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Yaítza Luna-Cruz: I am Borinqueña and an Atmospheric Physicist [1]

Submitted by Greetchen Díaz-Muñoz [2] on 14 April 2014 - 9:00am

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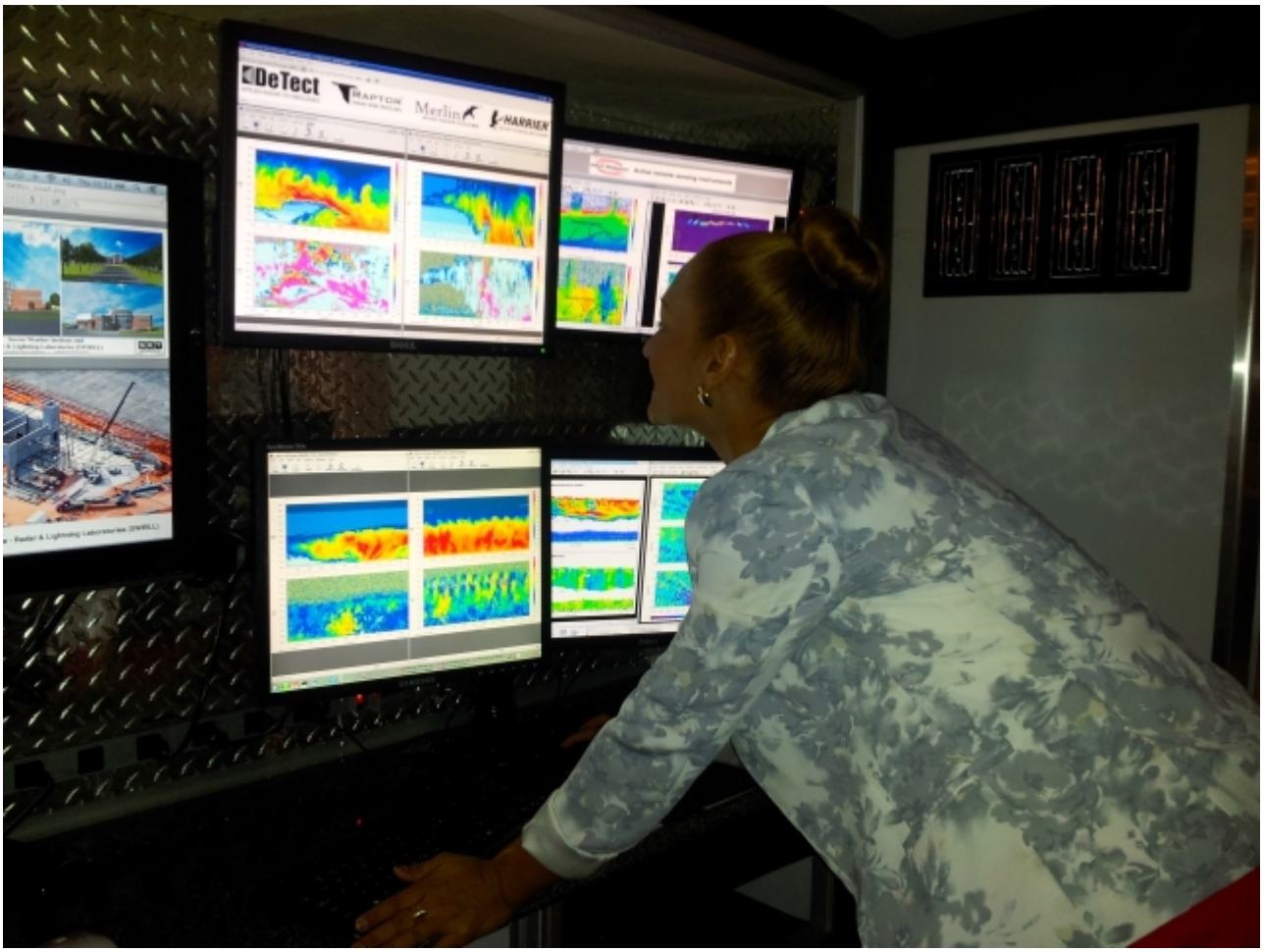


Yaítza Luna-Cruz [3] is an atmospheric physics scientist. She is currently an investigator that collaborates in educational initiatives of the Ecoexploratorio [4], Puerto Rico's future science

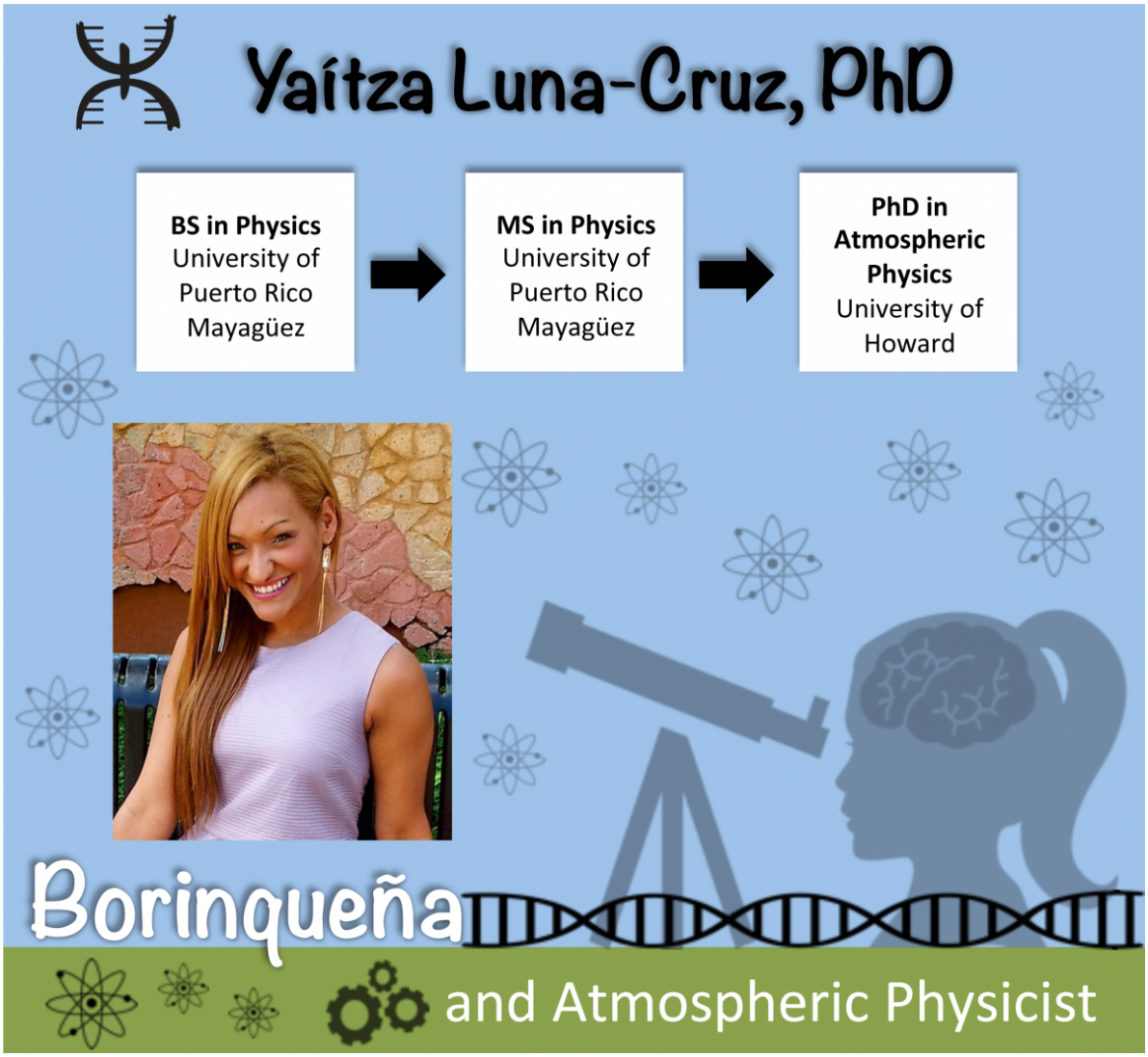
museum. Yaítza is founder and the first president of the student chapter [5] of the Puerto Rico Metereological Society This Borinqueña hails from Cidra, the city of eternal spring.

Greetchen: Yaitza, how did you become interested in studying Physics?

Yaítza: Since I was a little girl, I always felt very curious about science and mathematics, especially astrophysics. I was always very interested in anything related to the universe, stars, galaxies and planets. I always wanted to know how and why things function, and I found that physics was the science that helped me, and still does, to try to understand our complicated universe.

Greetchen: Why atmospheric physics?

Yaítza: Once I started studying physics in college, I became fascinated by planetary sciences and space meteorology. After a while it became clear to me that to understand the atmosphere in other planets, I first had to understand ours. During that time I was looking for a career that had practical and direct applications. That is how I began to get interested in atmospheric physics and all of its phenomena (i.e. cloud physics, hurricanes, radiation, climate change, aerosols).



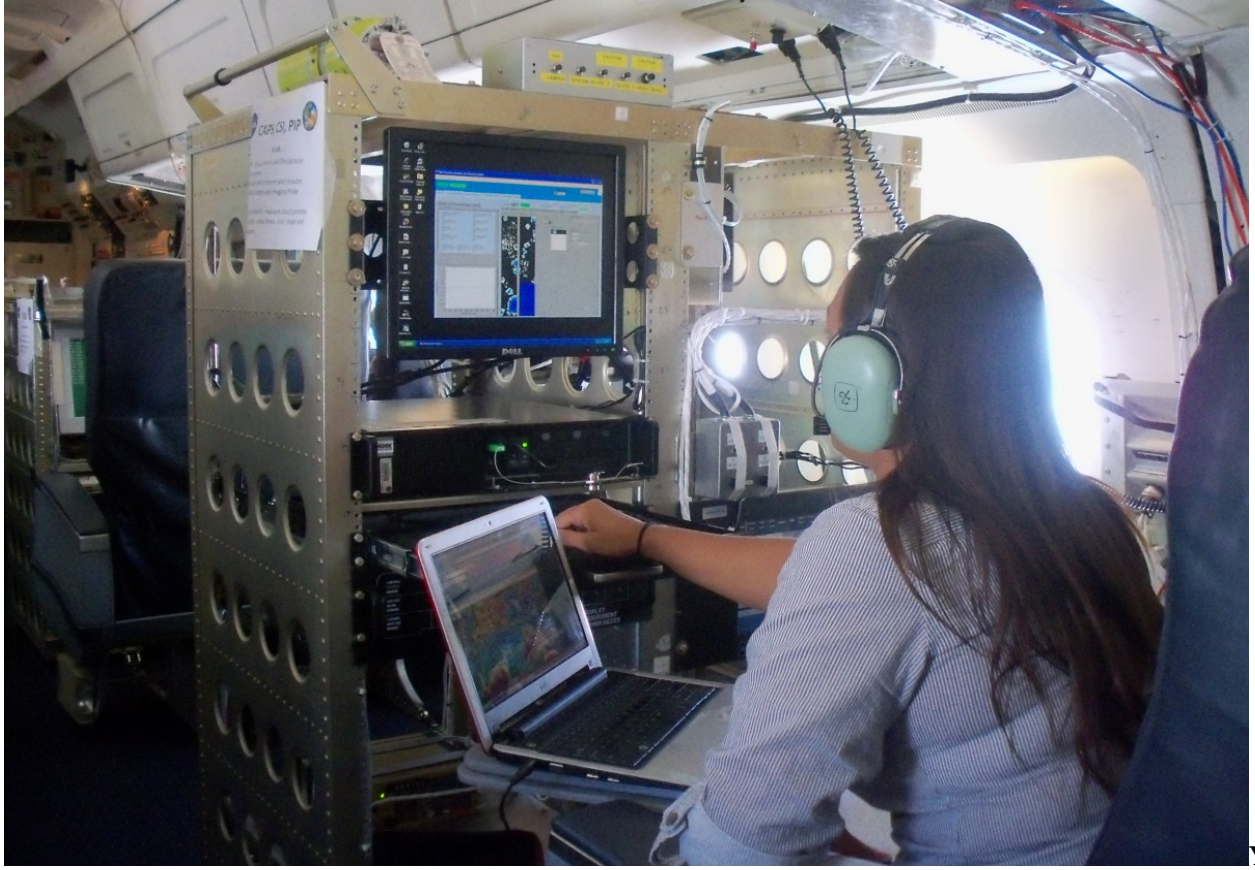
Greetchen: In your opinion, what is the most important aspect of your job? What part of the job are you most passionate about?

Yaítza: Meteorology is something that affects us constantly, day and night, every day of the year. For me, it is very fulfilling to contribute to the understanding of tropical atmospheric phenomena so that we can save lives with more efficient forecasts. The part about my job that I am most passionate about are the constant challenges it presents and that it allows me to be in direct contact with nature. I really enjoy doing fieldwork, manipulating instruments of remote perception, wo h practice th . Another pa e general pu

Yaítza is passionate about communicating her science to others

Greetchen: What has been the most exciting experience in your career?

Yaítza: Without a doubt, the most exciting experience of my career was the privilege of penetrating the walls of the eye of hurricane Earl, a category 4 hurricane, by flying aboard a NASA DC-8 plane [6]. The NASA-GRIP [7] mission (2010) was a life changing experience for me and reaffirmed my desire to continue doing what I do every day.



Yaítza during the NASA-GRIP mission

Greetchen: What are the biggest challenges that you have encountered during your career?

Yaítza: Being a woman and Puerto Rican in science and mathematics is a big challenge, but at the same time it is very rewarding to be part of a team of scientists of international caliber. Another big challenge brought about by my career is that I am far away from my family. I am another example of the runaway brains that left the island and I did it to be able to complete my doctorate. However, being able to represent my people, and put the Puerto Rican flag on a NASA [8] or NCAR [9] plane, being the pride of the people I love most, and motivating other young people to study science, are some of the things that give me the strength and the drive to continue.

Greetchen: You mentioned that being a woman in this field has been a challenge. Tell us, what do you know about the situation for women in the physical sciences?

Yaítza: A gender gap has always existed in STEM (Science, technology, engineering and mathematics) careers. This gap is more obvious at the level of advanced degrees (doctorates). According to the most recent NSF [10] statistics (2013), in the United States, only 28% of the jobs in science and engineering belong to women (8.1% of those are Hispanic women). Of the 28% only 3.6% has a doctorate in physical sciences, and only 0.9% atmospheric and oceanic sciences. I think this is due to the multiple challenges that accompany obtaining a doctorate, since it is a very demanding career. The social standards of when and how to have a family and what it implies, is a challenge. To change these statistics we need to break stereotypes and give a different message to girls and young women.

Greetchen: What is your advice to all Borinqueñas so that they can achieve success in science?

Yaítza: For me the secret to achieve success in science lies in what Mayagüez professor Carlos Pabón taught me: scientific honesty and the passion that you put into your work. My advice to future scientist Borinqueñas is: be responsible, organized and professional in everything you do. Never let your fears and insecurities control you. Never forget where you come from and never stop being yourself. Believe in yourself, identify your capabilities and follow your instincts. Learn to find a balance between your career and the things you do for fun (I love fashion, dance and exercise). Take on new challenges and new opportunities. It is not an easy task, but it is definitely possible!

You can follow Greetchen on Twitter @GreetDiaz. Reyna Martinez (@remadel) contributed with this story. Share this story using #Borinqueña and do not forget to visit our store [11].

Borinqueña emphasizes the contribution of Puerto Rican and Hispanic women in science and technology and provides a space to discuss topics of interest about the empowerment of women. In "I am Borinqueña" we will be interviewing women scientists that are role models for future generations. Learn about their stories and paths to success. Use #borinqueña to spread the word.

Tags:

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