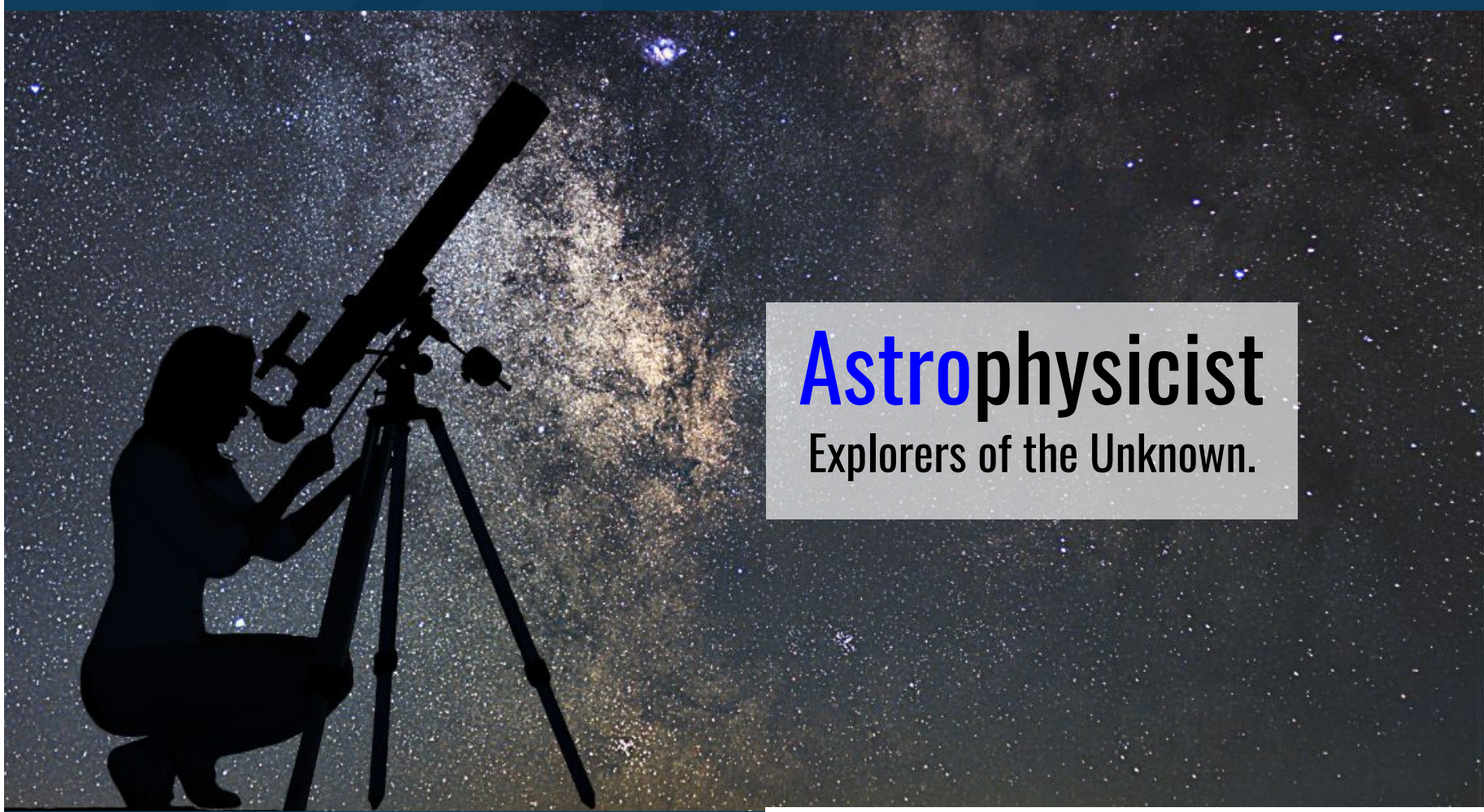


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Astrophysicist

Explorers of the Unknown.

By: Anthony, Derrick, Iain, Shining, Yunji, Angel



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TEAM 8838B



Introduction

We are team 8838B, Robohawks! We come from diverse backgrounds with different interests and skills but our unifying strength is our passion for robotics!

Astrophysicists will help us discover our place in the universe, change the way we look at the world, and allow us to sculpt our future.

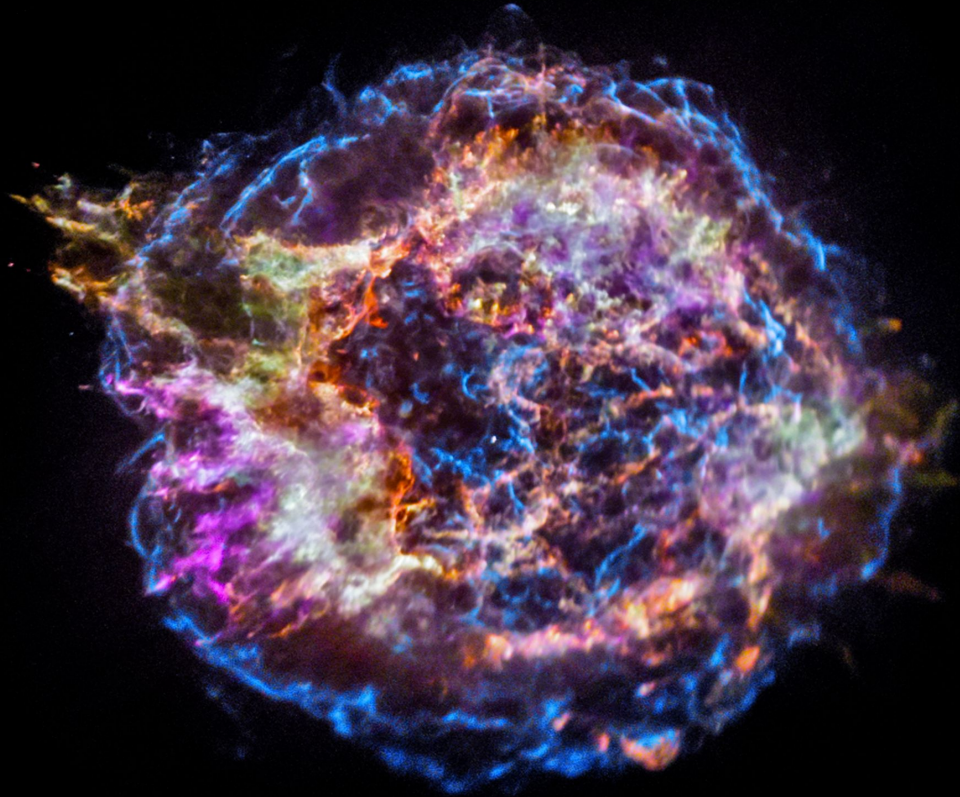


The journey begins when a mind is sparked with curiosity,
wondering, what exists in this vast universe?

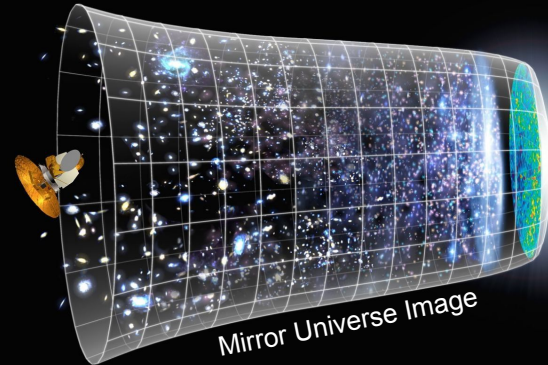


WHO ARE ASTROPHYSICISTS?

Astrophysicists are people who aim to understand the universe beyond us. They study planets, comets, and galaxies within the cosmos. One of their most important goals is to discover if there are any planets that are habitable and if there are signs of extraterrestrial life. Many missions are launched and developed at NASA to extend the vision of humans.

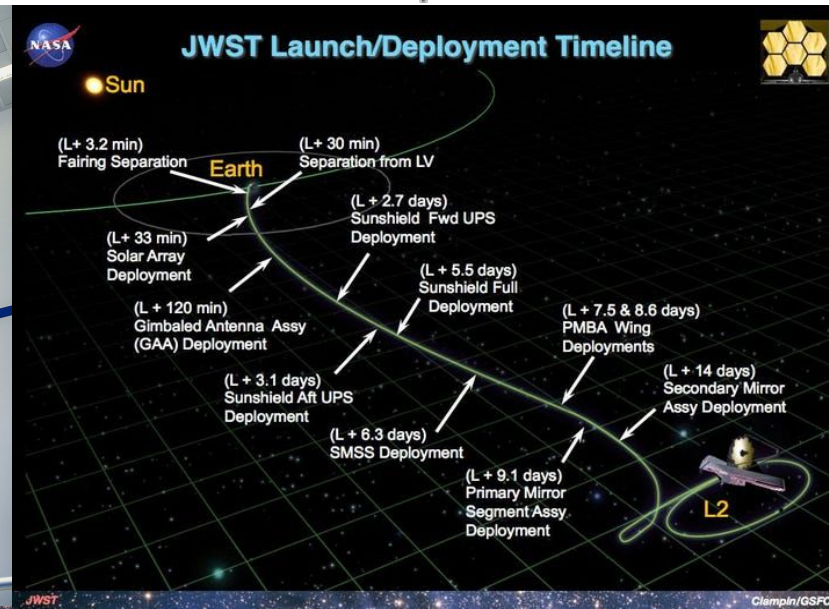
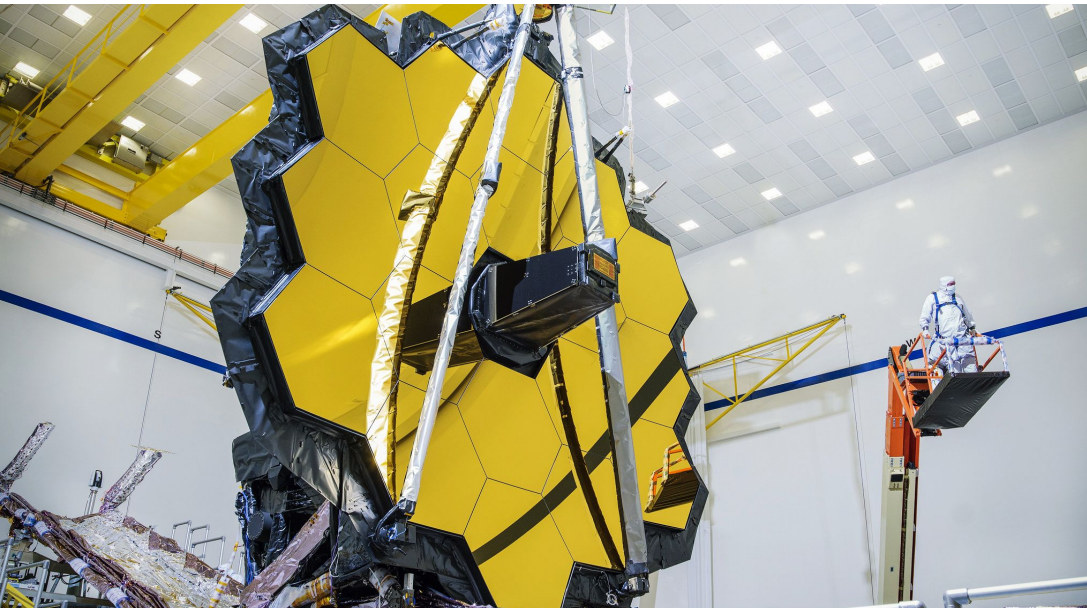
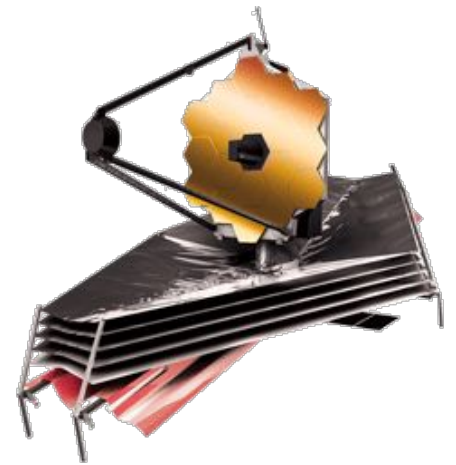


The image above was taken from Chandra X-Ray Observatory, measuring X-ray emission from heated areas in the universe. Picture of Cassiopeia A. Teamwork and perseverance play a big role to develop new technologies for this telescope.



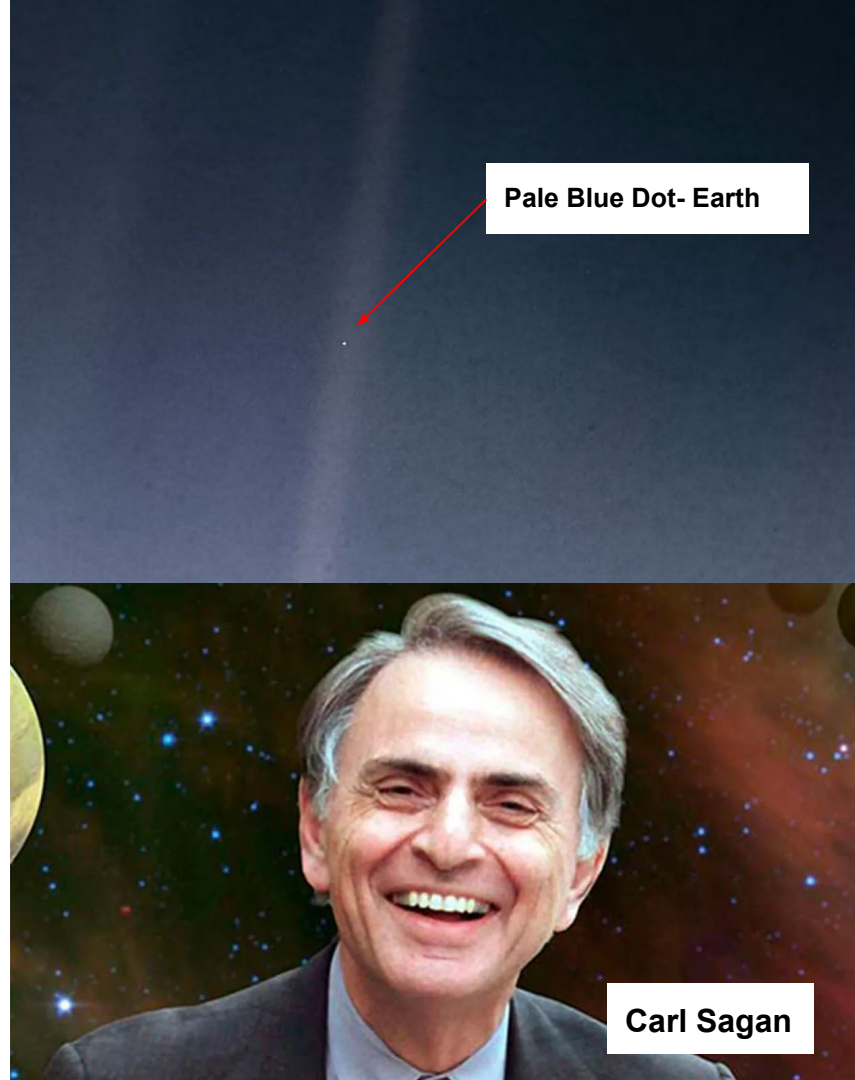
JAMES WEBB TELESCOPE

The James Webb Telescope is a feat achieved by the teamwork and collaboration of many space agencies, employees of NASA, and most importantly, astrophysicists! As this telescope is the result of 25 years of work, many astrophysicists have great hopes for what this telescope may discover. This telescope is crucial for astrophysicists to understand the origins of our universe because it will provide knowledge of the first luminous objects and possibly even molecular species.



WHAT IMPACT DO ASTROPHYSICISTS MAKE?

1. Astrophysicists influence the daily lives and thinking of humans on Earth. Based on the research that astrophysicists do, the human perspective on space is adjusted.
2. Astrophysicists can provide further information on science education, bringing more accurate knowledge of the very beginnings of life.
3. Astrophysicists, in helping space missions get to success, contribute to bringing unity throughout our cosmos as teamwork and inclusion are practiced in space.



Pale Blue Dot- Earth

Carl Sagan

HOW IS ROBOTICS INVOLVED?

Astrophysicists are constantly using the engineering design process to overcome challenges when developing instruments for telescopes, space probes, and more complex machinery. The engineering process that NASA STEM leaders use is asking, imagining, planning, creating, test, and improving. This is very similar to the engineering process that VEX students and innovators use. The skills that are practiced in VEX Robotics are key when pursuing astrophysics in your future career. Astrophysicists have to work together making teamwork essential. Being able to successfully carry out missions under time and pressure constraints are necessary skills that are incorporated into VEX Robotics.



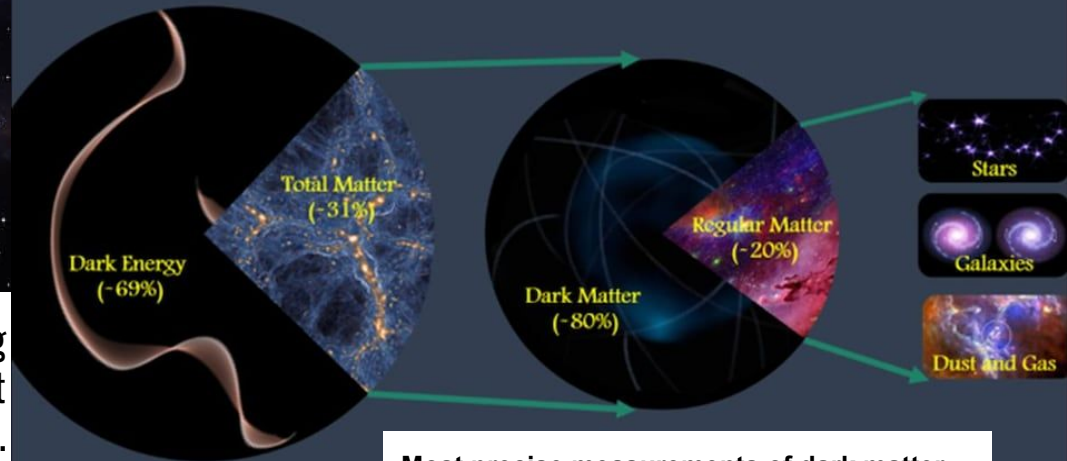
Stephen Hawking Above. Despite his wheelchair, Hawking was an incredible teacher, sparking curiosity about astrophysics.

HOW IS ASTROPHYSICS BE USEFUL IN THE FUTURE?



Astrophysicists are much needed in the future space industry as we have only discovered a fraction of what the cosmos is made up of. Many topics such as dark matter are still yet to be understood.

NASA and other space agencies are supporting astrophysics as they continue to develop telescopes that are essential to the research astrophysicists conduct. Astrophysics involves many aspects of STEM.



Most precise measurements of dark matter.

AN INTERVIEW WITH DR. MARTHA HANNER



Dr. Hanner was a JPL scientist for 25 years who took part in the Galileo mission to Jupiter, the ESA mission to Comet Halley, and the Stardust mission. She demonstrates girl power as she was one of the woman pioneers pursuing her passion at JPL. Her work has led up to the success of many missions.

JPL

Jet Propulsion Laboratory
California Institute of Technology



AN INTERVIEW WITH DR. MARTHA HANNER



How did you first get inspired to get involved with space and astrophysics?

I majored in astronomy when I was in college and received my Ph.D. in astronomy just a month before the first Apollo astronauts landed on the moon! After watching Neil Armstrong landing on the moon, I went on to center my work around comets.

Why were you interested in comets?

Astronomers are interested in comets because they preserve a frozen record of that original solar system material., a frozen time capsule.

What was the most interesting mission you worked on?

Definitely, the European mission to Comet Halley (the Giotto mission) was the most exciting for me. I was among the scientists present at the control center in Darmstadt Germany the night that Giotto flew past the nucleus at a distance of only a few hundred km.

HOW TO BECOME AN ASTROPHYSICIST

Requirements/Day In Life	Salary	Job Growth	Employers
<p>You must have a masters degree, however, many employers require doctoral degrees.</p> <p>In order to find out what exists in the universe, astrophysicists use telescopes and instruments to collect data about their research.</p>	<p>The typical salary of an astrophysicist is anywhere from \$16,134 to \$422,641.</p>	<p>As the government will value space exploration, the demand for astrophysicists will steadily increase.</p>	<p>Some astrophysicists work for governments however, most work in universities or colleges.</p>

CONCLUSION

Astrophysics is a quickly expanding field as it holds many opportunities to learn more about human origins and signs of life outside our planet. Astrophysicists take part in developing the new technologies needed to gaze into the very beginnings when life was birthed from the cosmos. Our team aspires to become like the brave men and women who navigate these uncertain yet exciting STEM pathways.

Taking another step forward no matter how hard it was, made these engineers and scientists come to love their passion, just as we plan our future, one step at a time.

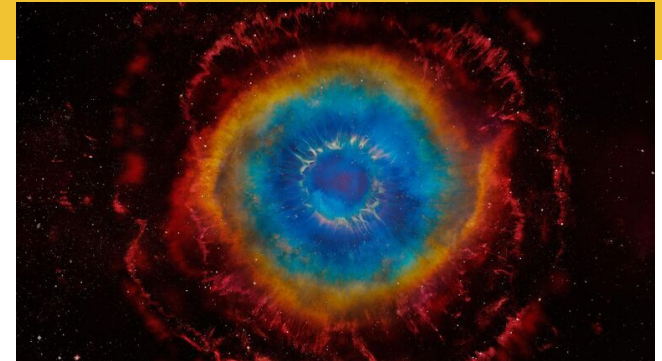
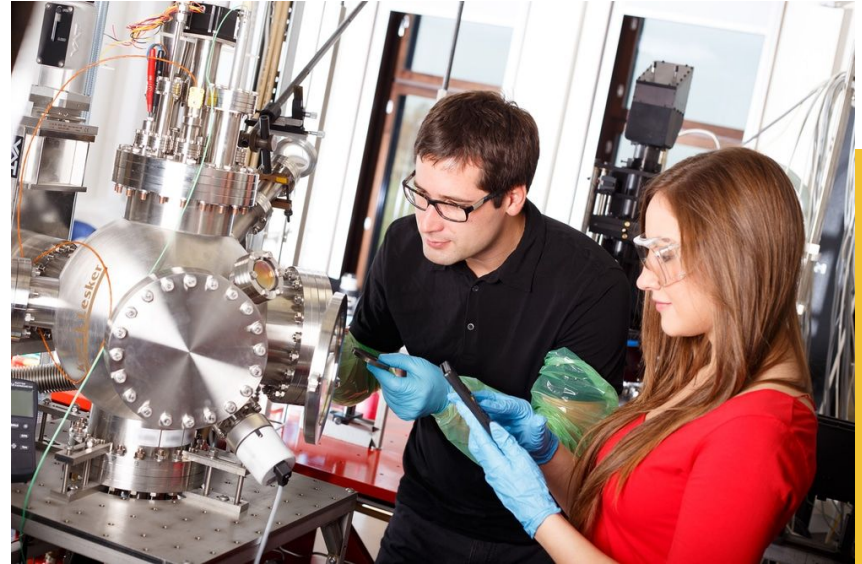


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