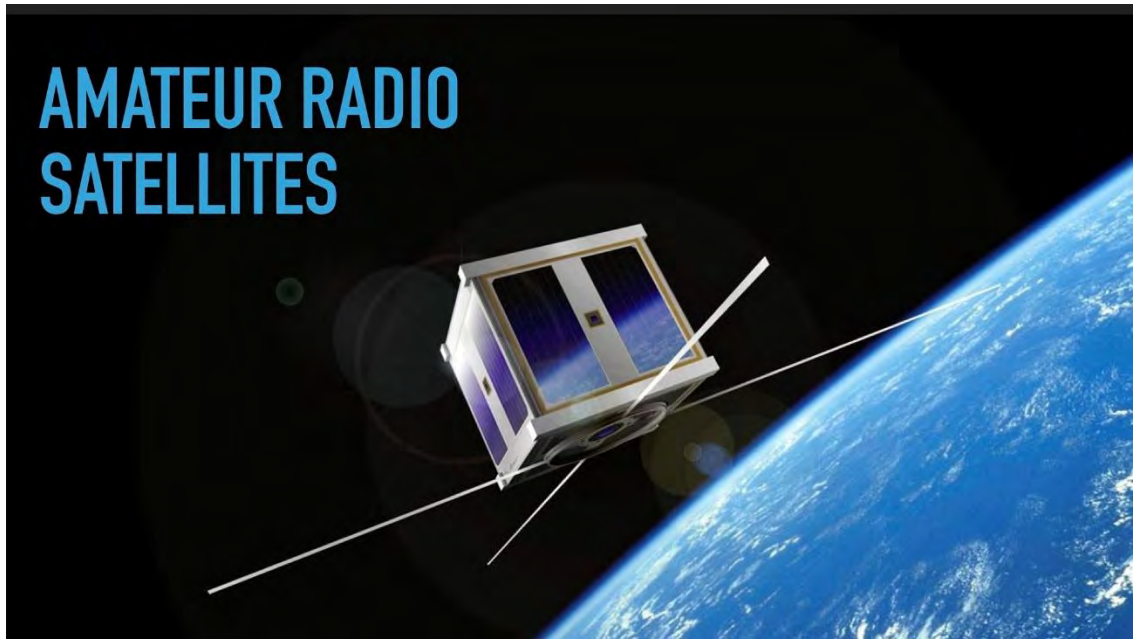
AMSAT

Announcement of a Special Seminar for all SEIC staff and students



History of Amateur Radio Satellites and the first transponder on-board GEO satellite Phase-4A/QO-100

This document is 7 pages and was created by G. Maeda on 8 July 2019.

The guest speaker is JA3GEP, Mikio Mouri of JAMSAT

JAMSAT
The Japan AMSAT Association
HOME OF THE "SCOPE" EARTH IMAGING CAMERA PROJECT

Background of the speaker

In my childhood I hoped to talk with overseas people. I got my amateur radio license in 1963 at the age of 14. I started my carrier as an semiconductor engineer for microwave and optical communication devices.

After the launch of AO-13 in 1988, I found HEO Phase-3 satellites' operation was easy and very exciting. I enjoyed DXing and made many friends world wide. To thank AMSATs' efforts, I started to volunteer editing JAMSAT Newsletter, maintain small office, and running errand as president. My belief is "amateur satellite must be a big international cooperation!"

SEMINAR ABSTRACT

The first amateur radio satellite OSCAR 1 was launched in 1961 only 4 years after Sputnik-1. Even Phase-4 GSO SYNCART was approved to be launched in 1971, but cancelled due to urgent Apollo Mission. To cover wide area, three Phase-3 HEOs, AO-10, -13 and -40, were realized mainly thanks to AMSAT-DL/-NA and ESA/Ariane Space. But after failure of AO-40 in 2004, there has been no HEO or GSO with wide coverage.

The big story started in 2012 when AMSAT-DL president DB2OS, Peter, made a presentation in Doha, Qatar. High Management at Qatar government showed interests in "the world first GSO" amateur satellite and Es'haiSat Qatar Satellite Company agreed to support Phase-4A by providing some parts of its Es'Hail-2 Communication /Broadcasting GEO Satellite. The Es'Hail-2 was successfully launched and its amateur transponder Phase-4A was named Qatar OSCAR-100. This covers all Europe, Africa, south Asia, and some south America.

It is now open for all radio amateurs who are interested in communication worldwide. How can we start using QO-100? …. Let’s think about it.

JAMSAT symposium 2019

Kyoto, Japan, March 16th -17th 2019

L-R red circles:
Apiwat JE6RJA (BIRDS-1) and
Nakayama JE6VHF (BIRDS-4)

Seminar details:

Who should attend:
Anyone interested in amateur radio satellite communications and learning about its new frontiers.

When: 13:00 (3限), 16 July 2019.

Where: Cho Lab Seminar Room, on the 4th floor at the end of the hall.

Additional Notes from the Graduate School Section

This seminar will be counted as a "Interdisciplinary Seminar for Engineering　工学融合科目" for Doctoral course students.

Please note this seminar will be provided under "Electrical and Space Systems Engineering Course電気宇宙システム工学コース". Students can NOT include the seminar if it's provided under your own course.

Please get a proof of attendance on the performance report form from Maeda sensei at the seminar.

For details and to download the performance report form, please go to the website:
https://www.tobata.kyutech.ac.jp/gr-school/gra-menu/

If you have any question please ask at Graduate School Section.

Mr Mouri recently visited the **Qatar Amateur Radio Society** – photo provided by Mr Mouri.

OSCAR 1

Launched 12 December 1961.
The world's first amateur radio satellite.

OSCAR I (aka OSCAR 1) is the first amateur radio satellite launched by Project OSCAR into Low Earth Orbit. OSCAR I was launched December 12, 1961, by a Thor-DM21 Agena B launcher from Vandenberg Air Force Base, Lompoc, California. The satellite, a rectangular box (30 x 25 x 12 cm) weighing 10 kg., was launched as a secondary payload (ballast) for Corona 9029, also known as Discoverer 36, the eighth and final launch of a KH-3 satellite.

The satellite had a battery-powered 140 mW transmitter operating in the 2-meter band (144.983 MHz), employed a monopole transmitting antenna 60 cm long extended from the center of the convex surface, but had no attitude control system. Like Sputnik 1, Oscar 1 carried only a simple beacon. For three weeks it transmitted its Morse Code message "HI". To this day, many organizations identify their Morse-transmitting satellites with "HI", which also indicates laughter in amateur telegraphy.

OSCAR I lasted 22 days ceasing operation on January 3, 1962, and re-entered January 31, 1962.

The uniqueness of the OSCAR-1 spacecraft was not only that it was built by amateurs, only about four years after the launch of Sputnik-1, but that it was the world's first piggyback satellite and the world's first private non-government spacecraft.

Immediately following the launch of OSCAR-1, United States vice president, Lyndon B. Johnson, honored it with a congratulatory telegram to the group sponsoring this momentous event in the history of Amateur Radio. It read: “For me this project is symbolic of the type of freedom for which this country stands — freedom of enterprise and freedom of participation on the part of individuals throughout the world.”

The original backup of OSCAR-1 has been restored and is fully operational, running off AC power. As of 2011 it is on display at ARRL HQ in Newington, Connecticut and continues to broadcast "HI" in Morse Code at 145 MHz.

Wikipedia: https://en.wikipedia.org/wiki/OSCAR_1