Team # 3344

Activity 8.1: *Remote Temperature Measurement*

Task 1: Thermopile Background

1. What is the difference between a thermopile and temperature sensor?

Temperature sensor relay on physical probe
The thermopile makes readings with infrared (IR) radiation

2. What will the thermopile be able to do on the Moon that the temperature sensor will not?

Thermopile can measure the temperature of the Lunar surface while the temperature sensor will measure only the temperature of the LunaSat

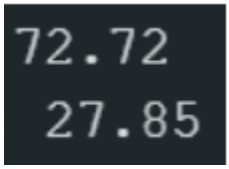
Task 2: Experimental Set-Up **(DO NOT TOUCH THE THERMOPILE)**

- ☑ ~~Retrieve paper, fabric, and aluminum foil~~
- ☑ ~~Connect the LunaSat to the FTDI and laptop~~
- ☑ ~~Verify and upload the code~~
- ☑ ~~Open the serial monitor~~
- ☑ ~~Move the LunaSat around and watch the serial monitor to see the temperature reading change~~

What is the room temperature (Celsius)? 26.85 C

Task 3: Conduct the Experiment **(DO NOT TOUCH THE THERMOPILE)**

- ☑ ~~Locate the thermopile on the LunaSat. Ask for help if you need it.~~
- ☑ ~~Move a cold or warm object around the thermopile to find its sensing location~~
- ☑ ~~Move each object in the sensing location and watch the serial monitor to determine the temperature reading~~
- ☑ ~~Record the objects' corresponding temperatures below~~



Temperature in Celsius (upper value - hot cup)

Object	Temperature
Paper	25.0 C
Fabric	29.1 C
Aluminum Foil	25.3 C