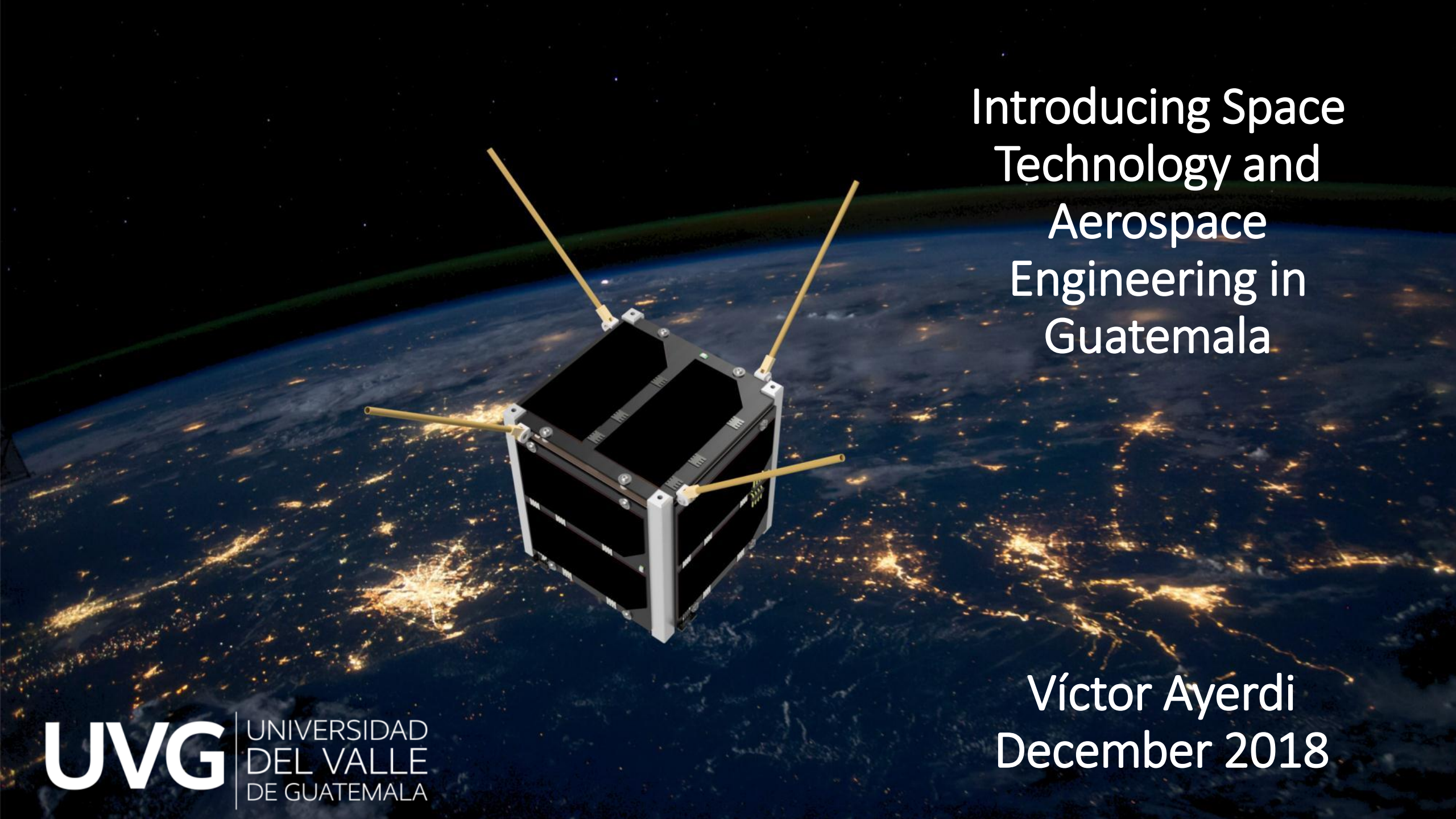


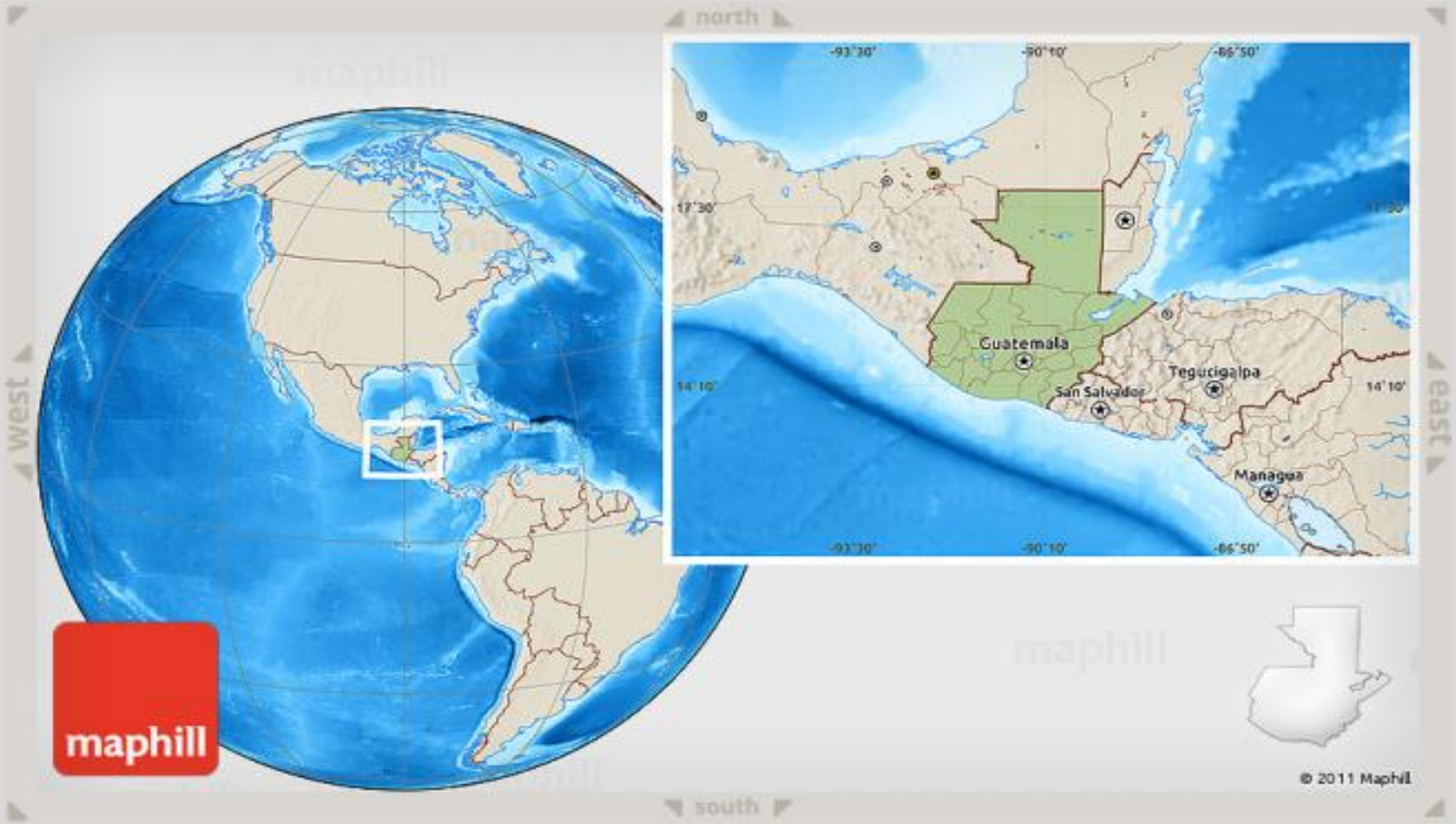
Introducing Space Technology and Aerospace Engineering in Guatemala

Víctor Ayerdi

December 2018

UVG UNIVERSIDAD DEL VALLE DE GUATEMALA

GUATEMALA



Quick Facts

- **16.5 million inhabitants**
- **50% under 25 years old**
- **51% women**
- **59% live in poverty**
- **Less than 5% get a college education**
- **Main exports:**
  - **Sugar, banana, coffee**

The first steps: CanSat Competition 2012-2014

Annual CanSat Competition in Texas

2013: position 14 of 25 teams
2014: position 12 of 40 teams

Next Step, the CubeSat Project

Team Phase 1 – CubeSat Project

January 2014:

- 4 Mechatronics Engineering students
- Budget: $0
- No credibility

December 2014:

First international participation: 1st IAA Latin American CubeSat Workshop, Brazil

CubeSat Mission

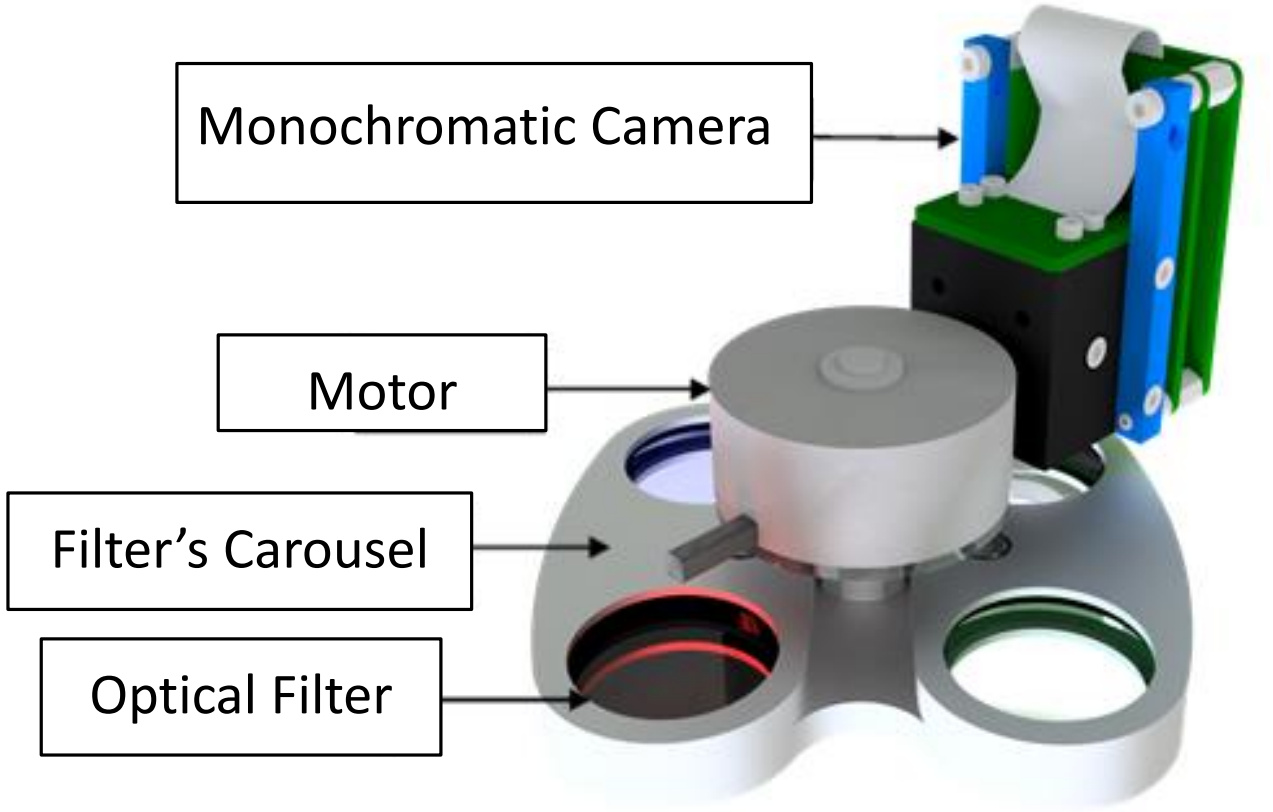
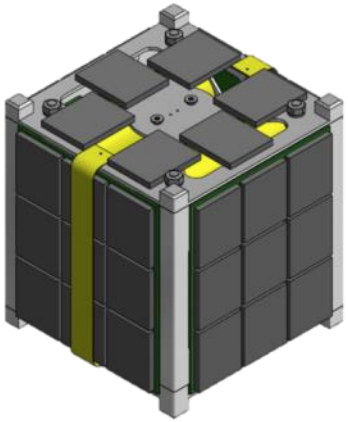


Image : Landsat 2015



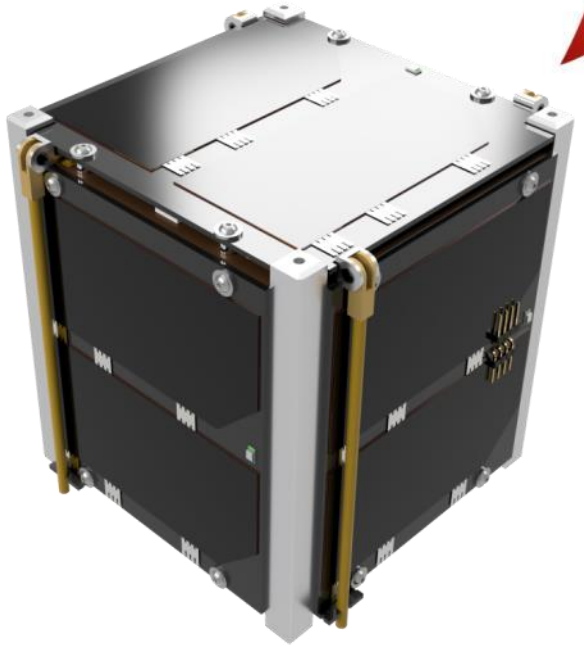
2014

2015

2016

2017

Second round winner of the KiboCube programme



Final Design 2018

Why is the KiboCube programme so important?

Dr. Luis Zea of UVG, receiving a simbolic CubeSat from Dr. Simonetta Di Pippo (UNOOSA) and Dr. Koichi Wataka (JAXA) during the announcement of the Second Round Winner of the KiboCube programme in IAC 2017. (Photo Credit: UNOOSA)

Benefits from KiboCube

1. Launch from ISS
2. Learn the process to send something to the ISS
3. Networking outside Guatemla
4. Credibility inside Guatemala

About networking and credibility....

Organizations supporting Quetzal-1

UNITED NATIONS
OOSA

JAXA
Japan Aerospace Exploration Agency

UVG UNIVERSIDAD DEL VALLE DE GUATEMALA

ICTP The Abdus Salam International Centre for Theoretical Physics

Julius-Maximilians-
UNIVERSITÄT WÜRZBURG

Universales
Queremos que siempre estés bien

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Embajada de los Estados Unidos de América

UK SPACE AGENCY

Claro

SIT GUATEMALA
SUPERINTENDENCIA DE TELECOMUNICACIONES

spg Guatemala

Club de Radioaficionados Guatemala, C.A.

DELTA

Lax Travel

L'alianXa Travel Network GUATEMALA

FUNDACIÓN JUAN BAUTISTA GUTIÉRREZ

ANSYS

GrupoSSC

Domino's Pizza

ERA & Relmo
Mejores Productos Industriales

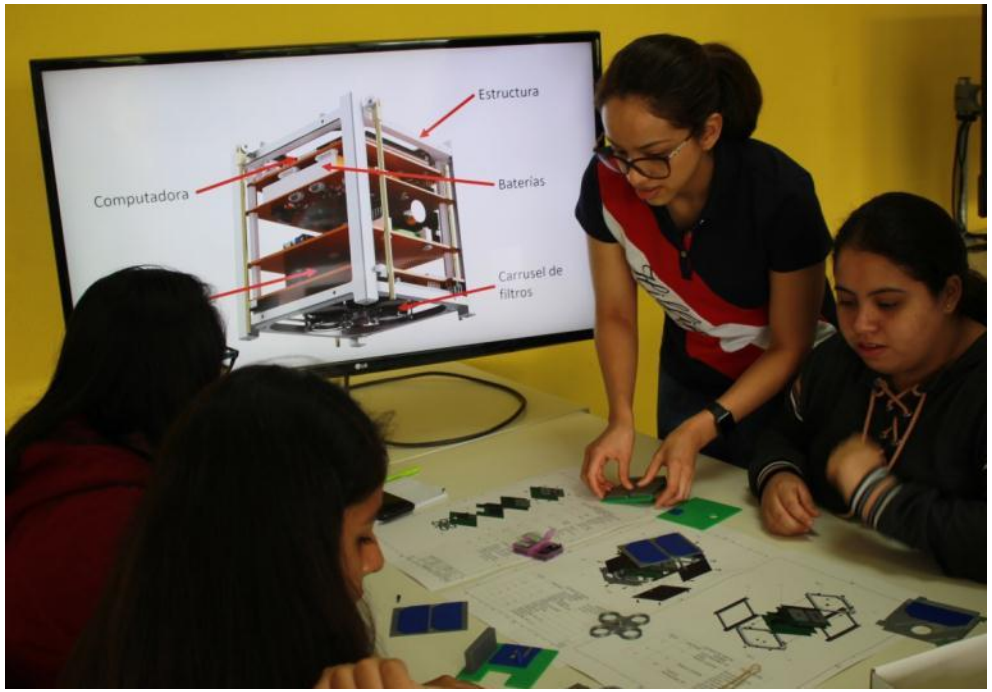
LG

ASTROSAT

TEC | Tecnológico de Costa Rica

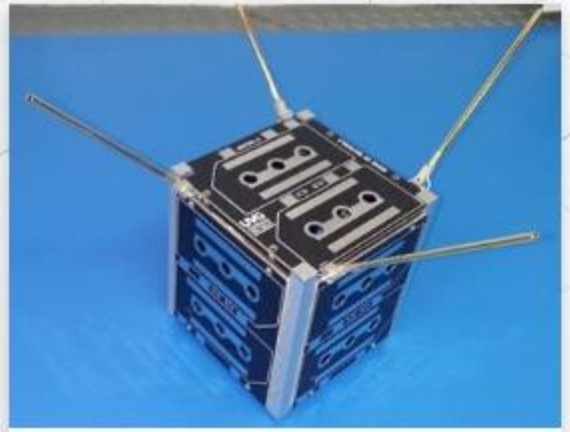
Outreach campaign in Guatemala

Conferences and workshops in schools



«Guate goes to the space» publications in Prensa Libre

PRENSA LIBRE



Guate va al espacio

CubeSat Guatemala: Cómo obtiene energía Quetzal-1

Para la operación en órbita de Quetzal-1 —que se lanzará al espacio en el 2019—, que se construye en la...

Guate va al espacio

CubeSat Guatemala: Resumen del trabajo realizado en seis...

Con esta edición llegamos a seis meses publicando quincenalmente en este espacio, información acerca del proyecto del...

Guate va al espacio

CubeSat Guatemala: Conozca dónde se construye Quetzal 1

Durante el proceso de construcción del primer satélite del país, que se desarrolla en la Universidad del Valle de...

Guate va al espacio

CubeSat Guatemala: Conozca a los catedráticos dedicados...

Los docentes que participan en el proyecto del primer satélite guatemalteco destacan por su compromiso y dedicación.

Competitions

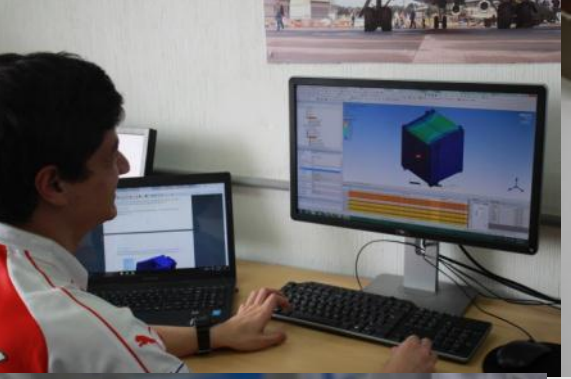
Name the Guatemala´s first satellite

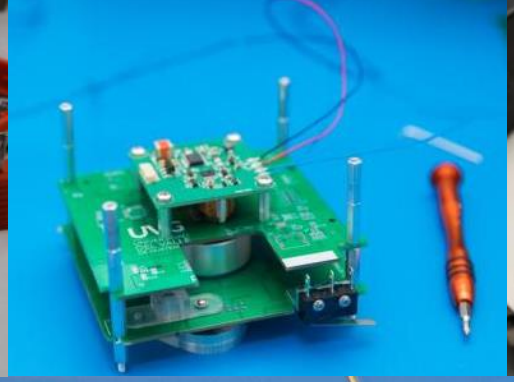
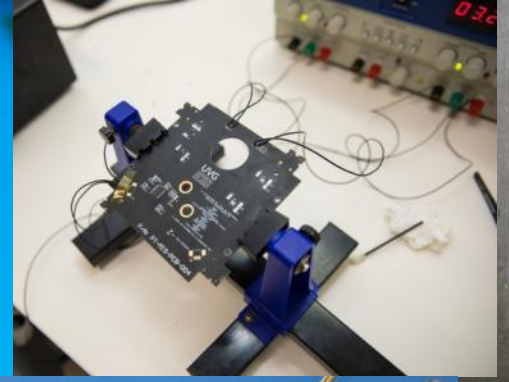
Design the Mission's Logo

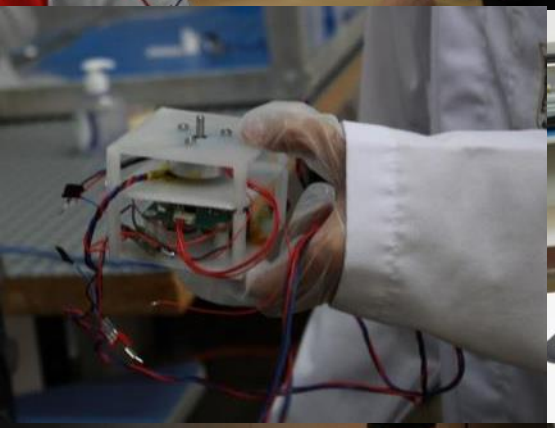
What´s next…

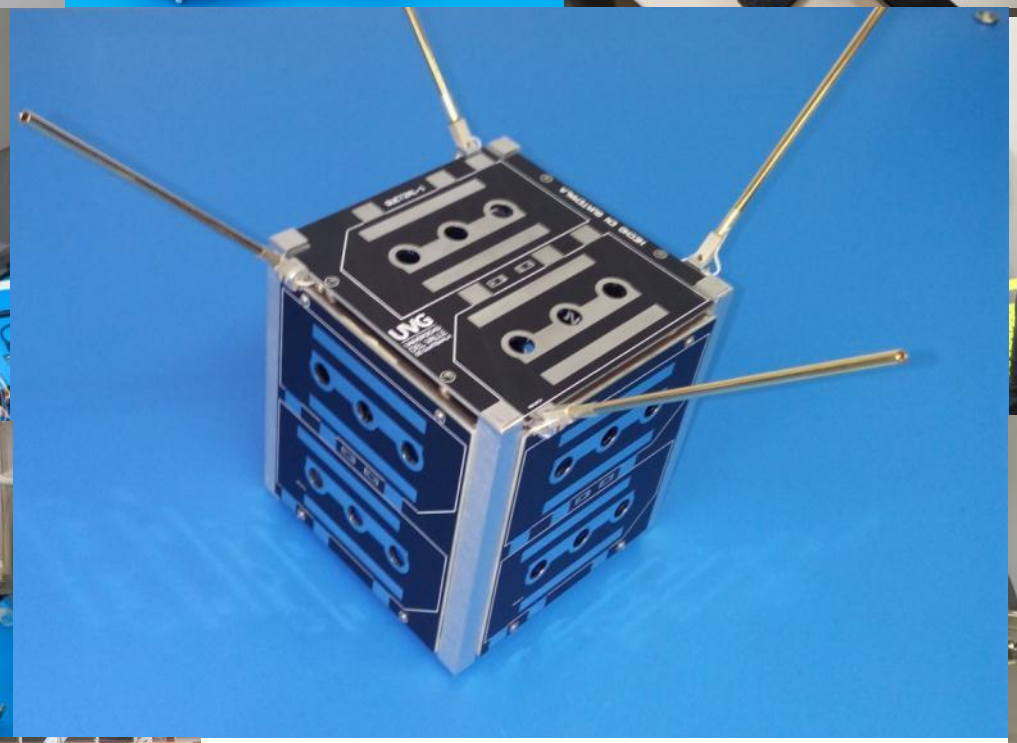
Goals

1. *Launch Quetzal-1 in 2019*
2. *Regional CubeSat together with TEC Costa Rica (international workshop for mission definition in 2019)*
3. *Aerospace Research Center in UVG in 2020*
4. *Send first experiment to ISS in 2022*
5. *First Aerospace Engineering programme in Guatemala in 2023*

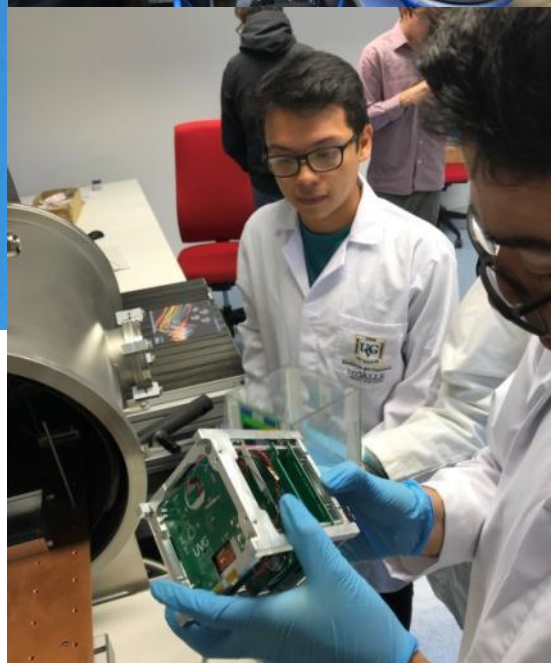










¡Thank you very much!

www.uvg.edu.gt/cubesat