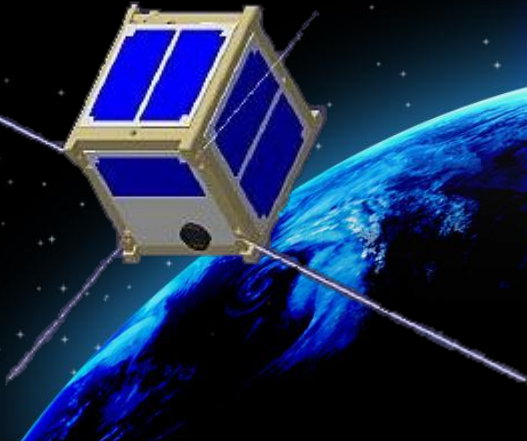


Design of a Nano-Sat in the Dominican Republic

Ingeniery school
Faculty of science and engineering
UNAPEC University

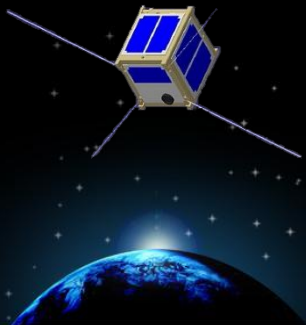


Where is Dominican Republic?



Mission:

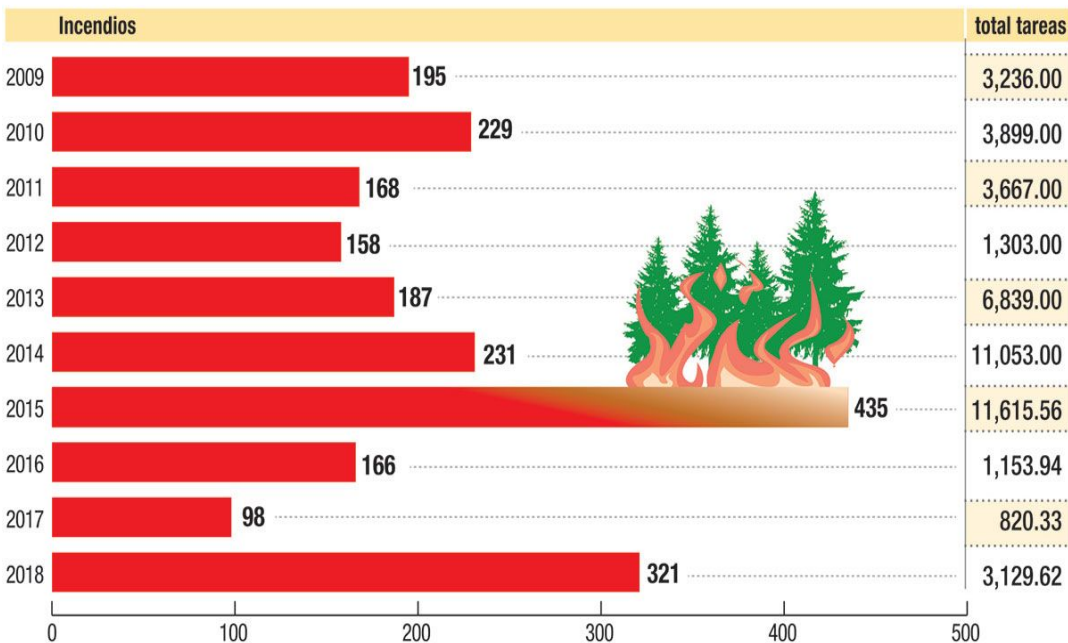
“Development of a nano satellite for the detection of forest fires in the Dominican Republic”



Forest Fires in the DR

Número de incendios forestales y superficie afectada (2009-2018)

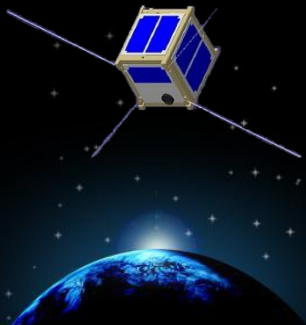
(Total incendios: 2,188 y total tareas:46,716.45)



- A significant increase in the last 20 years.
- The country has many forests and protected areas.
- There is no efficient system for early detection of forest fires.

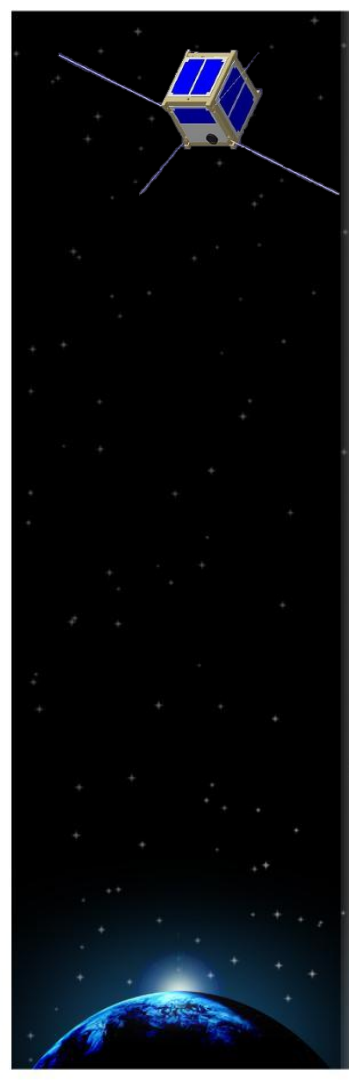
Mission stages:

- Design and construction of the nanosatellite.
- Development of a testing laboratory for nanosatellites.
- Development of a ground station to receive and process the Nano-Sat data.



Earth Station

- Design and construction of the ground station.
- Antennas made by our professor Porfirio Sanchez and his students in the antenna lab.



UNAPEC GROUNDSTATION

SatNOGS
NETWORK

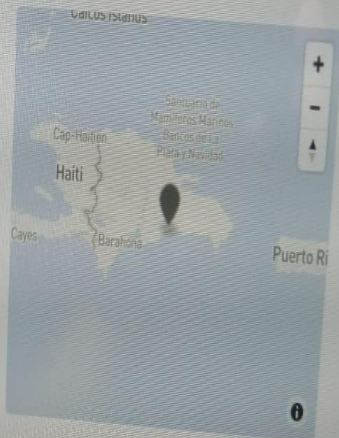
[Home](#)
[About](#)
[Observations](#)
[Ground Stations](#)
[Community](#)
[Wiki](#)

2687 - UNAPEC Groundstation

Owner psanchez
QTH Locator FK58bl
Coordinates 18.473°, -69.914°
Altitude 71 m
Min Horizon 10°
Antennas Turnstile (VHF, UHF)
Creation Date 33 minutes ago
Online Last seen 0 minutes ago
Uptime 0:11:27

Raspberry PI + RTL-SDR

Calculate Future Passes



Update filters

ID	Satellite	Frequency	Mode	Timeframe	Results	Observer	Station
#104016	OSCAR 7	145.925 MHz	USB 0	2022-07-08 21:04:30 2022-07-08 21:09:49		psanchez	2687 - UNAPEC Groundstation
#104017	PCSAT	145.827 MHz	AFSK 1200	2022-07-08 20:57:56 2022-07-08 21:04:00		psanchez	2687 - UNAPEC Groundstation
#104018	FOI-1A	145.978 MHz	DUV 200	2022-07-08 20:50:14 2022-07-08 20:57:26		psanchez	2687 - UNAPEC Groundstation
#104019	OSR-1	137.050 MHz	PSK 1200	2022-07-08 20:34:05 2022-07-08 20:45:08		psanchez	2687 - UNAPEC Groundstation
#104020	NOAA 9	136.770 MHz	BPSK	2022-07-08 20:25:51 2022-07-08 20:29:21		psanchez	2687 - UNAPEC Groundstation
#104021	FIRST-MOVE	145.970 MHz	CW 15	2022-07-08 20:17:06 2022-07-08 20:25:21		psanchez	2687 - UNAPEC Groundstation
#104022	MOVE-020	145.840 MHz	BPSK 12500	2022-07-08 20:09:58 2022-07-08 20:13:47		psanchez	2687 - UNAPEC Groundstation
#104023	FUNCUBE-1	145.935 MHz	BPSK 1200	2022-07-08 20:01:08 2022-07-08 20:09:28		psanchez	2687 - UNAPEC Groundstation
#104024	ISS-1	136.410 MHz	USB	2022-07-08 19:38:17 2022-07-08 19:50:43		psanchez	2687 - UNAPEC Groundstation
#104025	LAPIN-A2	145.825 MHz	AFSK 1200	2022-07-08 19:32:53 2022-07-08 19:37:47		psanchez	2687 - UNAPEC Groundstation
#104026	ISSA-2	145.900 MHz	FM	2022-07-08 19:15:46 2022-07-08 19:21:24		psanchez	2687 - UNAPEC Groundstation
#104027	OSCAR 7	145.925 MHz	USB 0	2022-07-08 19:09:57 2022-07-08 19:15:16		psanchez	2687 - UNAPEC Groundstation
#104028	VELOR 2	145.990 MHz	CW	2022-07-08 19:05:25 2022-07-08 19:09:27		psanchez	2687 - UNAPEC Groundstation
#104029	OSR-1	137.050 MHz	PSK 1200	2022-07-08 18:49:49 2022-07-08 18:59:22		psanchez	2687 - UNAPEC Groundstation
#104030	DELTA-ASST	145.870 MHz	BPSK 2400	2022-07-08 18:37:59 2022-07-08 18:43:21		psanchez	2687 - UNAPEC Groundstation
#104031	LAPIN-A2	145.825 MHz	AFSK 1200	2022-07-08 17:48:06 2022-07-08 17:54:06		psanchez	2687 - UNAPEC Groundstation

Our laboratory equipment



Modelo 8092 mostrado con la computadora, no incluida.

Our laboratory equipment



Next steps:

- Develop and implement the Nano-Sat test laboratory.
- Design and build the Nano-Sat according to our mission.

What we need...

- Funds to finance the different stages of our mission.
- Collaboration of institutions and experts who provide us with their experience in Cubesat projects.



Finally, our vision is:

- The Dominican Republic becomes a regional center for testing and developing small satellites.
- Place our infrastructure at the service of institutions such as UNISEC, as a means for the expansion of culture and knowledge of satellite engineering for scientific and educational purposes.

A satellite with blue solar panels and gold-colored body is shown in the upper left corner, orbiting against a starry black background.

Thank you
GRACIAS
ありがとうございました



UNAPEC
UNIVERSIDAD APEC