

# The European Astro Pi Challenge

The European Astro Pi Challenge is an ESA Education project run in collaboration with the Raspberry Pi Foundation.

It offers students and young people the amazing opportunity to conduct scientific investigations in space by writing computer programs that will be run on Raspberry Pi computers aboard the International Space Station.

[www.astro-pi.org](http://www.astro-pi.org)



# Astro Pi Mission Zero

Writing a short Python program, using trinket, that is guaranteed to run onboard the International Space Station!

- Teams of 2 to 4 young people up to the age of 14 years
- **Open 12 September 2019 to 20 March 2020**
- Can be completed in an afternoon using the online trinket emulator
- Every team receives a certificate showing the location of the ISS when their code ran



# Astro Pi Mission Space Lab

Designing and coding a scientific experiment to run on the Astro Pi computers.

- Teams of 2 to 6 young people up to 19 years old
- **Phase 1 open 12 September to 25 October 2019**
- Phase 1: Come up with an idea
- Phase 2: Best ideas receive Astro Pi kit and write the code for their experiments
- Phase 3: Best experiments selected to run on the ISS
- Phase 4: Write a report
- Best reports selected as winners

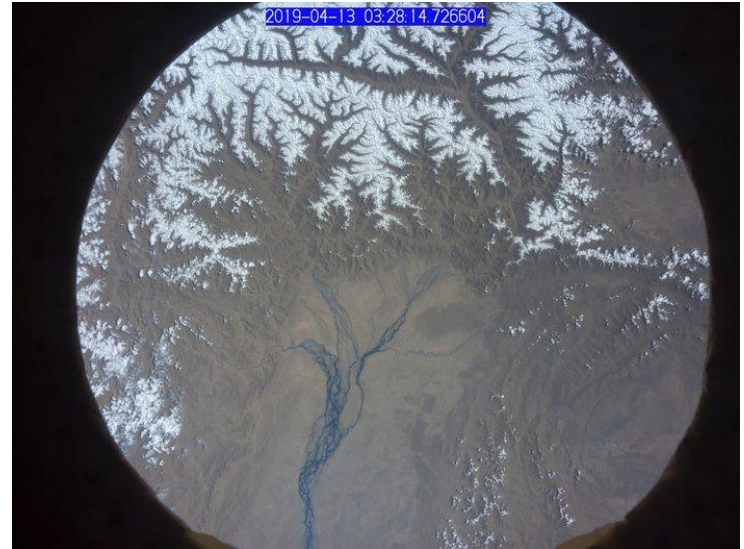


# 2018/2019 Mission Space Lab Winners

From 470 entries, 11 winners were selected, as well as 4 highly commended teams.

**AstroRussell** from Liceo Bertrand Russell, Italy, developed a clever image processing algorithm to classify images into sea, cloud, ice and land categories.

**TheHappy.Pi** from I Liceum Ogólnokształcące im. Bolesława Krzywoustego w Słupsku in Poland, successfully processed their images to measure the relative chlorophyll concentrations of vegetation on Earth.



River Brahmaputra in India analysed by team TheHappy.Pi



# Webinar with Frank De Winne

The 11 winning Mission Space Lab teams were rewarded with a very special prize... a webinar with ESA astronaut Frank De Winne!

Frank is currently the head of the European Astronaut Centre in Germany, where astronauts train for their missions to space.

The webinar took place on 18 June and each team had the chance to ask Frank questions about his life as an astronaut.

