



## US-ELTP Career Profile

# Beth Willman

## LSST Corporation CEO and Director of Science



*"If you only do things you are already comfortable doing, then you will never be able to grasp all of your potential."*

Beth Willman balanced her career trajectory with confidence and risk-taking, ultimately leading her to the position of CEO and Director of Science for LSST Corporation. She always had an inherent interest in math and science, which was encouraged by her mentors. In high school, her AP physics teacher saw Beth's potential and convinced her to lead their scientific computing team as captain. Without any experience developing code at the time, she welcomed the challenge and worked hard to meet it.

In college, Beth pursued a degree in physics. However, the culture of the Physics Department at the time wasn't friendly to women, which led her to switch departments and study astrophysics. Astronomy was a new field for Beth – she didn't grow up looking at the stars or fantasizing about becoming an astronomer. Persistence led Beth to the University of Washington for graduate school. Beth conducted a new observational project, based on theories that faint galaxies may exist within the Universe. Her resilience led to the discovery of Willman 1, a low-mass ultra-faint galaxy, confirming the existence

of low-luminosity galaxies. Beth's impact on astronomy opened her future to endless possibilities. She chose a future grounded in service and mentorship as she dedicated a significant portion of her career to the students and community at Haverford College and was deservedly recognized for her excellence in teaching.

Beth's dedication to astronomy and teaching initiatives prepared her to be the Deputy Director of NOIRLab. As part of her role as the Deputy Director, she took on the responsibility of being Project Director for the NOIRLab part of the US Extremely Large Telescope Program (US-ELTP). The US-ELTP is a top priority for the future of NOIRLab, and it is of great importance that appropriate resources are invested in the program. Beth set the strategies and priorities for the project and the team with an outward-looking approach.

### **What do you enjoy most about your role as Project Director of the US-ELTP?**

I enjoy working on something bigger than myself and my team. I am always learning new things and working with a diverse set of people from different backgrounds and professional roles. I feel lucky that I am in a position in my career where I can choose to work with people I enjoy.

When I was interviewing for my first entry-level position, I knew I wanted to have a guiding hand in enabling breakthrough science. I wanted to work at a place where I had a role in developing and implementing the strategic mission and vision of the organization. With the US-ELTP I believe strongly in what well-curated data and

## Fun Facts



I love living in Delaware with my family and dog.



My husband and I went to the same summer camp in middle school.



I am an astronomer who is afraid of the dark and mountains.



I am afraid of cotton balls.

well-designed data interactions can do for increasing inclusion in cutting-edge scientific discovery.

One of the great things about the US-ELTP is NOIRLab's great legacy and experience with community engagement and providing cutting-edge resources for a diverse audience to participate in discoveries. The US-ELTP is building on the foundation of NOIRLab and taking it to another level, not just building the software and user interfaces that could enable a diverse set of scientists with breakthrough discoveries but really integrating the idea of inclusion from the early stages of project development to ensure that what is being built can actually lower the barriers of access.

### What were some challenges or opportunities that you faced?

A challenge early in my career was learning what it meant to be female in a predominantly male environment. It was really bad in college to the point that I declared to a visiting committee and a room full of students that I would never work in a physics department again. Even when I was in an executive role, others who didn't know me yet would process my words and actions through a filter impacted by the fact that I had been a professor at a liberal arts college and

was a woman. Today, I am much more comfortable and very lucky that this is not the case anymore.

In terms of my career trajectory, two big opportunities that propelled me were the discovery of the first ultra-faint galaxy and learning from this discovery to just go for "it" and don't ask for permission. For example, as a postdoc, I joined the LSST science collaborations as the chair of the Milky Way science collaboration. Instead of waiting for someone to lay the work out for me, I just jumped right in and started my own leadership vision. Not waiting for permission can lead to a lot of opportunities and networking.

### Do you have any advice for students?

If you want to do something, don't avoid it because you think you can't do it. If you only do things you are already comfortable doing, then you will never be able to grasp all of your potential.

My philosophy on living life is to try not to get embarrassed. I may make a public mistake or do something others may find embarrassing. Instead of letting it consume me, I like to think that I made those witnesses feel better about themselves or they have learned from my actions.

### Beth Willman's Pathway to NOIRLab Deputy Director



Always enjoyed math and science



Captain of her high school's computing team project



Studied astrophysics in college



Went to the University of Washington for graduate school



Became the Deputy Director of NOIRLab (2018–2022) and NOIRLab Project Director for the US-ELTP



Prioritized mentorship and service to students



Discovered the first ultra-faint galaxy, Willman 1