
guldkorn fra den store mængde. Det er selvfølgelig et positivt problem - men jeg vil meget gerne høre fra de af jer, der kører satellitter nu. Jeg er interesseret i at vide, hvilke kilder der er pålidelige.

OZ1MY,lb

Hentet i BBSérne:

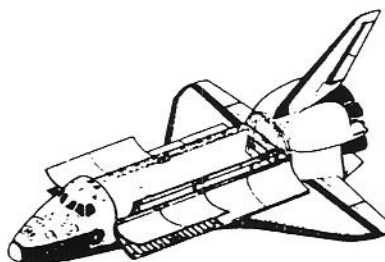
Lidt om STS45.

Hentet på packet. Jeg har strippet noget af indløbet fra. Der kan måske køres nogle QSO'er med dem. Med hensyn til up to date info, skal man nok holde øje med sin BBS/benytte sig af OZ6BBS's tilbud. Man kan også bruge de kilder, der opgives i artiklen.

Date: 04 Feb 92 16:06

STS-45 HAM RADIO OPERATION

Shuttle Amateur Radio
Experiment (SAREX) For STS-45



When Space Shuttle mission STS-45 launches, tentatively scheduled now for March 23, 1992, amateur radio operators around the world will have the best opportunity ever offered to communicate with astronauts during a space flight. STS-45 is the fifth mission to carry the capability for transmissions between ground-based and Shuttle-based amateur radio operators during flight. The unique part of this mission is the 57 degree orbital inclination. During STS-45, Orbiter Atlantis will be flying over a much larger portion of the world than in previous missions when the Shuttle Amateur Radio Experiment (SAREX) was aboard. Countries to be covered during this flight include the United States, Canada, Japan, Russia, European nations, South America, Asia, Australia, and Africa. The list includes practically the whole world.

Adding to the distinctive international character of STS-45 are crew members who are able to communicate in several languages. During the mission, SAREX will be operated by mission specialist David Leestma and pilot Brian Duffy, both licensed operators. Leestma's call sign is N5WQC and Duffy's is N5WQW. Other crew members who will be communicating alongside Leestma and Duffy are mission commander Charles Bolden; mission specialists C. Michael Foale and Kathy Sullivan, who is fluent in French and Norwegian; and payload specialists Byron Lichtenberg and Dirk Frimout, who speaks French as well as Dutch, and has the call sign ON1AFD. Kathy Sullivan has passed her amateur test but has not yet received her call sign. The crew will use Dave's call,

N5WQC, during the flight.

NASA has approved the use of amateur radio experiments during Shuttle flights for two reasons: to encourage public participation in the space program and to support educational opportunities offered by amateur radio. SAREX has flown previously in various hardware configurations on Space Shuttle missions STS-9, STS-51F, STS-35 and STS-37. As in the past, the crew will be communicating with students at various schools worldwide. SAREX crew-tended operating times will be dictated by the time of launch. As a secondary payload, SAREX will be operated by Leestma and Duffy whenever their work activities allow them time and when appropriate geographically for transmission. Most transmissions will be spontaneous open contacts. The SAREX will communicate with amateur stations in line-of-sight of the Orbiter in a battery powered 2-meter voice transmission mode. There will be no SSTV or packet operation on this flight due to available power limitations. All on-orbit SAREX operations are conducted in the 2-meter International Amateur Satellite Service band utilizing FM with a nominal frequency deviation of 3 kHz. The primary frequencies intended for use during the mission are as follows: 145.55 MHz for the downlink from the Atlantis and 144.91, 144.95 and 144.97 MHz for the uplink. *ib's bemærkning: "Kan det passe med 144.???"*

An elaborate station setup is not required for making a 2-meter contact. An effective radiated power of no more than 100 watts will give excellent results if there is not a lot of other ground interference. A beam antenna with both azimuth and elevation pointing capability will give best performance, however, a fixed vertical antenna mounted above obstructions will eliminate the need for elaborate orbit tracking and pointing. Accurate tracking data for your station location is best provided by a computer satellite tracking program. If you have a computer or programmable calculator and need a tracking program, write to AMSAT Software Exchange, Roy Welch, W0SL, 908 Dutch Mill Drive, Manchester, Mo 63011. The orbital parameters required by these programs are broadcast on W1AW bulletins and AMSAT nets.

The Keplerian elements can be obtained from the Public Services Branch, NASA Johnson Space Center, AP4, Houston, Texas 77058. They will also be available to those with access to the Public Affairs Office Bulletin Board at the NASA Johnson Space Center. For access to this free electronic bulletin board, call (713) 483-2500 and wait for a connection. After connection, strike the enter key twice. You will be asked to enter a number. Enter 62511 and you will be connected to the public information bulletin board. Follow the menus for specific information wanted. Keplerian elements are available in file

area 30. Your computer configuration should be 8-N-1 at 1200 baud.

The primary payload for the STS-45 mission is the Atmospheric Laboratory for Applications and Science (ATLAS). The laboratory will be mounted on a Spacelab pallet in the Shuttle cargo bay. Long-term changes in the total energy radiated by the Sun will be measured and auroras from the polar regions studied. Mission duration is expected to be eight days.

The following are Keplerian elements which match the nominal flight plan for a launch on March 23, 1992, at 13:01 UTC.

STS-45

```
1 00045U      92083.60247757 .00002000 00000-0 60500-5 0   55
2 00045 57.0018 276.2278 0008560 276.7379 83.2700 15.92512314 21
```

Satellite: STS-45

Catalog number: 00045

Epoch time: 92083.60247757 (23 MAR 92 14:27:34.06 UTC)

Element set: JSC-005

Inclination: 57.0015 deg

RA of node: 276.2278 deg Space Shuttle Flight STS-45

Eccentricity: .0009153 Pre-launch SGP4 Keplerian Elements

Arg of perigee: 275.2941 deg Launch: 23 MAR 92 13:01:00 UTC

Mean anomaly: 84.7118 deg

Mean motion: 15.92517922 rev/day W5RRR

Decay rate: 2.000e-05 rev/day² NASA Johnson Space Center

Epoch rev: 2

--

Gary Morris Internet: GaryM@telesoft.com

KK6YB UUCP: ucsd!telesoft!GaryM

TeleSoft, San Diego, CA Phone: +1 619-457-2700

Ib's bemærkninger: "Der er mindre uoverensstemmelser mellem to.linje format opgivelserne og AMSAT opgivelserne. Det er ikke alvorligt, da det jo kun er foreløbige data".

Europæisk AMSAT net.

Date: 10 Feb 92 08:06

Hello everybody interested in satellite communications !

Here i send you a information about our weekly European AMSAT Net. So if there is anybody wishing to join us please call in, we discuss every Saturday about things of interest regarding the amateur radio satellites.

The time is at 10.00 UTC every Saturday and the frequency is 14.280 Mc. plus--minus QRM.

Hope to see you on 20 Meters next Saturday.....

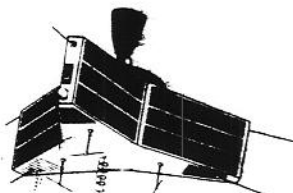
73 de Oscar (DJ0MY @ DK0MAV)

DXpedition.

Date: 08 Feb 92 01:54

Subject: EA8 DXpedi. on AO-13

de DJ0MY @ DK0MAV



Hello Sattelite Users!

This is a preannouncement of my Dxpedition to the island of Teneriffe in july 1992. I will stay there for 2 weeks and i will be QRV on OSCAR-13 maybe i try to be active also on some other satelite, specially on RS-10, RS-12 and Fuji Oscar 20. My QTH will be on the north of the island in Puerto de la Cruz that will give a good take off when OSCAR-13 is in Range of North America , Europe, and Japan.- My portable station will have aprox. 150 watt ERP, so look out for me. I will be active in CW and SSB, i have little sked capability but i am able to arrange some sked with QRP or rare stations, otherwise try to contact me on random.

I will write the exact Date in the Store & Forward net @ AMSAT in a few weeks. So look out, 73 and good DX from DJ0MY @ DK0MAV

Oscar (DJ0MY)

UoSAT3/UoSAT5 role reversal.

Date: 06 Feb 92 12:06

Message-ID: <21986@GB7BBS>

From: G4WFQ@GB7BBS

To: AMSAT@WW

Subject: UoSAT-3 / UoSAT-5 Role Reversal

Title : Move over to UO-22

*** Amateur Radio Operations Move from UoSAT-3 to UoSAT-OSCAR-22 ***

3 February 1992

University of Surrey

In late December, we introduced an enhanced broadcast server on UoSAT-3, which did a lot to reduce congestion on the satellite's single uplink; now we have another bottle-neck. Because UoSAT-3 has only 256 kBytes of program/data memory, we are using a RAMDISK which can only hold 400 messages at a time; with uplink contention reduced, gateways on line, and more than 150 stations regularly active, this 400 message limit is often exceeded. When the satellite is full, new messages cannot be uploaded, and older messages have short lifetimes (before being deleted automatically to make way for new messages).

The large population of amateur radio stations on UoSAT-3 is also somewhat limiting for the non-amateur stations which get only very small access windows (roughly 1:5 of the opportunity given to amateur stations). The brief bursts of transmission on the non-amateur downlink interrupt amateur activity and also make it difficult for automatic frequency control circuits to operate on the non-amateur downlink.

In addition to UoSAT-3 (OSCAR-14) the controllers at Surrey have UoSAT-5 (OSCAR-22) as a potential resource. SatelLife - the organisation which paid for most of UoSAT-5 - had planned to operate the satellite predominantly on non-amateur frequencies. Operation of the CCD camera on the amateur downlink was to be a "secondary" activity of UoSAT-5.

After launch, this plan has run into two difficulties: The UoSAT-5 CCD camera has proven very successful, and amateur radio stations around the world are downloading the images of the Earth; images are taken several times per week, and each is more than 300 kbytes of data. Furthermore, UoSAT-5's high power amplifier which has produced excellent output on the amateur frequencies - does not work reliably on the non-amateur frequencies.

Taking into account the resources available to us and our obligations to SatelLife and other organisations, we have decided to take the following steps to optimise our use of UoSAT-3 and UoSAT-OSCAR-22:

- 1) All non-amateur traffic, both SatelLife and VITA will be carried on UoSAT-3, which will cease to transmit on its amateur downlink.
- 2) All amateur traffic will move to UoSAT-OSCAR-22, and UoSAT-OSCAR-22 will operate as a dedicated amateur radio satellite transmitting constantly on its amateur downlink.

Of course, there is a price to pay for this transition: Most notably, the conflict between CCD users who want to download large CCD image files and "BBS" users who just want to get their mail. We are looking into on-board JPEG compression for the images, and this potential disadvantage will be balanced by the following advantages:

- 512kBytes of program memory permitting 800 message capacity
- two amateur-radio uplinks : 145.900 and 145.975
- no downlink frequency switching (permanently on 435.120)

**** THE BIG SWITCH ****

The UO-22 file server is now enabled, and we recommend that all new messages be uploaded to UO-22 and not to UoSAT-3. The UoSAT-3 FTL0 server will be disabled sometime on Wednesday, February 5, and UoSAT-3's amateur downlink will be turned off. I apologize for the short notice, but there is engineering work on UO-3 which must be done this week, and there hasn't been enough time for a more gradual transition to be publicised.

Jeff Ward G0/K8KA
University of Surrey Spacecraft Engineering
Research Unit

annonce annonce

Relativt relevante bøger fra Radioamatørernes Forlag aps.

Satellite Anthology,ARRL80,00 kr.

Weather Satellite Handbook,ARRL
.....190,00 kr.

Discette for do.95 kr.

Satellite Experimenters Handbook,
second ed. ARRL175,00kr.

OSCAR-lokator mappe med plan
.....96,00 kr.

Radioamatørernes Forlag aps

Kronprinsensgade 46, st tlf 66 13 77 00
5100 Odense C

Service fra AMSAT-SM.

SM7ANL fortæller os, at han har mange satellitrelevante programmer i sin bank. Han er lige ved at lægge sidste hånd på et nyt katalog på 37 sider. Det skulle blive færdigt i midten af marts. Han sender det til alle OZér på vores liste, dog ikke til afdelingerne, så I kan godt begynde at spare sammen til software.

InstantTrack.

Vi har anskaffet InstantTrack her på OZ1KTE, naturligvis mod behørig donation til AMSAT-NA.

Det er jo en sand fornøjelse at studere hvordan satellitterne summer rundt om jorden.

Jeg bringer en meget lille bid af indledningen til dokumentationen:

Introduction...

InstantTrack was designed to assist amateur radio operators who need to track a large number of earth-orbiting satellites, point antennas at them in real time, estimate when communications links will be possible with operators in other parts of the world, etc.

InstantTrack is copyrighted software. See the copyright and distribution information later in this document.

InstantTrack has several features that make it unique among satellite tracking programs, and a few features

which, while not unique, are relatively uncommon among low cost satellite tracking programs.

I've taken the liberty of listing a few of these here,

Speed -- InstantTrack is faster than any other tracking program.

Humans should never wait for computers.

Ease of use -- Most commands are a single keystroke. Usually tedious functions are fully automated.

Automated orbital element entry -- InstantTrack reads the popular NASA and AMSAT format satellite element files and updates its database automatically. You need never again manually enter dozens of 10 digit numbers.

Automated time setting -- InstantTrack automatically sets time on your computer by accessing the NBS time service via your modem.

Instant Visibility -- InstantTrack shows you the positions of your "favorite" satellites, even before you issue the first keystroke. The menu

of 200 satellites shows you which are visible from your location even before you select a satellite.

The menu of 1754 cities shows you which cities are visible from the selected satellite even before... etc.

Graphics -- InstantTrack displays full color high resolution (EGA/VGA) maps of the Earth, showing satellite and observers position, two kinds of satellite footprint, grayline, etc. (Map projection is selectable.) Users can also select either a diagram of the satellite's orbit showing orientation of the satellite, or a map of the sky, showing the satellite's position against the field of stars.

You can move from map to map or satellite to satellite with a single keystroke, instantly.

Large # of Sats & Stations -- InstantTrack supports a database of 200 satellites and 50 observer locations. A unique grouping feature allows you to categorize satellites, and perform most operations on either a selected group, or the entire database.

City Database -- InstantTrack includes a database of 1754 cities worldwide. Locations of the satellite (sub-satellite points) and observers are displayed relative to the nearest city!

Observing stations can be specified by entering as little as their city name!

Grid Squares -- InstantTrack understands the gridsquare system.

Observing stations can be specified by typing only their gridsquare.

Satellite Covisibility -- InstantTrack shows you when satellites can see other satellites (i.e when crosslinks are possible), when satellites are in eclipse (in the shadow of the earth), etc.

This display, of course, updates in real-time, so you can see crosslinks appear and disappear.

Satellite Offpointing -- (sometimes called Squint Angle) InstantTrack computes the angle by which the satellite's antennas are pointed away from you. Helps you understand why quality of communications via satellites such as Oscar-10 and Oscar-13 (spin-stabilized satellites with directional antennas) varies.

InstantTrack's graphics show you where a satellite's antennas are pointing. Maps display a contour line of squint angle.

Stations within this line have low squint, and can establish the best links via such satellites.

Path Loss -- InstantTrack shows the path loss between your station and the satellite in realtime.

Schedules -- InstantTrack can show you the next three weeks schedule for a satellite, or one day's schedule for 20 satellites on one easy-to-read screen.

Realtime Rotor Control -- InstantTrack supports realtime antenna rotor control via the Kansas-City-Tracker interface.

Background Mode -- A unique background mode allows you to track satellites & point antennas in real-time while you run other programs.

Sun & Moon -- InstantTrack tracks the Sun & Moon as well as the satellites in its database.

Fast Rise-Time Finder -- InstantTrack computes the time at which a satellite will rise over the horizon without the usual delay caused by stepping through small time increments between now and then.

Tracking Multiple Stations -- You can see the computed parameters (azimuth, elevation, squint, etc) both from your perspective and from the perspective of the station at the other end of the satellite link.

Documentation -- Extensive and Tutorial.

Online Help -- InstantTrack contains an online help facility which can be entered from almost any screen.

IT's Been Tested -- InstantTrack has been extensively beta tested by a group of 12 volunteers on three continents for six months prior to release.

Required Hardware...

Any IBMPC, or AT, PS2, clone, etc with at least 512k memory.

Any display type is ok for the text mode screens. Maps presently require EGA.

Slutbemærkninger af 1MY

Vi har taget manualen ud og redigeret lidt i den, så den fremtræder nydeligt med sidenumre osv. Skulle nogen være interesserede i en kopi, er vi til at tale med.

Afslutningsvis bliver jeg nødt til at gøre opmærksom på, at jeg ikke har

kommercielle interesser i InstantTrack.

Husk iøvrigt, at programmer som InstantTrack er doneret til AMSAT, som skal have en lille donation fra hver bruger. Pengene går så til at bygge nye satellitter.

Lidt udklip

OSCAR-21

AO-21 befinder sig im «Duty Mode». Das heisst, es ist seit Wochen nur die CW-Bake auf 145.948 MHz eingeschaltet. Also kein RUDAK und kein Transponder.

Das militärische Ministerium für Geologie und Forschung (GEOS) wurde in ein ziviles umgewandelt. Nun werden dem Bodenpersonal keine Gehälter mehr ausbezahlt. Dies bedeutet, dass auch der Satellit INFORMATOR-1, bei welchem AO-21 mitfliegt, nicht mehr befehligt wird.

30 Jahre OSCAR (von Peter Guelzow, DB2OS)

Am 12. Dezember 1961 wurde der erste Amateurfunk-Satellit OSCAR-1 («1961 Alpha-Kapa 2») mit einer THOR-AGENA-B Rakete vom Startgelände in Vandenberg/USA gestartet. Die Umlaufbahn hatte ein Apogäum von 471 km und eine Inklination von 81 Grad.

OSCAR-1 hatte lediglich eine Batterie und einen 0,1 Watt Sender mit einer einfachen Telemetrieabake auf 145 MHz an Bord.

OSCAR-1 wurde zuletzt am 3. Januar 1962 gehört und verglühte am 31. Januar 1962 beim Wiedereintritt in die Erdatmosphäre. Bis dahin lagen der OSCAR-Gruppe in USA mehr als 5200 Empfangsmeldungen von über 570 Funkamateuren aus 25 Ländern vor.

Der erste künstliche Satellit SPUTNIK-1 wurde am 4. Oktober 1957 gestartet.

Sidereal Time

Nachfolgend die Greenwich Mean Sidereal Time-Konstanten für Januar 0.00 UTC für folgende Jahre:

1990: 0.27610467	1991: 0.27544157
1992: 0.27477847	1993: 0.27685328
1994: 0.27619018	1995: 0.27552708
1996: 0.27486399	1997: 0.27693880

Manche Satellitenbahn-Berechnungsprogramme brauchen diese Konstanten, um die Raumkoordinaten in erdbasierende Koordinaten zu konvertieren.

Historie og navne

Der er sikkert mange, der ikke var med fra starten af OSCAR historien. Enkelte var nok slet ikke tænkt på. Derfor vil jeg prøve at lave en lille oversigt over diverse amatørsatellitter, der har været oppe eller stadig er det.

Det meste af det kommer fra "The Satellite Experimenters Handbook". I appendix A er der en god oversigt med et mere udtømmende datamateriale end, det der kommer her.

Samtidig skulle det her også tjene til at få lidt orden i navneforbistringen.

OSCAR I

Opsendt 1961, levetid 21 dage. Beacon 145MHz, 0,1W. Højde 430Km.

OSCAR II

Opsendt 1962, levetid 19 dage. Beacon 145MHz, 0,1W. Højde 390Km.

OSCAR III

Opsendt 1965, levetid for transponder 18 dage. Frekvens 145MHz, 1W. Højde 940Km.

OSCAR IV

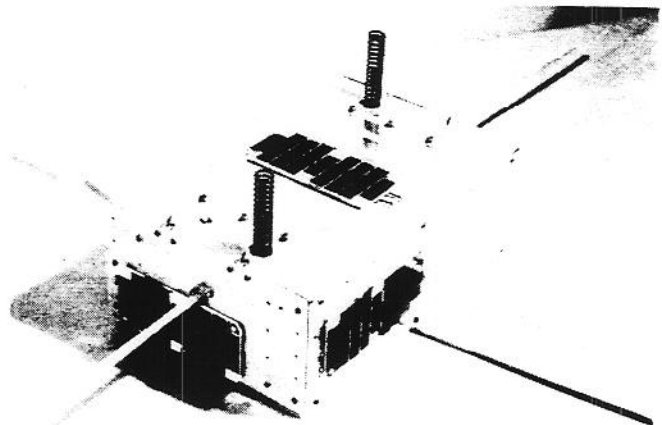
Opsendt 1965, levetid 85 dage. Transponder 144/432MHz, 3W. Apogee (største højde) 33.600Km.

Australis-OSCAR 5

Opsendt 1970, levetid 52 dage. Beacon 144MHz og 29,45MHz. 0,2W. Apogee 1480Km.



Chuck Towns, K6LFH, in his own garage workshop with OSCAR II. Though the Amateur Radio Satellite Program had its roots in basements and garages, the strictest professional standards were always maintained for the final spacecraft to pass rigorous testing by the various launch agencies.



OSCAR III in full-dress. Note that the two 2-meter dipole antennas are constructed of flexible steel carpenter's rule material. The dark "checkerboard" areas are the solar-cell panels that are used as a battery backup and the springs shown on the top face were used to separate the spacecraft from the launch vehicle.

AMSAT-OSCAR 6

Opsendt 1972, levetid 4,5år. Transponder 146/29,40MHz. 1,5W.

Apogee 1460Km.

AMSAT-OSCAR 7

Opsendt 1974, levetid 6,5år. Transponder 146/29,45MHz og 432/146MHz.

8W. Apogee 1460Km.

AMSAT-OSCAR 8

Opsendt 1978, levetid 5,3år. Transponder 146/29,45MHz og 146/435MHz.

1,5W. Apogee 910Km.

Radio Sputnik RS1/RS2

Opsendt 1978, levetid flere måneder.

Transponder 145/29,37MHz. Apogee 1700 Km.

AMSAT P3A

Opsendt 1980, gik i vandet ved opsendelsen. 50W

UoSAT 1(A)-OSCAR 9

Opsendt 1981, levetid 8+år, reenter 1989. Ingen transponder, men mange beacons. Apogee 544Km.

Radio Sputnik RS3-8

Opsendt 1981, levetid fra 2år til 6,5år.

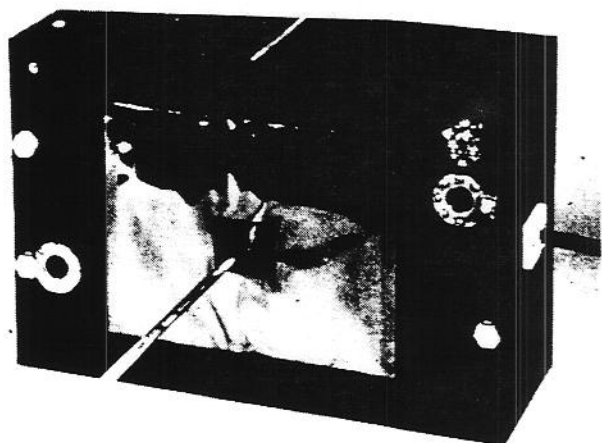
Transponder 145/29,4MHz. 1,5W. Apogee 1690Km.

Iskra 2

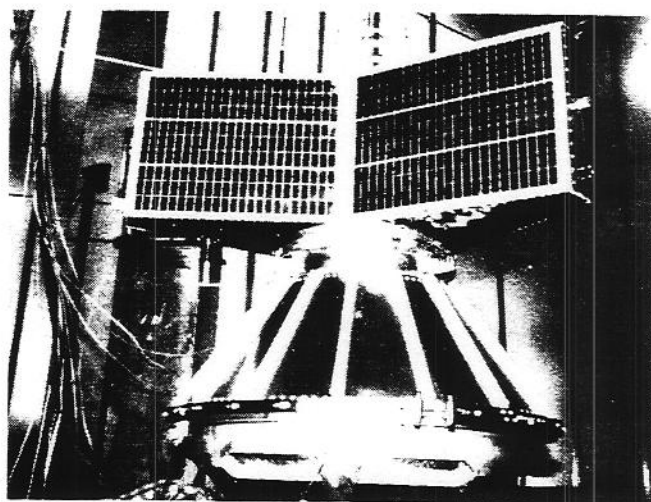
Opsendt 1982, levetid 53 dage. Transponder 21/29MHz. 1W. Apogee 335Km.

Iskra 3

Opsendt 1982, levetid 37 dage. Transponder 21/29MHz. 1W. Apogee 335Km



Australis-OSCAR 5 shown with its antennas deployed. Note that this satellite carried no solar cells and that actual steel carpenter rule was used for the antenna elements.



AMSAT-OSCAR 10 rests atop its attach fitting on a laboratory bench in preparation for packaging and shipping to the launch-vehicle integration site. Antennas occupy the top face, solar panels the side faces, sensors and antenna reflectors protrude off the ends of the arms. At the proper time in the launch-separation sequence, the satellite is literally "sprung" free of the launcher, leaving the conical attach fitting behind. (The kick motor is hidden from view within the cone.)

AMSAT-OSCAR 10

Opsendt 1983. Kontrol computer fejl 1986. Transponder 435/146MHz og 1269/436MHz. 50W. Apogee 35.550Km.

UoSAT 2(B)-OSCAR 11

Opsendt 1984, kører endnu. Ingen transponder. Beacon 145,826 og 435,025-MHz og 2401,5MHz. FM. 1W. Apogee 690Km.

IAS1 Fuji-OSCAR 12

Opsendt 1986, levetid 3+år. Service ophørt. Packet type 2W. Apogee 1510-Km.

RS10/11

Opsendt 1987, virker endnu. Mange modes. 21/29/145MHz. 5W. Apogee 1000Km.

AMSAT-OSCAR 13

Opsendt 1988, virker endnu (i høj grad). Mange transpondere. 50W. Apogee 36.550Km.

UoSAT 3(C)-OSCAR 14

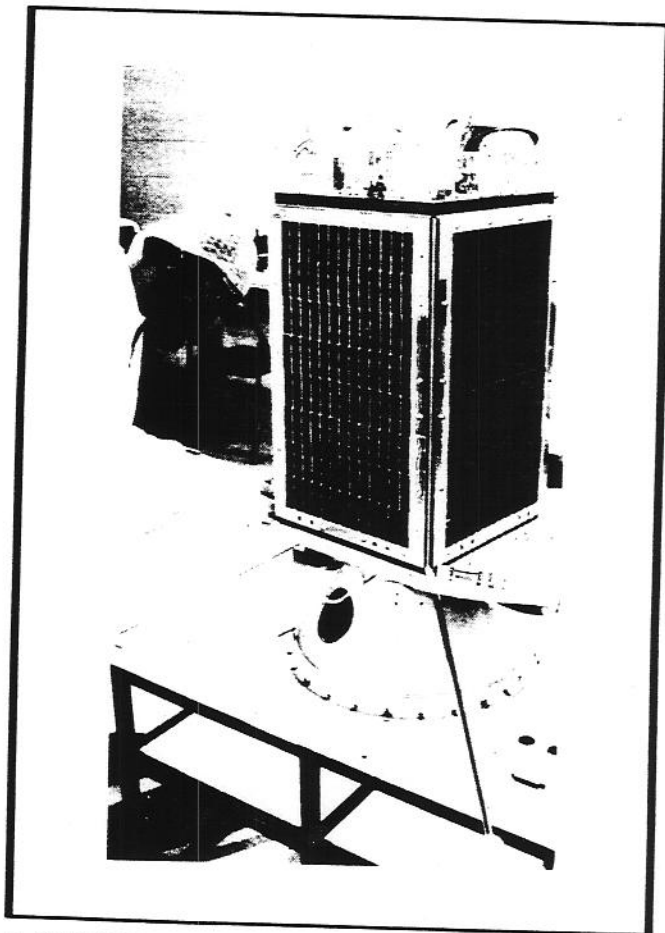
Opsendt 1990, virker endnu. Lige nu trukket ud af amatørservice. Se side 6. Packet type. 10W. Apogee 805Km.

UoSAT 4(D)-OSCAR 15

Opsendt 1990, levetid 1 dag. "Den taler vi ikke om" !

Pacsat-OSCAR 16

Opsendt 1990, i funktion. Op på 145.9 + 145.92 + 145.94 + 145.96MHz. Ned på 437,051MHz 4W, 437,02625MHz 4W og 2401,1428MHz 1W. Apogee 805Km



UoSAT-OSCAR 11, shown here undergoing final checkout, was the second amateur spacecraft designed and built at the University of Surrey, England. (photo courtesy University of Surrey)

Spacecraft Description

2.1 Shape

Tri-star as shown in Fig 1 (AO13)
Mass: 92 kg + 50 kg fuel

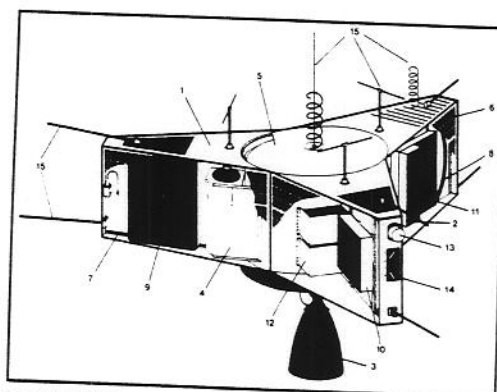


Fig 1 (AO13)

1—Aluminum space frame
2—S-band transponder
3—Kick motor
4—Helium tank container
5—Fuel and oxidizer tank
6—Solar panel
7—Magnetorquer coil
8—Nutation dampener

Graphic by AMSAT-DL
9—Integrated housekeeping unit
10—Battery charge regulator
11—Modulator
12—Auxiliary battery
13—Earth sensor
14—Sun sensor
15—Antennas

DOVE-OSCAR 17

Opsendt 1990, i funktion. Ned på 145,825MHz 4W og 2401,221MHz 1W. Apogee 805Km.

Webersat-OSCAR 18

Opsendt 1990, i funktion. Weber State University, Ohio.Div, billedeksperimenter, ATV m.m. Ned 437,0751MHz og 437,102MHz 4W. Apogee 805Km.

Lusat-OSCAR 19

Opsendt 1990, i funktion. Op på 2m, ned på 70cm. Apogee 805Km.

OSCAR's 14-19 er opsendt med samme ARIANE raket.

IAS1b Fuji-OSCAR 20

Opsendt 1990, i funktion. Både lineær og digital transponder. Apogee 1745Km.

RS12/13

Opsendt 1991?, i funktion. Mange frekvenser 21/29/145MHz. Cirka 1W. Apogee 1000Km.

RS14 AMSAT-OSCAR 21

Opsendt 1991?, i funktion. Tysk/russisk. Transponder 435/145MHz + RUDAK. 12W. Apogee 1000Km.

UoSAT 5(F)-OSCAR 22

Opsendt 1991, i funktion. se side 6. Digital,packet.

Det er jo slet ikke så få satellitter, radioamatører over det meste af verden har bygget.

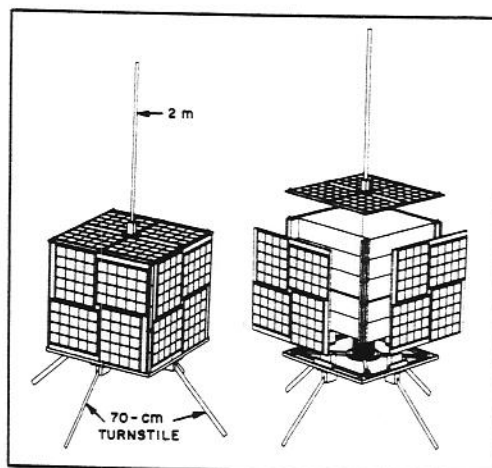


Fig 1 (MSat)—Microsat structure. Exploded view at right. (drawings courtesy WD4FAB)

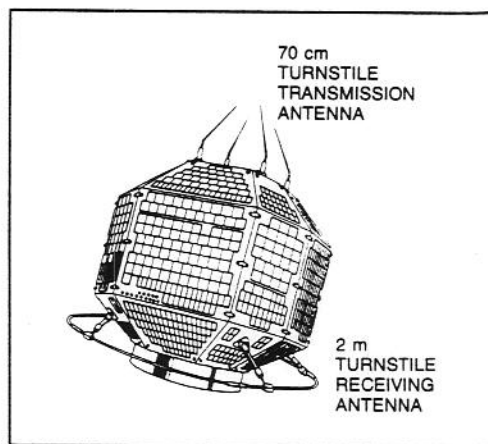


Fig 1 (FO20)—Drawing of Fuji-OSCAR 20 (from OSCAR News, Dec 1989, p 36).

P3D Falcon.

P3D begynder at tage form. I nov. 1991 var mange af nøglepersonerne samlet i Orlando, Florida, for at fastlægge delelementer af satellitten. AMSAT-DL står for en meget stor del af arbejdet. P3D opsendes med ARIANE AR 502 af ESA. Den bliver stor, cirka 500Kg.

Antenner

Til 2m. blev man enige om, at benytte en 9 elements "phased array", bestående af 3 grupper med 3 elementer i hver. Hver af de 9 elementer har sin egen effektforstærker. Ved at gruppere dem i 120° afstand får man en pæn cirkulær polarisation.

Til 10m. vil man benytte selve solpanelerne.

Antennerne til 70cm,23cm,13cm forlyder der ikke noget om. Derimod fortalte Jyri Putkonen, OH7JP, om 10GHz transponderen og om forsøg med 4 horn antenner. Fasen til de fire antenner kan styres, så udstrålingsvinklen på 14° kunne kontrolleres.

Satellite Operator, Februar 1992 har mange flere oplysninger. Næste møde om P3D i Marburg i maj.

CQ-QSO, belgisk, oplyser, at ON1BPS og ON7IZ fra AMSAT-Belgium vil bygge en beacon til 24GHz.

Andre interessante ting er, at senderne vil være: 29MHz @ 100W, 145MHz @ 400W, 436MHz @ 400W, 1269MHz @ 200-400W alt afhængig af WARC konferencen, 2400MHz @ 200-400W, 5830MHz @ ?, problem kan ikke bruges i alle lande, 10,450MHz @ 8 gange 10W ?.

Fra OZ1KYM, der har haft en QSO med WA4NFY, oplyses, at der vil blive transpondere til mode B og mode S, men ingen mode J.

Der vil være 10GHz samt 1296MHz op og 2401MHz ned.

WA4NFY er med i en gruppe, der afprøver antennerne til P3D.

CQ-QSO har iøvrigt Kepler elementer for P3D, så man kan se hvordan dens bane er planlagt.

De bringes her.

You can discover for yourself what the exciting advantages are for the planned orbit of phase III D. Insert the following elements into your satellite tracking program, e.g., QT4, IT, ORBITS, SATSCAN, etc., and see for yourself what a fantastic orbit this will be.

Satellite:	PHASE-3D
Catalog number:	00001
Epoch time:	91080.00000000
Element set:	001
Inclination:	63.4349 deg
RA of node:	225.0000 deg
Eccentricity:	0.6774378
Arg of perigee:	270.0000 deg
Mean anomaly:	0.0000 deg
Mean motion:	1.50000000 rev/day
Decay rate:	0.0e-07 rev/day^2
Epoch rev:	0001

Fra OZ DR 2197

Fra OZ DR 2197 har vi modtaget nyt, som er opfanget på AMSAT-EU net den 22/2. Det er det net som er omtalt foran på side 5.

Han har selv lyttet på nettet siden 1987 og kan varmt anbefale det.

Om MIR

Den 17/3 vil en tysker og to russere blive sendt op til MIR. Alle tre vil være aktive som radioamatører. Call-sign's for den tyske deltager vil være enten DP1MIR eller DP2MIR, afhængig af hvilken af de to tyskere, der er i træning for missionen, som bliver valgt.

Docking med MIR skulle ske den 19/3. Frekvensen 145,550MHz, FM eller digital speech, vil blive anvendt.

I forbindelse med denne mission, vil der i Tyskland blive oprettet en jords-tation, som sender info om missionen. Call: DF0VR, frek:3695KHz, UTC 1630.

Landingen skulle finde sted den 25/3.

Om Shuttle STS45

Se også side 2.

I følge OZ DR 2197's kilde skulle der være 4 radioamatører ombord. Tre amerikanere og en fra Belgien. Call for den belgiske deltager: ON1AFD. I forbindelse med denne mission vil man udføre SAREX-eksperimenter.

Dvs kontakte forskellige skoler rundt om på jorden. Eleverne kan så få lejlighed til at stille astronauterne spørgsmål. Bl.a. skulle den skole, der stod for koordineringen med MIR, da GB1MIR var ombord, blive kontaktet.

Navnet på denne skole er: Harrogate Ladies College. Call for skolen er: GB2HC/G0HCA og GB0JUNO. Frek: 145,550MHz, FM.

Ønsker man at lytte på retransmissionerne fra Shuttle, så prøv at lytte på : 3860/7185/14295/21395 og 28650-KHz.

Disse udsendes fra Goddard amatør radio klub, call: WA3NAN.

Under sidste mission hørte jeg tydeligt retransmissionerne på 7185/14295 og 21395MHz.

m.v.h. OZ DR2197

Tak for oplysningerne.

Fra OZ1DMR

Date: 12 Feb 92 17:41 Message-ID: <37941@OZ6BBS> From: OZ1DMR@OZ6BBS
To: OZ1KTE@OZ2BBS Subject: INFO i flg. aftale OZ7IS
** Vy 73 Gs Peter OZ1DMR / OZ6BBS **

Da interessen for Amsat er i kraftig udvikling, er der i OZ6BBS indført en ny "service", dog kun på begynder stadiet !

Er du indenfor rækkevidde/connect til oz6bbs vil du, efter tast af D AMSAT blive præsenteret for følgende menu :

AMSAT - MENU

TAST	FOR AT SE NYESTE	TAST	FOR AT SE NYESTE
D A1	2Line Orbital Elm.	D A10	Light Elm.
D A2	Diverse Index.	D A11	Micros Elm.
D A3	MIR Keps.+ MIR Elm.	D A12	Misc. Elm.
D A4	MIR TODAY Bulletin.	D A13	Weather Elm.
D A5	UOSAT-Data (OZ3FO)	D A14	Oscar Elm.
D A6	SPACENEWS (3sidste)	D A15	SATEL.DAT FBBBBS(OZ1ENT
D A7	Service Bulletiner.		
D A8	SARA Bulletiner.		Du kan oxo selv udregne div.
D A9	2Line#939.		Satellit - Data, her på BBS'en
D AOZ	Nyt fra AMSAT-OZ.		Gå i SERVER-MENU ved at taste:
D TRE	AMSAT Dir Struktur.		(F) dernæst (T). Så(?)for Help.

Menuen burde være selvforklarende, og kan ændres efter brugerønsker/indlæg, etc. Altså har DU tillæg - nye(ere) Data - rettelser - så hold dig endelig IKKE tilbage!!

De fleste med interesse for nævnte kan, af gode grunde, ikke nå oz6bbs, er jo ikke SCA dækkende tsk..

- 1: Requeste på vanlig hvis herfra, til din hjemmebbs..
Eks.: Nyeste UOSAT fra OZ3FO = Reqfil A5
- 2: Sende et P-Mail til OZ1DMR@OZ6BBS eller OZ3FO@OZ6BBS indeholdende følgende:

Interesse for følgende data : (Eks.:Spacenews)
HjemmeBBS: (ozxxx@Hjemmebbs)

Herefter vil du (Indtil du selv siger fra) få tilsendt nyeste DATA i OZ6BBS, omkring netop din interesse - som P-Mail..

På længere sigt håbes der på kontakt til AMSAT OZ, hvor så eventuelle tekniske spørgsmål fra Packetbrugere vil kunne stilles til OZ6BBS..

Med tak til Freddy/OZ3FO for ideen
Vy 73 Peter OZ1DMR@OZ6BBS.KBH.DNK.EU

12/02/92

Fra Elektron, hollandsk.

AMATEURSATELLIETEN

Door Jack van Tuijn, PA0JJT, Eindhoven.

Deze rubriek komt tot stand in nauwe samenwerking met de Eindhovense Amateursatelliet werkgroep HAMSAT.

Rubriek Amateursatellieten

Deze keer een korte rubriek, we volstaan met de referentie omlopen, keplersets, de weersatellieten en de lijst voor OSCAR 13.

Keplersets van amateur en andere voor amateurs interessante satellieten afkomstig van NASA bulletin # 924

PA0JJT

Satelliet Name	Int.ID	YY	Epoch day	Orbit	Mean An.	Mean Mot.	Decay MM	Incl.	Excentr.	Arg.Per.	R.A.A.N.
-OSCAR 10	83 58	B92	-83.154000	3458	19.2321	2.0587760	0.0000014	25.9821	0.606328	282.9118	120 6950
AO-13	88 51	B92	-92.063260	2525	16.5174	2.0970760	0.0000018	56.6605	0.724118	265.9374	69 2389
UoSAT 2	84 21	B92	-85.409510	40578	188.7602	14.6747100	0.0000260	97.8863	0.001177	171.3840	320.3128
RS-10/11	87 54	A92	-82.826780	21522	133.8843	13.7222000	0.0000018	82.9304	0.001060	226.1429	334.6315
UO-14	90 5	B92	-82.313690	8934	170.7550	14.2929000	0.0000078	98.6607	0.001077	189.3432	1 4365
UO-15	90 5	C92	-84.270630	8904	165.5594	14.2881000	0.0000048	98.6636	0.000967	194.5309	359.3171
PACSAT	90 5	D92	-88.655310	8844	153.1561	14.2935900	0.0000071	98.6657	0.001047	206.9105	355.5470
DO-17	90 5	E92	-83.782200	8914	168.3679	14.2946400	0.0000080	98.6657	0.001086	191.7251	0.4577
WO-18	90 5	F92	-82.275090	8936	172.7394	14.2949500	0.0000071	98.6654	0.001148	187.3620	2.0076
LO-19	90 5	G92	-82.306890	8936	172.7486	14.2957400	0.0000071	98.6654	0.001200	187.3522	2.0515
FO-20	90 13	C92	-97.131440	7634	290.4014	12.8318900	0.0000003	99.0394	0.054146	75.6581	231.1591
Oscar-21		92	-81.875060	3481	59.0253	13.7441600	0.0000014	82.9472	0.003443	300.7517	148.7090
RS 12/13	91 7	A92	-82.241330	3387	36.6048	13.7393000	0.0000015	82.9215	0.002934	323.3100	19.1604
UO-22	91 50	B92	-85.266690	1172	9.0320	14.3621200	0.0000107	98.5346	0.000798	351.0721	352.8035
ROSAT	90 49	A92	-84.465980	7391	24.7153	15.0219800	0.0000482	52.9919	0.001134	335.3271	86.0657
NOAA 9	84123	A92	-82.297980	35169	257.9396	14.1314200	0.0000051	99.1657	0.001615	102.3558	298.9685
NOAA 10	86 73	A92	-82.713410	26279	41.0595	14.2431500	0.0000072	98.5576	0.001234	318.9654	303.5780
NOAA 11	88 89	A92	-83.080690	15652	339.5488	14.1232500	0.0000085	99.0429	0.001257	20.6203	237.6128
NOAA 12	91 32	A92	-82.689300	2097	166.5190	14.2161500	0.0000083	98.7264	0.001306	193.5606	310.4191
Meteor 2-16	87 68	A92	-81.978030	20934	5.6457	13.8384000	0.0000013	82.5544	0.001281	354.4558	269.9326
Meteor 2-17	88 5	A92	-81.915380	18658	302.3944	13.8454500	0.0000030	82.5446	0.001817	57.8972	328.9284
Meteor 2-18	89 18	A92	-82.180270	13191	265.3177	13.8418100	0.0000026	82.5185	0.001530	94.9730	206.2436
Meteor 2-19	90 57	A92	-81.997750	6488	334.9297	13.8401600	0.0000011	82.5451	0.001740	25.2710	267.7445
Meteor 2-20	90 86	A92	-82.144230	5206	74.6891	13.8339300	0.0000028	82.5244	0.001273	285.2860	206.6745
Meteor 3-2	88 64	A92	-84.913360	15372	160.5019	13.1693300	0.0000005	82.5429	0.001609	199.5507	300.0224
Meteor 3-3	89 86	A92	-82.091400	9404	146.4863	13.1596300	0.0000004	82.5489	0.001485	213.5321	239.6117
Meteor 3-4	91 30	A92	-84.981990	2183	226.9612	13.1668600	0.0000004	82.5484	0.001847	133.2687	145.5658
Meteor 3-5	91 56	A92	-81.933140	733	233.1954	13.1678600	0.0000037	82.5483	0.001400	127.0385	89.6322
Mir	86 17	A92	-82.300200	32302	57.7755	15.5551000	0.0002928	51.6022	0.000330	302.2814	72.2549
Alouette 1	62B-A	192	-22.650360	45638	31.3834	13.6762200	0.0000023	80.4652	0.002339	328.5912	114.4260
ATS 3	67111	A92	-53.789070	8788	129.3343	1.0027230	0.0000008	13.8068	0.001487	230.5029	16.7631
Cosmos 398	71 16	A92	-21.764770	65369	204.3017	11.9886000	0.0010519	51.4939	0.185027	162.9633	221.4128
GPS-0002	78 47	A92	-46.551150	9900	348.0467	2.0162940	0.0000002	64.0785	0.019773	12.4876	314.5119

ELECTRON FEBRUARI 1992

Scandinavian VHF Meeting.

THE SCANDINAVIAN VHF-UHF-SHF-MEETING 1992

ÅBY RADIOKLUBB, SK70L, has the pleasure to invite You to the above mentioned meeting at ÄNGELHOLM (J066KG) 1992-06-05-08 (Whitsuntide).

Set in a forest and alongside a sandy beach (5 kilometers long) the holiday village of KLITTERBYN , where wooden Scanian coastal chalets are available for self-catering holidays, is the place where we meet.

The original landscape and vegetation have been mindfully preserved. The building style, the small-scale and compact layout , and the colours are all in accordance with southern Swedish tradition.

As we, SK70L, got the inquiry if we could arrange this meeting in the last part of January, we do not have a detailed programme to introduce to You yet. If You have any suggestions about the contents, if You want to give a lecture or in any way contribute with Your knowledges, please let us know as soon as possible.

LODGING

We can offer You beds in the above mentioned chalets at KLITTERBYN .
5-7 beds per chalet. We have got a special price for 3 nights (friday-monday),
500 swedish crowns/bed, including bed-linen and cleaning.

Each chalet has a shower/WC, kitchen facilities, colour TV, and telephone.
Village square with reception (including our own), assembly room, cafe
and village shop.

Table tennis, football, tennis, playgrounds, cycle hire.

In the middle of the village You find the INN where You can either choose a dish of the day, an `a la carte menu or coffee and cakes or waffles, if You do not like selfcatering at Your chalet.

100 yards from KLITTERBYN You find RÅBOCKA family-camping (3 stars) for tents and caravans. Even here You can eat and You also find a well-stocked grocery store and a 15 hole minigolf course.
From friday-monday You pay 300 swedish crowns/caravan. Also cheaper than usual.

HAMDINNER

The hamdinner (200 persons) takes place at the restaurant PALETTEN in ÄNGELHOLM, about 2,5 kilometers from KLITTERBYN.

The price for 3 dishes, ecl drinks, 185 swedish crowns/person.

BOOKING

We need Your preliminary booking of beds at KLITTERBYN, caravans at the CAMPING and seats at the HAMDINNER not later than March 30th sent to

SM7BOU, BERTH "KICKE" NILSSON, KOHAGEVÄGEN 2c,
S-260 83 VEJBYSTRAND, SWEDEN.

FINAL booking concerning the KLITTERBYN beds and the HAMDINNER

NOT later than May 4th. At the same time we must have the payment 500 SEK for lodging and 185 SEK for the dinner sent to Bankgiro 5352-1159, ÅBY RADIOKLUBB or Postgiro 263226-3, ÅBY RADIOKLUBB. The payment confirms Your booking.

Usually the KLITTERBYN applies to the guests for payment not later than 60 days before the arrival. This system also makes it easier for us.

Camping : Final booking not later than May 4th. Send no money as You pay directly at the RÅBOCKA CAMPING.

QUESTIONS AND INFORMATION

Presumptive members of the meeting, including exhibitors, lecturers etc, who have questions or want to have more information, please contact:

- SM7KOJ, JAN EMANUELSSON, tel + 46 435 24390
- SM7BOU, BERTH "KICKE" NILSSON, tel + 46 431 56155

You can also reach us via

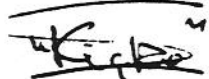
- AMTOR QRG 14.074 MHz MARK SEL CALL SK7OL
- PACKET SK7OL via SK7DD/BBS QRG 144,675 MHz
- TELEFAX +46 435 12345

Answer by mail or TELEFAX.

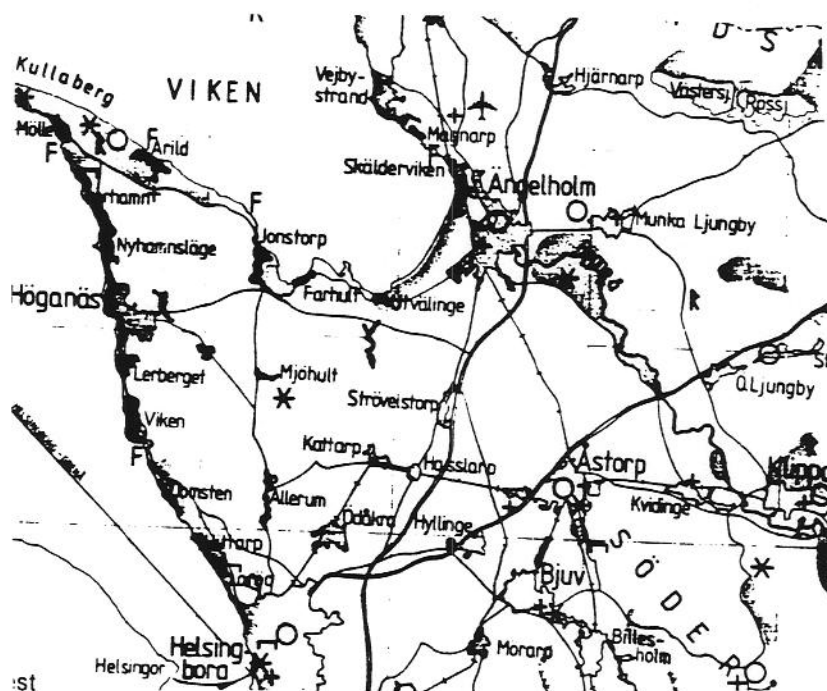
Information about the programme and frequencies for guiding through ÅNGELHOLM will be announced as soon as possible.

WELCOME TO ÅNGELHOLM AND THE 1992 MEETING !

ÅBY RADIOKLUBB



SM7BOU / "KICKE"



Brev fra ON6UG.

Dear Christoffersen,

Congratulations to You and all radio amateurs in Denmark for the founding of Amsat - OZ. I wish Amsat - OZ all the prosperity for the future.

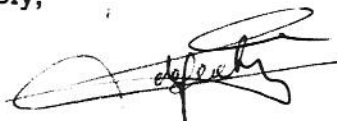
As a present to your new amateur radio group, enclosed is a description of Supertrak, a tracking system that is going to be published in various Amsat magazines shortly.

The introduction is now going to be published in Amsat- DL, Amsat UK and Amsat VK shortly.

I offer you this article to publish in your magazine if you wish. The follow - up description is quite large and has several photographs and drawings. I realize that this project is not for newcomers in satellite work, but I leave it up to you, to publish it or not.

My very best 73's to all in Amsat - OZ,

Sincerely,



Freddy de Guchteneire ON6UG
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QRL int+32 91 64 66 28
internet : gucht@inwchem.rug.ac.be