler.

The purpose of the Health Fair was to bring youth from the Winston-Salem area and provide speakers for them. Physicians, pharmacists, nutritionists, etc. were present to talk to the youth.

The doctors checked the children's heart rate, pulse, etc.

The pharmacists warned the children of the dangers of drugs, and how to "just say no." The nutritionists discussed dieting and the main food groups as well as what is healthy and what is not. The Teens were there to assist younger participants.

If a child needed help and didn't know where to go, the Teens assisted them. The Teens stood by the door and as children came through, the Teens took their hand

and walked around with them. They introduced themselves and then introduced them to the nutritionists or the pharmacists. If the children had collected pamphlets or souvenirs and the doctor was checking their pulse the teens would hold their things.

The Kappas were extremely appreciative for the Teens' hard work. All in all, it was another memorable event as the Winston-Salem Chapter of Top Teens of America reached out to volunteer in their community.

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