**Hanzhuo Zhang**

**First Reflection Session**

From the wave phenomenon topic in HL physics, it came to my attention that the relationship between the width of the central maximum of a single slit diffraction and the width of the slit is inversely proportional. As the leader of quantum physics club, I saw a possible connection between this counterintuitive phenomenon and Heisenberg’s uncertainty principle. The non-deterministic nature of quantum physics had always been an interest of mine, hence I decided investigate whether the aforementioned phenomenon is a manifestation of the Heisenberg’s uncertainty principle.

During our first meeting, my supervisor reminded me that a Physics EE must be anchored upon practical work, hence I proposed a method that can investigate the relationship between the distribution of photons in a single-slit diffraction pattern and the width of the single slit, and we arranged another meeting to test if it works. Evaluating my position after the meeting, I decided to come up with some backup physics EE ideas and alternative methods in case my proposed method fails to produce the desired results.