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The Women of JWST: Creating the Path to the Future

In 1922, NASA hired a woman named Pearl Young to work as a tactical employee for the first time. One hundred years later, NASA and partners ESA (European Space Agency) and CSA (Canadian Space Agency) spearheaded the James Webb Space Telescope project. Again, women have risen against the oppression they have faced to become vital components of the task.

The James Webb Space Telescope's goal, also called JWST, is to capture photos of the regions of space we have yet to explore with human-crewed spacecraft and gain a deeper understanding of our universe. With jobs within the engineering and science fields having been male-dominated for much of the last century, women have indeed begun to show that they have what it takes to stand beside "the man" and make these daunting tasks a reality.

This reality can be attributed to many incredible scientists, astrophysicists, mathematicians, and engineers, many of whom are women.

Dr. Jane Rigby, an astrophysicist who works at NASA, is often attributed as one of the leading women of the JWST project and the operations it handles. As the operations project scientist for the JWST, Dr. Rigby is in charge of many observatory tasks, including which images to select as data and scheduling when data will be taken. When interviewed by Lee Billings of Scientific American, Dr. Rigby said, "Give me a telescope, and I can come up with something good to do with it."

This can-do attitude is a refreshing note from someone like Dr. Rigby, who believes an essential part of the JWST is the further projects derived from the information it gives us and the learning opportunities it can offer us.

Another woman who has been influential within the realm of JWST is Emily Rickman, ESA Research Fellow. Rickman's job primarily involves the universe's unknowns and piecing together images to create a hypothetical map of our Solar System. Within this job, Rickman has the task of discovering planets, which she has done in her career and is hoping to do again with the help of the JWST.

When chosen to be a part of an International Women's Day panel, Rickman was asked what the most significant challenge she had faced in her career had been.

"There have been many moments where I have been the only woman in the room, and it felt like I did not belong there or that my opinion was not valued as much as my male peers. Whenever this feeling arises, I swallow it and make sure that my voice is heard. That can be difficult, but it's getting easier each time."

For Rickman, being a woman within the STEM field is something she holds close to her heart, and she aims to inspire younger women to become involved in the same field and show that they are capable of whatever they set their goals to be.

Lastly, Dr. Amber Straughn, an Astrophysicist and member of the JWST Science Team, spoke at the Perimeter Institute for Theoretical Physics, where she gave insight on what she calls "A New Era in Astronomy," referring to the groundbreaking information the James Webb Space Telescope will bring to the human race.

Having grown up in rural Arkansas, Dr. Straughn attributes her path to astronomy to her mother, who encouraged her to look for answers she was unsure of instead of relying on those around her. Taking that advice into her adulthood, Dr. Straughn became a vital part of many of the mathematical and thermal physics problems that were used to build the telescope, as well as the information that is being retrieved from the telescope now that it is in space.

With women such as Dr. Jane Rigby, Emily Rickman, and Dr. Amber Straughn working on the front lines of NASA and ESA with significant projects such as this one, they are laying the path for other women to follow and know that their opinions, voices, skills and hard work is valid and valued within the STEM world.

Without this woman and the many other women who worked as a part of this project, the James Webb Space Telescope would not be what it is today. Looking back, Pearl Young would be proud as she and all the women of the past and present can be attributed with helping the space exploration of today, tomorrow, and beyond.