

NEWSLETTER-AMSAT-EA

02/2020 FEBRUARY

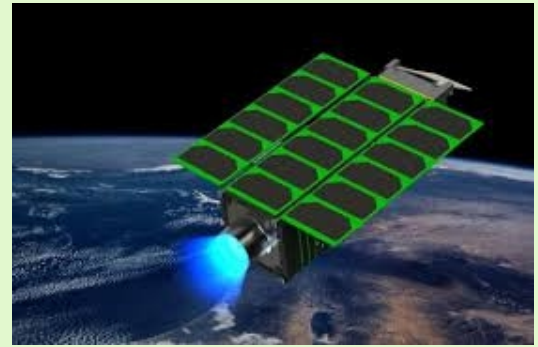
contacto@amsat-ea.org

eb1ao@amsat-ea.org

Translation by Fernando EC1AME

HuskySat-1

On November 2, 2019 the 3U Cubesat HuskySat-1 of the University of Washington was taken to the Space Station International. HuskySat-1 has remained stored on board a Northrop Grumman Cygnus supply vehicle. Within 24 hours after the departure of Cygnus from the ISS, HuskySat-1 and SwampSat 2 were deployed in orbit. Later, the HuskySat-1 1,200 bps BPSK beacon in 435,800 MHz will be active and decoded with the latest version of AMSAT's FoxTelem. HuskySat-1 is expected to carry out its main mission before being delivered to AMSAT to activate the amateur radio payload.



HuskySat-1 has a 30 kHz wide V / U linear transponder for SSB and CW. The uplink pass band will be 145.910 - 145.940 MHz LSB / CW. The downlink pass band will be 435.840 - 435.810 MHz USB / CW (inverted). Telemetry will be transmitted on 435,800 MHz, 1k2 bps BPSK with a experimental downlink at 24,049 GHz. FoxTelem software "Fox-in-a-Box " has been updated for the HuskySat-1 operation on its download website.

The new version now contains the image of the SD card, FIAB-distro8- V1.08w.zip. This file, when decompressed and written to a 16Gb SD card, will provide the latest software for FoxTelem and will run on a Raspberry Pi 4. Versions 1.08 can change the bands between listening on VHF and UHF, according to the Fox and Husky satellites.

EASAT-2

Last January 30 has become effective the place reservation for the launch of the EASAT-2 by Alba Orbital for the flight Alba Cluster 3. The EASAT-2 is a 1.5p and twin of the Hades PocketQube.

In the same flight these sats will be included: LibertyQuve-1, Grizu-263a 1P, Pycubed 1P, Hades 1.5P (AMSAT-EA), TRSI-2 1P, EASAT-2 1.5P (AMSAT-EA)



@Ueuropa students, who have participated in the project with Rakesh Chandra of Orion Space.

As many of you already know from the multiple information of recent weeks, we are in the final stretch for the satellites of our GÉNESIS project.

The GENESIS, for those who are not aware of the project, are two twin satellites that are being developed in AMSAT-EA since summer of 2019, based on the pocketQube 1.5P platform (7.5x5x5 cm) and that differ only in weight. Their names are GENESIS-L (light GENESIS) and GENESIS-N (normal GENESIS) and will fly together from USA to space presumably in spring or summer. We have expected to be in the United States at the end of February. The launch will take place from Vandenberg air base in California. This opportunity came to us this summer, hand in hand with Fossa and LibreSpace, as a result of the Dream program by a company named Firefly. We and our students from the European University of Madrid began to work tirelessly receiving assistance also from members of the EAQRPClub as well as engineers from the space sector that personally and selflessly have given support. LibreSpace has developed the ejector that allows launching pocketQubes of AMSAT-EA, Fossa and the Greek foundation itself, from the Alpha rocket of Firefly.

The GENESIS will last in orbit for a month, so we are using panels solar not of space and what is new is an ion propellant each as a experimental load, which have been provided by the American company Applied Ion Systems: <https://appliedionsystems.com/> and that have generated great expectation for being a new experiment and never before conducted on such a small platform.

On the first days of February we have been able to verify the correct electric integration between the propeller and the on-board Genesis' computer.

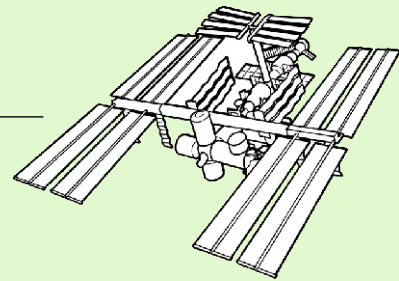
As for EASAT-2, the satellite will be launched at the end of the year with its twin Hades, payment has already been made to Alba Orbital to have reservation in Cluster 3 of the company.

<http://www.albaorbital.com/launch>

We are the organization that occupies the most space in the rocket by having reserved a 3p space compared to 1p for the rest of the travel companions. Here is a list of some of national and international events and congresses where we have been giving presentations about the EASAT-2 project:

- Current status of the EASAT-2 project (Ávila, IberRadio Hamfest, September 2017)
- EASAT-2 telecommunications satellite (Delft University of Technology (Holland), Delft PocketQube Workshop, March 2018)
- EASAT-2 Satellite (STARCON Congress, Murcia, Spain 2018)
- Pico satellites and amateur radio via sat (Madrid, ETSIT-UPM, February 2019)
- EASAT-2 / UESAT-1 SATELLITE - Linear transponder technical design (STARCON 2019, Polytechnic University of Madrid, Spain, April 2019)
- Development of a PocketQube Satellite as Amateur Communication Relay and a Minature Stirling Engine Demonstrator (Posters section / Speaker Corner - SSSIF - Spanish Small Satellites International Forum 2019, Málaga, 2019)
- EASAT-2 / UESAT-1 3rd pocketQube Workshop (Glasgow, UK, 2019)
- EASAT-2 Project (TecSat-Po 2019 Viana do Castelo, Portugal, November 2019)

International Space Station



Russian cosmonauts have activated the SSTV transmissions on 145.800 MHz FM sending slow scan television (SSTV) images from the International Space Station on Thursday, January 30 and Friday, January 31 as part of the MAI-75 experiment.

Time slots were:

- Thursday January 30 13:30 - 19:00 GMT
- Friday January 31 15:00 - 17:30 GMT

Transmissions are on 145,800 MHz FM in SSTV mode PD-120 . Once you have received the images you can publish them in the web: http://www.spaceflightsoftware.com/ARISS_SSTV/index.php and then request the diploma for each activity.



On February 1 the italian ESA astronaut Luca Parmitano was heard making random CQ calls over Europe. Some Spanish and Italian colleagues could establish a QSO with him.



Is a great surprise to pick up a random call from an astronaut in the ISS, as we don't have many information about their schedules and when they may be on radio. It's a good idea to pay attention to all the passes to see if we are lucky.

Announced Activities



W8MV, Mel will be in Montserrat from January 26 to February 2, operating as VP2MCV in FM Sats. QSL through LOTW.

KE9AJ, Joe will cross the border into Florida to EL79 throughout the month of February. Since it will be there for an extended period, he will be available both on FM and SSB sats. More info: <https://twitter.com/KE9AJ>. There is a possibility that Joe has to make a pit stop at EM54 and EM53 on their way south on February 1

W8MV, Mel will be in Antigua from February 2 to 9. Mel is waiting for her license to operate from that island. It will be updated as soon as it arrives. FM only. QSL through LOTW

W5PFG, Clayton will be in Key West, Florida (EL94) from February 9 to February 11. On Monday, February 10, he will be from 1:15 p.m. to 5:30 p.m. UTC operating FM and linear satellites from EL84xm, Cayo Boca Grande. During these days Clayton, W5PFG may operate additional grids such as EL79, EL89, EL99, EL86, EL96, EI95. More information on Twitter <https://twitter.com/w5pfg>

AD0DX, Robert will be on February 15 at CN78, on linear and FM satellites

The members of Radio Club Puebla DX will be active as **6F3A** from Isla Pérez, Mexico, between February 11 and 17. The operators mentioned are Patricia / XE1SPM (Team Leader), Ismael / XE1AY, Rey / XE1SRD and Ricardo / XE1SY. The activity will be at 80/40/20/17/15/12/10/6 meters and will include the ARRL CW DX contest (February 15-16). QSL via XE1SY. Ismael, XE1AY, reports that he is using CW in satellites, and also TX from EL50 and XE1AY/mm from EI51

KC7JPC, John will be active on March 14 and 15 from DN26 / 37 on linear satellites

Ron **AD0DX** Doug **N6UA** and Josh **W3ARD** will be active from the Big Bend National Park to activate DL88. More details when available.

IZ4YGS Mateo will be QRV as **9G5GS** from Sanzule, Ghana from February 1 - 26. He plans some activity on the QO-100 satellite.



LU3EMB, Miguel on /p

Announced Activities

cont.



I13BIA, special station will be QRV till february 29 during the 2020 World Biathlon Championship held in Antholz. It includes a possible QO-100 satellite activity. QSL via IN3ZWF.

FJ, ST. BARTHEMELY. Various operators: Pat /N2IEN, Lee / WW2DX, Rock / WW1X and Ray / W2RE will be active as FJ/N2IEN, FJ/WW2DX, FJ/WW1X and FJ / W2RE respectively, from St.Barthemely (NA-146) between February 15-22. Will be Active holiday style in various HF (160-6m) / VHF / UHF CW, SSB, RTTY and satellites. QSL via their own call.

ZS95SARL celebrates the 95th anniversary of SouthAfrica's Radio League, founded in May 1925(renamed after the WWII). QRV throughout the year in HF, VHF, UHF and through satellites. QSL via bureau



W8LID and his modified Arrow

AMSAT-EA FORUM

From AMSAT-EA we want to promote among the spanish speaking amateur radio community everything about our hobby. Therefore we remind you that our association has a forum in which anyone can participate. You don't need to be a member to participate. We encourage you to take advantage of this space to make your own queries, start discussions, share your concerns or help others.

Link to our forum

<http://foro.amsat-ea.org>



Since childhood I have had special interest in arm and disarm things (many remained unarmed, others modified, anyway) and from there I learned a lot. Translated to amateur radio, I've had the practice of making my antennas, which they caught my attention, or that I knew they were going to work on what I like, the amateur radio satellites.

Long time ago I saw a video of a transmission on the SO50, using a cubic antenna and the spark ignited, so I went into the Oscar satellites madness and the antenna was definitely necessary.

The cubic antennas, crossed yagis. I built all antenna designs I found online. But the antenna that attracted me the most was the famous Arrow used by the Americans and starting with some details that the manufacturer provides to make it at home, and with the collaboration of Victor, TI2VLM, who detailed a few measures not defined in the original model, I took on the task of putting together my own LEO satellite antenna, based on a three-element version in the 2-meter band crossed with 7 elements in the 70cm band.



I have had very good results, having a tripod generates a good stability, for example, tracking the International Space Station, when it transmits SSTV images, or with amateur radio sats available .If it is necessary to keep track of the orbit, as in the case of IO-86 wich has an equatorial orbit, the tripod is a great help, otherwise the Manual clamping is usual.



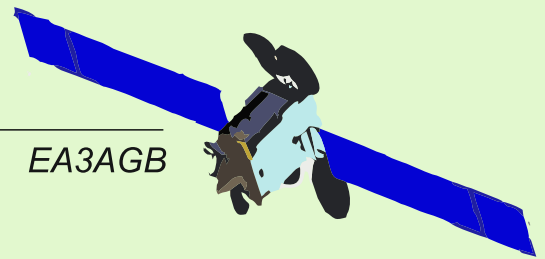
Recently I tried to listen to a few meteo satellites, with not as good results due to the frequencies they use, though this antenna can easily be adjusted for that, always experimenting and learning.

This construction is totally open to modifications and even suggestions, a good way to enrich ham radio. Every starting point from a small idea always generates something big and better. I hope this helps anyone who wants to experience a new activity as a radio amateur.

[Enlace de descarga](#)

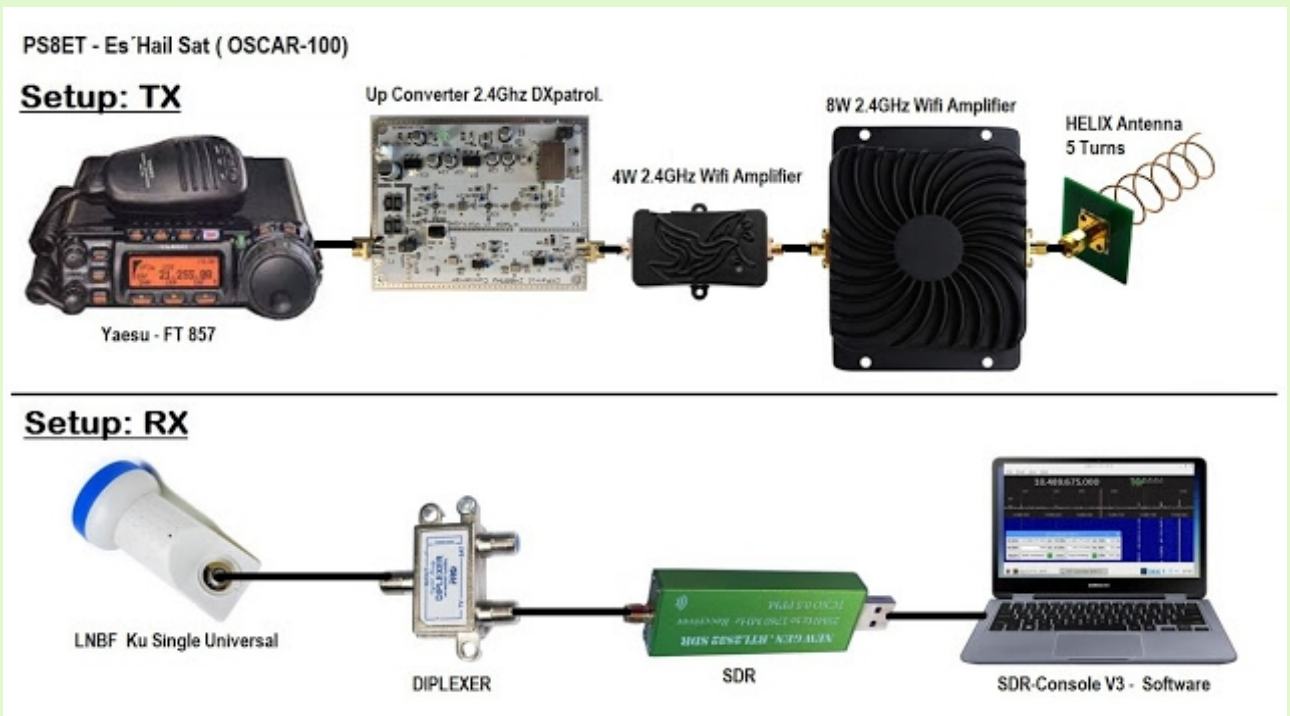
73, Ignacio. T13IES
Costa Rica

QO-100



In this new section we will try to inform about the stations received through the geostationary satellite QO-100 (Es'hail-2) as well as the forms of Contact confirmation of each station.

A75GR	SSB	QSL VIA M0OXO
A92GR	SSB	QSL VIA DIRECT
A41KT	SSB	QSL VIA BURO, LOTW, EQSL
8T2G	SSB	QSL VIA VU2JOS IOTAAS-153
OV6A	SSB	QSL VIA HRDLOG IOTA EU-172
PY1EME	SSB	QSL VIA PY2BS IOTA SA-029
V55QO	SSB-CW	VIADL3ZL DX-EXPEDITION
VU2AVG	SSB	QSL VIA DIRECT
VU2PEP	SSB	QSL VIA W3HNC
A41KT	SSB	QSL VIA BURO, LOTW, EQSL
BG0AUB	SSB	QSL VIA LOTW
ST2NH	SSB	QSL VIA EA7FTR
EA9MH	SSB	QSL VIA DIRECT
EP4HR	SSB	QSL VIA IK2RZQ
C37URA	SSB	QSL VIA LOTW
4Z4DX	SSB	QSL VIA LOTW, EQSL
9V1HY	SSB	QSL VIA LOTW, BURO, DIRECT



Setup used by PS8ET for TX and RX thru QO100

AMSAT-EA products in the URE store

For several weeks you have at your disposal several AMSAT-EA products personalized with your callsign . Find them on the URE website.



**DO NOT HESITATE!
COLLABORATE WITH AMSAT-EA**