Your team needs to incorporate feedback from the Astro Pi team to progress to Phase 2. Please submit your team's updated idea by 25 November 2021.

Phase 1 feedback

Please update your experiment idea, taking the feedback below into consideration:

1) Please can you provide more information about your idea. Are you planning nighttime photography? What is the likelihood that
2) the ISS will pass over an active fire in the 3 hour period when you experiment is running? How will you use ML to distinguish
3) between fires and light pollution? What will you use for training data?

Update your team's idea

INITIAL IDEA

Life on Earth

In this project we will use Astro Pi's camera in order to detect: fires on earth and light pollution.
Fires and light pollution can be detected by using a certain threshold for each one.
Machine learning(using coral) can also be used to distinguish between fires and light pollution .

Data

LIGHT, PHOTOS

Update your team's idea

SUBMITTED

1. Are you planning night time photography?

2. What is the likelihood that the ISS will pas over an active fire in the 3 hour period when your experiment is running

3. How will you use ML to distinguish between fires and light pollution? what will you use for training data?

1. NO we cannot know the time our program runs on ISS, so we'll make two different algorithms, one for night time and one for day time. We will measure light to identify if it is daytime or night time. In the daytime will have to remove daylight from our pictures to identify easier

2. Of course we're not sure about an active fire at that period but we have to try this - but there will be lights for sure or even smoke from factorys which can be identified

3. The light of a "fire" has diffent wave length from technical light especially led lighting. Also fires make smoke. In order to train the ML we can use images from ISS including fires and only light. Also we can use small fires and lighting from leds and train it that way. Then we can compare results from each method to determine which is the best.

Στις σύγχρονες πόλεις, όλο και περισσότερο, αντικαθιστώνται οι συνήθεις λαμπτήρες πυρακτώσεως, με νέους λαμπτήρες LED. Το φωτεινό αποτύπωμα των πόλεων, αποτέλεσε, τείνει να επεκτείνεται από το φάσμα του "υπέρυθρου - ερυθρού - κίτρινου" προς το φάσμα του "μπλε - γαλάζιο - υπεριώδους".

Έτσι θα είναι πιο εύκολο για τους ανιχνευτές μας, να εντοπίσουν και να διακρίνουν τη περιοχή πυρακτώσης (που θα είναι κοντά στο υπέρυθρο) από τη ψυχρή περιοχή πόλης (που θα είναι κοντά στο υπεριώδες).

Η "εκμάθηση" θα γίνει σε πραγματικές φωτεινές, σε ανοικτό χώρο και με λάμπες LED από τον δημόσιο φωτισμό.

ΚΣΗΧΣΤΥ