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Naval Horizons - Plasma Physics

The human imagination is endless but reality isn't, but sometimes we can use our imagination to create reality. When I was ten I got really into video games and action movies. In those movies I found out about railguns, and energy swords which I thought were cool but impossible. At least, until I found out about a Naval Research Laboratory (NRL) area of focus called Plasma Physics. Darryl Watkins, a contractor with NRL, illustrated to me that there are different plasma related projects that could not only aid the military, but other fields of work using ion beams. Plasma physics taught me how some of these weapons were not only possible, but already a reality, and in use in today's military on the most advanced warships. Because of Darryl Watkins, I have been inspired to help create the next generation of these future plasma technologies because of how useful this technology could be. Without a doubt, I believe that if our research on Plasma increases, the fictional weapons we see on the big screens will be in the palm of our hands.

Naval research laboratories make fictional weapons a reality. Weapons that we are also starting to use in today's military. The military's Plasma Physics Division conducts theories and experiments programs researching plasma physics, laboratory discharge, and space plasmas, intense electron, ion beams and photon sources, atomic physics, pulsed power sources, laser physics, advanced spectral diagnostics, and nonlinear systems. The Navy has developed a rail gun that can shoot a projectile at seven times the speed of sound and can slice straight through ships. Plasma has also made it so that the Air Force harnesses power to enable aviators to affordably and effectively strike critical targets at the speed of sound in their planes. These advances are aiding other branches of the military such as the Army. The Army is using laser weapons to hunt down any enemy drones with a large laser that gets within its kill zone. In general a lot of these weapons are still a work in progress, however, given more time they can become a reality.

Plasma physics will not only be helping out the military but also other workplaces. Plasma has made it into the tech industry by helping make the chips and semiconductors inside today's computers. Semiconductors are a vital component of many electronic and computing devices, many of which are in our military systems. Plasma physics has also made it so in the Netherlands, Physicists and bioengineers have created a brand new approach in medical procedures that can maybe be used, this technology has made it so medical workers can remove diseased tissue and sterilizing wounds. The "plasma needle" could also offer an alternative to conventional surgery in some cases. Plasma has also entered the jewelry industry by working with diamonds and helping dig up economically valuable material from the ground. Plasma is also used in everyday televisions by using tiny fast moving fluorescent light cells to form a picture. Overall plasma has improved people's day to day activities and improved their lifestyles.

Plasma has made many recent advancements in today's modern world. Plasma has proven its usefulness in everyday use to improve the lives of many. It is essential that we keep and improve this technology to ensure a better future. Naval Research Labs using this technology, will make the U.S. much stronger and

become safer for its citizens by creating new highly advanced defense systems such as lasers to take down drones and turrets that can slice through any enemy's armor. Not only did Naval Horizons career videos enlighten me about the importance of this new technology but It has also motivated me to start researching any possible careers related to plasma in the military. I hope to see myself one day being a part of a team who will create the newest lifesaving technologies because of my studies in plasma physics. Finally, the reason why it is good for plasma physics to be used in everyday jobs, and in the military, is it will benefit the country and everyone in it for better economy and security. Helping us to grow better in defense, economy, and community.