Zhong zhen 09/03/2018 Journal1

I have visited the Aeronautics & Astronautic (A&A) Lab of UW, and visit three sub-Labs, I have impression about the First research program I gone to, the subsonic wind tunnel, and the second program I have visited, the Z-pinch plasma. The first Lab’s main work is using Kirsten wind Tunnel (KWT) test the airplane data, but they can also test car model if corporation needs. After we came to KWT lab, they guide us to serval places. For example, the basement is a place to fix the model and get data when doing experiment, like sensor. And the second floor is the main part of the KWT, I saw the platform used for placing the model and calibration, and when you go deep inside, in the deep black hole, and behind two tall and big steel net bell mouth, there are a huge fan with one-human tall blade, can blow the wind not higher than 0.7 sonic speed. The fan is drive by a ship motor, and the instructor mentioned that when the fan do not work, there are gap between blade and gap, but when the fan is running, the blade would stretch and the gap would disappear because of some force.

The second Lab is dealing with plasma, a subarea in high-energy physics. They using a very cyberpunk feeling machine, a lot of tube, very complex looking. The Z-pinch program’s research is connecting with our future life in the Space Dynamic, because plasma is a high energy thing that people can use it in propeller, nowadays or vertex engine using air but in the space, it will be the plasma. When they do experiment, they need inject hydron gas into that machine and give them thousands volt to make gas become plasma. Then from the observation window, they can calculate the color spectrum. The plasma with high-energy would be beautiful purple.

After Lab view, I find all our group instructor is female, with one-hundred percent passion and self-confidence. And Engineer research is different in different area, in my bio-interface research we have chance using MRI, place sensor on the skin, but when I saw the wind tunnel, I can fell the huge power and why people loves it.