

**Text (sans images) for Dramaturgical presentation**  
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***The Half-Life of Marie Curie* by Lauren Gunderson**  
**The Nora / Central Square Theater**  
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**An Ordinary friendship Between Two Extraordinary Women:  
Hertha Ayrton & Marie Curie**

We're going to start with a little science lesson.

We know that Hertha is best known for "taming" the electric arc. But what is the electric arc? Where does the spark come from? What makes it work?

Imagine a searchlight...

Essentially, there are three important elements: A negative carbon on one side, a positive carbon on the other side, and a mirror in between them that receives the light the carbons cast and sends it out as a beam or ray. The positive carbon has a spot of light at the end of it which can only be steadied and maintained by the darkness at the tip of the negative carbon. When the darkness and light are balanced properly it creates what is known as "the electric arc," a kind of imaginary bridge of energy between the two carbons.

In Hertha's experiments she discovered that in order to make an effective, reliable electric arc that is free of unwanted noise, the spot of light on the positive carbon needs to be motionless. But the only way to keep the positive carbon steady is if the negative carbon stays small enough so as not to cast a shadow and block the beam of light on its way to the mirror.

In other words, the positive and negative carbons have to work together. They cannot compete with one another- they have to burn at the same rate.

When our play begins, Marie is lost in the dark and Hertha is the light that she needs in order to cast that outward beam. In order to make that ray of light, our two women (our two scientists!) need to work together.

If Marie is the negative carbon and Hertha is the positive carbon, then the electric arc between them is their friendship.

While the heart of this play is the friendship between these two women (which is a fairly ordinary thing)– how they lean on and protect one another, how they need each other– the energy that moves the play is the fact that these are not ordinary women at all. Their intellectual brilliance, their individual power, and their scientific contributions make them extraordinary and it's what makes this story worth telling.

What is special about their friendship? Hertha surrounded herself with close, female confidants throughout her entire adult life, gratefully leaning on them as needed. Marie, however, was a very private person and quite particular about who she allowed into her inner circle. Nearly all of her friends were scientists.

At the time our play takes place (1912), both women (58yr old Hertha and 45yr old Marie) have been recently widowed. They have both already achieved what will later be known as the greatest work of their lives, and they have been publicly acknowledged for that work.

The spark that ignites our story is the public backlash to the news of Marie's affair with physicist Paul Langevin. Marie's life has been threatened, she's been accosted in the streets, her home has been vandalized, and French newspapers have printed slanderous content about her character. Then, like balm to a wound, her friend Hertha appears and attempts to pull Marie up out of the mess.

Never before had Marie entrusted her mental and physical health to a friend for an extended period of time. Often choosing to suffer alone, this was the first–and likely the only– time Marie Curie allowed someone to truly take care of her.

The friendship between these two extraordinary women is a story of two unlike forces coming together. Hertha and Marie have different temperaments. And what happens when different temperatures come together? A storm, usually. Marie's coolness and Hertha's warmth create a kind of wild, beautiful storm. And when that storm wears itself out– when its competing forces begin to soften and work together– the air clears and the space is transformed, just as the women themselves are transformed by each other.