MUSA

project

ORBITAL

SPACE TECHNOLOGIES

OUR CURRENT PROJECT

MUSA

In 2019, Project MUSA, now Orbital Space Technologies proof of concept, won the sixt edition of the Mission Idea Contest organized by UNISEC.
The team was also rewarded with the International Academy of Astronautics (IAA) award, as the project with the greatest potential for international cooperation.

The project seeks to study the fungus that causes Panama Disease, (which threatens banana plantations worldwide) and its antagonist in a microgravity environment with the intention to determine the gene expression changes that will allow us to develop a cure for the pathogen and save plantations all across the globe.

DUAL CULTURE OF FUNGI

Fusarium oxysporum f. sp. cubense (Panama's disease creator)

Trichoderma Harzianum (Natural biocontroler or antagonist)

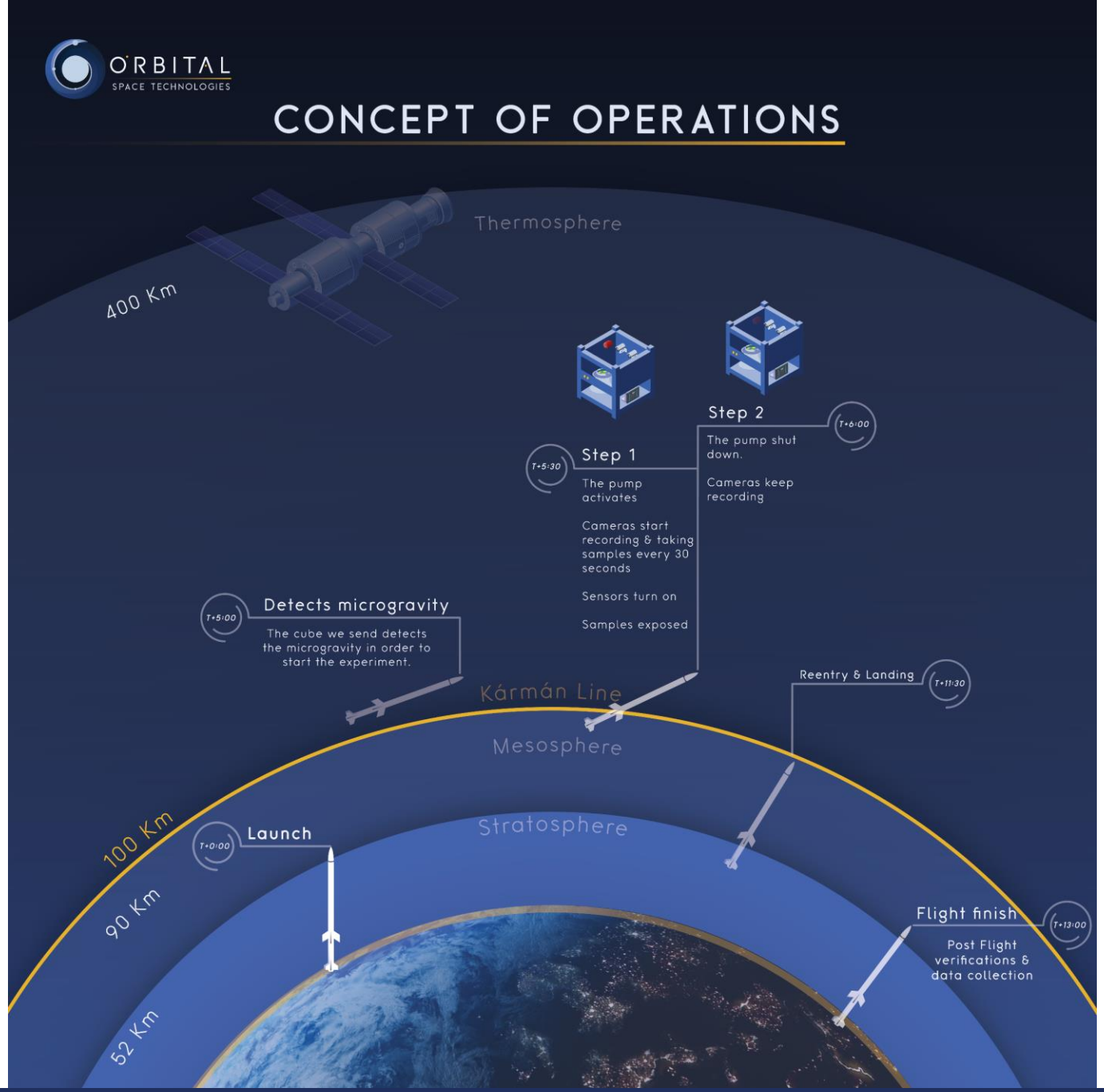
Currently, this project is on its development phase, and the technology for the experimental platform, designed by the company, will be validated via a suborbital flight that is scheduled for June, 2022. Once the platform is validated, the experiment will be sent to the International Space Station.

ICE CUBES FACILITY PILLAR

MORE RECENTLY

SETEC Lab
Space Systems Laboratory

ORBITAL
SPACE TECHNOLOGIES


ORBITAL
SPACE TECHNOLOGIES
CONCEPT OF OPERATIONS
Thermosphere
400 Km
Step 2
T+6:00
The pump shut down.
Cameras keep recording
Step 1
T+5:30
The pump activates
Cameras start recording & taking samples every 30 seconds
Sensors turn on
Samples exposed
Detects microgravity
T+5:00
The cube we send detects the microgravity in order to start the experiment.
Kármán Line
Reentry & Landing
T+11:30
Mesosphere
100 Km
Launch
T+0:00
Stratosphere
90 Km
Flight finish
T+13:00
Post Flight verifications & data collection
52 Km

FUTURE STEPS

- FUNDING STAGE
- MANUFACTURE OF MECHANICAL COMPONENTS
- SYSTEM INTEGRATION
- FLIGHT OBJECT ASSEMBLY AND TESTING
- LAUNCH TO ISS AND OPERATIONS
- SAMPLE ANALYSES AND RESULTS DOCUMENTATION

IF YOU WANT TO HELP

GOGETFUNDING CAMPAIGN: MUSA PROJECT SUBORBITAL FLIGHT

MUSA
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THANKS FOR YOUR ATTENTION

crodriguez@orbitalspace.tech

+506 8364 3080

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