



NEWSLETTER-AMSAT-EA

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ES'HAIL-2 / P4-A

Es'Hail-2 was launched on november 15 from the Space X's Falcon 9 rocket.

Mitsubishi and Es'hailSat will beguine the IOT programme once the satellite settles on its final orbit. This phase will take several months, so the ham radio payload won't be activated till then. Once this phase is completed, the satellite will move to its final position at 26° and AMSAT DL will announce when its ready. Please, don't use the transponders yet. They will announce when they are available. So try not to interfere when they are making tests.



SSO-A MISSION LAUNCHES

On november 19 the launch of the SSO-A mission was postponed. They planned to launch 15 microsats and 56 cubesats with amateur radio payloads.

These ones will have ham radio options: CSIM, ESEO, EXSEED, FOX 1C, JY1SAT, K2SAT, KNACKSAT, IRVINE02, ITASAT, MINXSS-2, MOVE-2, RANGO A / B, PWSAT2, SNUGLITE, SNUSAT-2, SUOMI-100 and VISIONCUBE.

Next launch window is scheduled for Monday December 3

AMSAT EA registers the FOSSA-1 sat @ IARU

AMSAT-EA has registered at IARU the pocketQube 1P FOSSA-1 satellite which is being developed by Julián Fernández EA4HCD, and a bunch of collaborators.

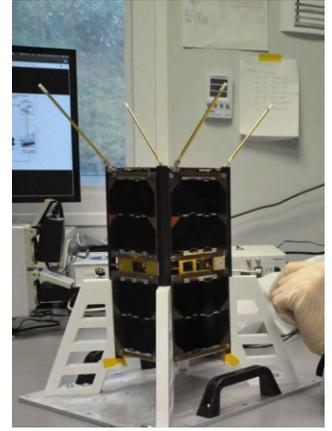
Documentation was sent to the secretary of state for the government approval. The requested callsign is AO4FOS. This satellite is a 5cm cube and has several missions, being one of them the test and experimentation of a new modulation type called LoRa, with a wider spectrum that increases the communication possibilities with powers lower than 100mW, reducing therefore the possibility to interfere with other satellites.

Besides that, this new technology reduces energy consumption and simplifies the telemetry reception from the sat. The LoRa technology is common in applications related to IoT (Internet of Things) for terrestrial networks, but only once was tested in the space. It was on the NORSAT-2 in the first days of 2018.

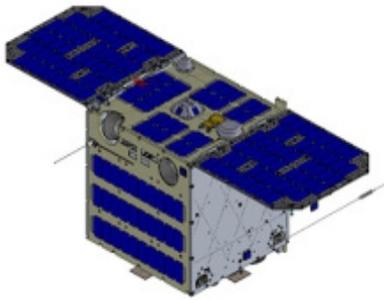


LUME-1

On december 25 Lume-1 will be launched. It's a 2U cubesat developed by the Vigo University. Its systems will be used to demonstrate the reception of notification alarms when sensors located in the Galician forest detect fires. Another goal is that the telecommunications engineering doctorate students will test a SDR platform that can be used in several apps: low speed data comms , ADS-B reception, characterization of the sources of an interference...SDR will also be used to test new modulations and services for amateur radio. These experiments and wave forms will be uploaded during the flight. The downlink proposal is a UHF link with GFSK and data from 1k2 to 9k6



DIWATA-2 microsat, launched

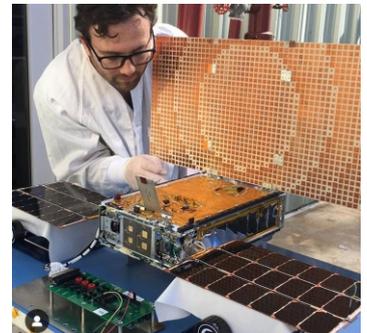


Diwata-2, developed by 11 philipi students with help from the Philippine Department of Science and Technology as well as the japanese universities of Tohoku and Hokkaido was launched on October 29 from the Japanese space center in Tanegashima using the H-IIA rocket. This microsat weights 50kg and its a 50cm cube carrying several experiments, a ham radio payload (FM repeater) and APRS digipeater. It's expected to change both modes depending on the week day. Uplink 437.700 Mhz, Download 145.900

MarCO A & B

On november 26 these two 6U cubesats made history helping NASA's InSight during the entering procedure, deployment and landing in Mars. They retransmitted the communications and this was the first time ever they used cubesats in the deep space.

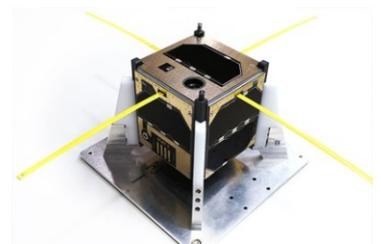
Each cubesat has a UHF antenna with circular polarization. The information transmitted during descent and landing of the InSight travelled thru a UHF frequency at 8 Kbits/s and the cubesats got the data, along with a frequency in band X, to receive and transmit the information at 8 kbits/s



The maximun power of the MarCO on band X, allowed by its solar panels is 5w maximun.

CubeCat-1

The CubeCat-1 nanosat, developed by the Nanosat Lab at the Escuela Tècnica Superior de Telecomunicación de Barcelona (ETSETB) part of the UPC University, was launched on november 29 at 5:28 h (local time), with 6 experiments onboard. The launch, financed by the Catalonia Space Estudios (IEEC), was done from the space base in Sriharikota (India).



Next Activations



KG5DRK and his dad KG5GJT operating thru AO92

N4QX, Brennan from nov 28 to december from JN36, JN47 with these prefixes HB9, HB0 and 4U1ITU

N7AME, John is active from december 3 to 14 from Hawaii. He will try 10 different grids only on AO-91, AO-92.

EA4NF, Philippe will be active december 6-9 from IN87 as F/EA4NF and January 1-5 from IM58 as CT7/EA4NF.

W9TWJ, Tanner will travel december 10-12 to Greensburg FN00, he will try some FM sats night passes.

WD9EWK, Patrick will be active december 15 from the RMS Queen Mary docked in Long Beach, California. He will use the call W6RO.

F4DXV, Jerome will be active from Luchon from December 27 to january 1 as F4DXV/P and EA2/F4DXV in Jn02.

EB1AO, Jose will be active thru FM sats january 1-5 from IM66, IM76, IM77

UT1FG/MM, skipper Yuri is back on route over the Atlantic activating several grids.



EA4NF, after his first trasatlantic QSO



KOFFY gear for AO-7

SCHOOL MEETINGS

We are keeping the talks in some elementary schools . On November 15 there was an interesting talk about amateur radio satellites at the CEIP Escultor Acuña in Vigo, Galicia, Spain. After the meeting and talks, there was a small workshop to show kids how to build an antenna to receive NOAA satellites. Later, in the school playground they were able to receive the AO91 doing several contacts.

On future dates in this month of December more talks are planned and will activate the special call ED1AO.



A VISIT FROM THE EUROPEAN UNIVERSITY OF MADRID

On november 28 at the AMSAT EA headquarters we got a visit from the European University students in Madrid .They are taking part , along with us, in the design and building of the experimental comms picosat named EASAT-2 / UESAT-1.

After visiting AMSAT EA and knowing the backround history of the building (an old elevators and mechanical stairs factory), the teams (AMSAT and the University) begun talks: Félix EA4GQS and Felipe EA7KAN showed up some of the electronic systems updates (energy, onboard computer, lineal transponder, this being built by ICAI students, and about the future tracking station in the making. On the other hand, the students explained about the structure, mechanics, thermic design and onboard experiment using a Stirling engine.

