**Lightning detection and photography**

Our goal in this project is to detect and take pictures of lightnings in Earth’s stratosphere by examining changes in electromagnetic filed and image classification at the same time.

This project would take advantage of the astropi’s onboard IMU sensor, camera and the Coral TPU.

Because we are looking for electric felds, we should be able to detect them even thru ISS’s and astropi’s shielding, which can act as a Farraday cage. We will also take pictures periodically and try to classify them using a tflite model trained on modified NASA footage. We will store some of the pictures, so if the classification wasn’t precise enough, we would still recieve some images.

After the experiment, we plan to compare data from the magnetometer and classified images to NASA database.