



## P.E.A.R.E. (PHOTO-ELECTRIC AFFECTION-BASED REGOLITH-EXTRACTOR) ASTEROID DUST COLLECTION SYSTEM



**SCHOOL:** HIGHLAND HIGH SCHOOL

**LOCATION:** MEDINA, OH

**FLIGHT PROVIDER:** UP AEROSPACE

**GRADES:** HIGH SCHOOL

### STUDENT EXPERIMENT DESCRIPTION

Our experiment is a dust collection system that's intended to be used on the surface of celestial objects like asteroids or other planets. We plan to use a high powered UVC LED to induce the photoelectric effect which will cause the dust particles to become charged. When the particles become charged, they gain magnetic properties and can become attracted to a magnet which sucks in the dust. We test to see if our experiment works by using a sensor near the magnet to see if dust is collected.