



INDHOLD

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Lidt af hvert

Det er stadig lidt overvældende at sidde i den her stol. Det vælter ind med breve og blade og indmeldelser.

Indtil nu har 43 meldt sig ind i AMSAT-OZ, så det går helt pænt. Af de 43 er der fire lokalafdelinger. Der er også smukke ord med på vejen. F.eks. ønsker OZ5FK god vind. OZ5FK har tidligere været leder af AMSAT-Danmark. Tak for det Claus.

OZ1GBY, Bjarne, sender to programmer han selv har lavet og doneret til AMSAT-OZ. Han tilbyder at tage sig af AMSAT soft-ware, hvis vi mangler en til det. Det kalder jeg et tilbud.

Vi tager det op i styregruppen meget hurtigt. Vi har slet ikke fået samlet os sammen endnu, men nu har vi da en solid anledning. Tak til Bjarne. Fra OZ1KYM et lille hjertesuk. Meget stof på engelsk! Ja, det strejfede da også min biocomputer mere end en gang - men men som så ofte bestemmer tiden, hvor meget der bliver oversat. Jeg vil prøve at oversætte lidt mere fra næste nummer. Vi er faldet over et lille program, der skulle kunne lave rå-oversættelsen. Det er dog ikke kommet endnu - så det bliver via toppen af hovedet denne gang. Henning sender også info om aktiviteter på AO-13. Det kommer inde i månedsbrevet. Tak til Henning.

Ellers har perioden været præget af dels MIR dels Space Shuttle. Det vil sikkert interessere mange, at få lidt fra de af jer, der har kørt dem i perioden.

Informationskilder

Ideen med denne side er, at have et fast sted, hvor man kan se hvilke kilder der er til eksempelvis Kepler elementer, net osv.

AMSAT-OZ: Kontakt på AMSAT-OZ Ingeniørhøjskolen Kø- benhavns Teknikum, Elektronik afd. Hørkær 12A,2730 Herlev. telf. 44 92 26 11 til Ib Christoffersen, OZ1- MY eller OZ1KTE @ OZ2BBS på packet. Styregruppe iøvrigt: OZ9AAR,OZ2ABA og OZ4ACV.	Vores svenske venner har et net: AMSAT-SM net på 80m 3740KHz på søndage kl. 1000 og en telefon BBS: AMSAT-SM BBS telf. 009-468 750 46 27 1200/2400Baud. AMSAT International 14282KHz Søndage 19.00 UTC AMSAT SA 14282KHz Søndage 09.00 UTC DX information på OSCAR 13 på 145,890- MHz BLADE: OSCAR NEWS, med- lemsblad for AMSAT- UK. AMSAT-SM INFO, svensk medlemsblad The AMSAT Journal, AMSAT-NA medlems- blad OSCAR Satellite Re- port og Satellite Ope- rator.	AMSAT Europa 14280KHz Lørdage 10.00 UTC AMSAT DX windows net 18155KHz Søndage 23.00 UTC AMSAT Launch infor- mation networks. AMSAT 3840KHz 14282KHz 21280KHz Goddard Space Flight Center, WA3NAN 3860KHz 7185KHz 14295KHz 21395KHz Jet Propulsion Lab. W6VIO, 3850KHz 14282KHz 21280KHz Johnson Space Center W5RRR 3840KHz 14280KHz ARRL,W1AW ?
Der ligger meget god info på 6BBS, 144,625- MHz. Forbindelse ved at taste D AMSAT Man kan sende P-mail til OZ1DMR @ OZ6BBS eller OZ3FO @ OZ6BBS med ønsker: Interesse for følgende data: F.eks.:Spacenews. Op- giv hjemmeBBS: OZxxx@HjemmeBBS Check iøvrigt alt hvad det har label AMSAT på jeres hjemmeBBS. Der kommer en stor mængde info den vej.		

Flere breve fra gode venner.

Fra OZ8SL

Han har modtaget et demoprogram for nogle af DK2CH's programmer.

Det har vi nu her. Det drejer sig om et azimut-,afstands og lokatorberegningensprogram for såvel ATARI ST modeller og for Commodor Amiga 500 til Amiga 2000 og PC.

Det andet er et satellitbane beregningsprogram for samme computere som ovenfor.

Skulle nogen være interesserede, så send os en linje. Det ligger på 3½ tomme diskette. Tak for det Svend Erik.

Fra AMSAT-UK

G3AAJ, Ron Broadbent, har reageret på en forespørgsel fra mig om vi skulle meddele andre oprettelsen af AMSAT-OZ.

Han har på min opfordring sendt optagelsesbegæring til AMSAT-UK, som vi vedlægger dette nummer af månedsbrevet.

Fra AMSAT-SM

Vi sendte vores adresseliste med labels til SM7ANL og I skulle nu allesammen have modtaget AMSAT-SM's katalog over programmer, printkort, modems m.m. Nu er det jo så et spørgsmål om pengene slår til.

Mere fra AMSAT-UK Colloquium 92

De plejer at afholde et stort satellit seminar i juli måned hvert år. Det bliver i år den 30. juli til og med den 2. august. Seminaret finder sted på

University of Surrey umiddelbart syd for London i Guildford. Tilmeldings-skemaer kommer med næste nummer af OSCAR NEWS.

Han efterlyser folk, der vil komme med indlæg o.s.v.

Yderligere information fra Ron. Han adr. er på indmeldelsesblanketten, der er vedlagt dette nummer.

OZ7IS, Ivan og jeg vil deltage i seminaret. Vi regner med, at der vil være utrolig meget at lære og specielt vil der nok være meget om P3D. Det kunne da også være helt skægt at se nogen af girafferne.

Fra OZ-DR 2197

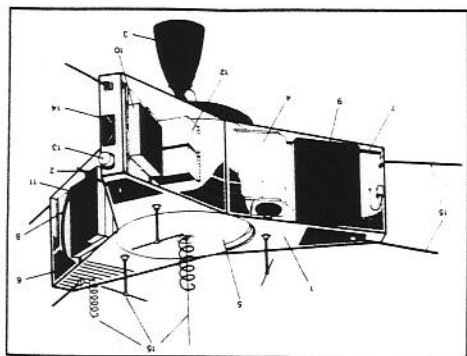
Han nåede lige at komme med. Beretter, at AO-21 skulle været igang ifølge AMSAT-EU net på 14280KHz. G3IOR siger han har haft flere QSO'er med andre G-stationer. OZ DR2197 har ikke hørt nogen på AO-21 - men har konstateret ændringer på telemetrien, der sendes på 145,948MHz. *IMY indskud: Mener at den også sender telemetri på 145,800MHz. 7IS have hørt det, og de tider det kommer på passede med AO-21, da vi checkede det.*

OZ DR 2197 har hørt DP0MIR/DP2-MIR på phone et par gange. På nær 18/3, så var DF0VR aktiv som nævnt i månedsbrev nr.2.

STS-45. Hørt N5WQC ialt 7 gange. RS-10. Rimelig aktivitet af europæiske stationer. Det er dog ikke særlig mange OZ-stationer, han har hørt på det satellit. Indenfor det sidste halve år er det kun blevet til tre.

RS12. Kun hørt 23 forskellige calls.

OSCAR 13 siderne.....



Der har været meget snak om OSCAR 13 i den seneste tid. Specielt har den eksperimentelle "mode-plan" vækket mange til skriverier.

Jeg skal indledningsvis gengive planen som den ser ud nu:

I perioden fra den 16. marts til og med den 8. juni.

Mode JL fire dage om ugen. Mandag, onsdag, fredag og lørdag UTC fra MA 100 - 150. Mode J off MA 120 - 135.

Mode B ON på alle andre tider.

Mode S ON hvert omløb MA 120 - 135, kun beacon på "L"-dage, transponderen på "B"-dage.

Det skulle vist være rimelig klart eller hva'!

G3RUH slutter med følgende ord:

"Stol ikke på rygter. Up to date information om OSCAR 13 er altid til rådighed på beacons, 145,812MHz eller 435,658MHz i CW, RTTY og 400bps PSK" Kontrolstationerne er altid åbne for tilbagemeldinger om hvordan det går.

Kontrolstationerne er, Peter DB2OS @ DK0MAV, James G3RUH @ GB7DDX, Graham VK5AGR @ VK5WI.

Indskud om modes

Det er måske på sin plads at repetere hvad de modes, der omtales ovenfor er.

Mode	Uplink	Downlink
B	435MHz	145MHz
J	145MHz	435MHz
JL	1.2GHz	435MHz
S	1.2GHz	2.4GHz

Transponderen i OSCAR 13 er ikke rigtig mode S. Den har uplink på 435-MHz. Den er lavet for at få erfaringer med 2.4MHz downlink.

Beacons og transpondere på OSCAR 13

Først beacons:

Mode B generel: 145,812MHz

Mode B engineering: 145,985MHz

Mode JL generel: 435,652MHz

Mode S generel: 2400,664MHz

så transponder pasbånd:

Mode B uplink: 435,423-435,573MHz

downlink: 145,975-145,825MHz. Inverterende lineær transponder.

Transponder ligning: Downlink frekvens = 581,398 - uplink frekvens ± doppler.

Mode JL: Type lineær inverterende

Mode L uplink: 1269,641-1269,351MHz

Mode J uplink: 144,423-144,473MHz

Mode L downlink: 435,715-436,005MHz

Mode J downlink: 435,990-435,940MHz

Mode L transponderligning: Downlink frekvens = 1705,356 - uplink frekvens ± doppler.

Mode J transponder ligning: Downlink frekvens = 580,413 - uplink frekvens ± doppler

Mode S: Transponder type lineær ikke inverterende. Uplink: 435,602 - 435,638MHz Downlink:2400,711-2400,747MHz.

Transponderligning: Downlink frekvens = 1965,109 + uplink frekvens ± doppler.

Fra OZ1KYM

I skrivende stund (15 marts) har der været god aktivitet på OSCAR 13 med mange DX-peditioner: UI/UM8MM Vlad, 3D2RR Low fra Pitcairn Island VP25E/WB6LYI Don fra Anquilla, VP2V/KK3K Jim fra Virgin Islands, QSL til KK3K, Jim Kelly, 2506 Aspen Stret, Philadelphia, PA 19130. FO0CI Arie fra Clipperton Island, QSL til N7QQ, Charles F. Spetnagel Jr. 5327 Carol Avenue, Alta Loma, CA 91701. UL0/UM8MM Vlad fra Kazakh.

Kommende aktiviteter på OSCAR 13.

V3 (Belize) Jun, VK9Y (Cocos-Keeling Island) call vil blive VK9CK og VK9CL den 17 marts til 6. april, QSL til F6IMS, Fritz Sconczo, 53 Chemin Des #2, Hameaux F-0170, Thoiry, Frankrig. C5 (Gambia) 12-20 april, QSL muligvis til ON5FF. Check 145,890MHz for info.. UH (Turkmenistan) i april, QSL til ES1RA Oleg Mir, Box 806, Tallinn EE-0017 Estland via Sverrig. JD1 (Ogasawara) 15 - 17 juni, QSL til Mikio Mouri, JA3GEP, 1-1-14 Nomura, Kusatu, Siga 525, Japan.

OZ1KYM har QSL-info, hvor jeg ikke har tilføjet det.

Henning efterlyser også et satellit

program, hvor man kan have to jords-tationer inde på samme tid, så man kan se om der er et vindue.

Det kan InstantTrack, Ibs bemærkning. Kan købes hos AMSAT-SM, som de fleste af jer har fået katalog fra.

Mere DX, fisket fra blade !

TY1PS (Benin) skulle snart være i luften.

OZ8QI indikerer gode muligheder for at køre fra A5 (Bhutan) i dette år.

Lad os høre om det !

DJ0MY vil køre fra de Kanariske øer EA8 to uger i juli, datoer og QSL er uklart.

Ed, WB4MLE overtager som QSL mager for Manolo EA9MH. Send ikke kort til Ed før det fremgår af QSO. ZC4SAT (Kypern) vil snart komme i luften.

PZ5OC er rapporteret hørt fra Surinam for nylig. QSL info ukendt.

Juan, P43AS har været aktiv. QSL til Juan Noguera, Box 2380, Aruba.

En ny station fra Venezuela, YV4FAY, QSL til Thomas Nunez, Calle Tampo Elias, San Blas 99-51, Valencia 2001, Carabobo, Venezuela.

Fra Tyrkiet skulle der snart være flere stationer, TA1D, TA1CCL og TA1ZA. QSL for alle Bruce Croskey, 4312, Rainier Place, Pittsburg, CA 94565. *Det er da lidt af en omvej - har nogen bedre info..IMY*

E.S.DX

The European Satellite DX fond

Der er oprettet en europæisk DX-fond. De der står bag er: Jeff GW7B-GA, Alec GW1MNC, Hardy DC8TS, Bernard DG6MGP, Frank ON1ACN, Andre ON1AIG, Jussi OH5LK.

De kan høres på 145,890MHz på OSCAR 13.

Bidrag og info til/fra dem til:

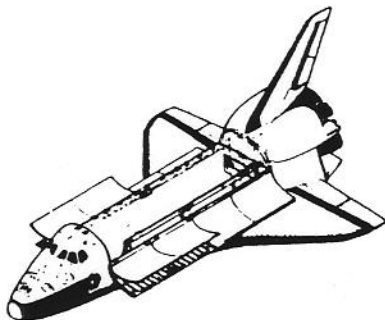
European Satellite DX-fond

PO BOX 26

B-2550 Kontich

Belgien

STS-45 glæder og sorger



Forsinkelse

STS-45 blev desværre forsinket et døgn tid, så de forud opgivne Kepler elementer passede ikke.

Der var vist lidt forvirring i starten - men mange var i besiddelse af OK data i løbet af onsdag nat.

Frekvenskludder

De uplink frekvenser, som var opgivet, viste sig ganske rigtigt at passe rigtig dårligt til Europa. Der kom så senere info om at bruge 144,700, 144,75 og 144,80MHz til det.

Kaldesignaler

Skulle være Dave N5WQC, Brian N5W

QW, Kathy N5YYV og belgiske Dirk ON1AFD.

QSL-info

Der er planlagt et specielt QSL-kort, der skulle kunne opnås hos:

Sterling Park Amateur Radio Club, PO Box 599, Sterling, VA 22170, USA.

Fremsend QSL-kort til dem og mærk på ydersiden om det er SWL eller to-vejs forbindelse. Altså enten STS-45 SWL eller STS-45 QSL-2 way. Send returkuvert med. De siger, at den skal have "business size" (A5 eller A4 ??). Vedlæg SASE for at få kort retur. SM7ANL skriver, at det også er en god ide, at vedlægge 5\$, til deres udgifter.

Hvordan gik det ?

Jeg kunne godt tænke mig, at få lidt info fra de af jer, der hører dem eller kører dem. Så kan det komme med i det næste nummer af månedsbrevet. Den smule jeg havde tid til at lytte tydede på, at der var mange, der ikke havde hørt hvilke frekvenser, der blev brugt. Her på IKTE er elevationsrotoren pist væk efter en storm sidste år, så der gik de bedst igennem lige i starten med lav elevation.

Feedback til SAREX

SAREX-holdet vil gerne have feedback på, hvordan I synes om missionen.

Det kan ske på adr. AMSAT-NA, Box 27, Washington D.C. 20044, USA.

Message-ID: <14096@W3IWI>

From: W3IWI@W3IWI

To: AMSAT@AMSAT

Subject: UOSAT NEWS

Path: OZ2BBS!OZ2BOX!OZ2BOX!OZ6BBS!OZ2BUL!OZ5BOX!SM7DLZ!FD1RJI ...

HR AMSAT NEWS SERVICE BULLETIN 060.01 FROM AMSAT HQ
SILVER SPRING, MD FEBRUARY 29, 1992 BID:\$ANS-060.01
TO ALL RADIO AMATEURS BT

New versions of PB/PG provide improved station automation features

Jeff Ward, G0/K8KA, reports that PB bugs in the first release (December 1991) of the "new version" have been fixed. In addition to bug fixes, some new features for automated station operation have been added. These features revolve around the use of batch files and batch processing. Some examples are included, but they only scratch the surface of the topic. A new utility called PFH_VAL.EXE has been included to help you create your own batch files. It returns as an errorlevel the first byte of data from a PACSAT File Header item which you select. DOS batch commands aren't particularly complicated or comprehensive, but a good system can be assembled using the hooks provided.

PG has been stripped of all functions other than uploading. It is also possible

to have PG upload waiting messages and exit without human (keyboard) intervention. This should really clear the decks for fully automated stations based on PG/PB.

The software is now available on UO-22 for downloading.

***** UoSAT-OSCAR-11

If you are receiving UO-11 bulletins, please drop a postcard to UoSAT. We are very interested in hearing from folks using the satellite. If you are using the satellite for educational purposes, please send along what you are doing. We will post information in future UO-11 bulletins concerning arrived postcards. Send postcards to Greg Jones G0/WD5IVD, UoSAT, Elec Eng., Univ. of Surrey, Guildford, Surrey, GU2 5XH, England.

[ANS thanks Jeff Ward, G0/K8KA, and Greg Jones, G0/WD5IVD, for the information in this bulletin.]

Hvordan man kan køre DX på satellitterne.

Subject: AO-13 DX tips and tricks

To : All Satellite Operators

Fm : Andre - ON1AIG @ ON7RC.BEL.EU

Taken from an article by John, KL7GRF/6

Hints on working DX-peditions or a "rare" DX-station :

DX-peditions are typically short in duration and are intended to work as many stations as possible in the period of time the expedition is on the air. Developing good operating habits will enhance your chances of working the expedition. Good operating habits help the "other guys" to work the expedition also.

The most important habit to develop is "LISTEN, LISTEN, LISTEN" before transmitting. Satellite operations are unique in that you must "match" your uplink and downlink frequencies. The absolute worst thing you can do is match your uplink and downlink on top of the DX-peditions downlink frequency. I have heard many, many stations talking themselves in on top of the DX-pedition downlink with the standard "HHHEEEEELLLLLOOOOOO" or by swishing a carrier across the downlink, thereby interfering with the QSO between the expedition and a station, further slowing down the expedition operator.

LISTEN,LISTEN,LISTEN to the DX station instructions, he may be working "split" (transmitting on one downlink and listening on another). A good DX operator announces he is listening "DOWN 10".

Here are some tips :

1. Don't tune up and "find" yourself on DX-station downlink. It is very simple matter to find yourself without causing QRM to the expedition downlink.
 - a. Tune your receiver on the DX-station.
 - b. Tune your receiver DOWN exactly 10kHz from the DX-station.
 - c. "Find" yourself on the receiver downlink.
 - d. Move your receiver back to the DX-station.
 - e. Move your transmitter DOWN exactly 10kHz.
 - f. You have gotten yourself on the DX station frequency with NO QRM.

If the DX station is working "split", take the time to calculate the proper uplink frequency to fall in the downlink area that he is listening in. Don't transmit on the DX station downlink;

-
- a. he can't hear you
 - b. you're only cause QRM to others trying to work him.

2. One of the very worst habits you can develop is to transmit while you are listening on the station speaker. This is a bad habit at any time on the satellites. **USE HEADPHONES !!!**

Listening to yourself using the station speaker causes the downlink heard through the station speaker to be re-transmitted as feedback. In most cases it is practically impossible to copy a station using a speaker instead of a set of headphones to receive the downlink. All this does is make it difficult for the other station to copy you.

3. When calling a DX station:

- a. LISTEN, LISTEN, LISTEN!! Before transmitting, make sure the DX station is ready to work the next station. The DX station or expedition may be working by call areas.
- b. Don't bother with his call when calling, he knows his own call.
- c. Speak concisely when calling.
- d. DON'T REPEAT YOUR CALLSIGN OVER AND OVER. Twice is fine.
- e. Just give your own call, don't add frivolous things.
- f. Be consistent when giving your call phonetically, use the same phonetics, don't change "SIERRA" to "SANTIAGO" and back again. Use the international phonetics. In some cases a pronunciation of a particular phonetic may cause difficulty. If the DX-station asks for your call sign again, give the same phonetics but change ONLY the phonetic that is causing the difficulty.

4. After you have called :

- a. LISTEN, LISTEN, LISTEN!! Don't just keep calling in the blind. It is incredible how many stations just keep on calling and don't even realise that the DX station has responded to another station and is trying to work him while you are causing all kinds of QRM. Too much of this rude and un-professional tactic might get you on a "black list" for a QSL-card from the DX-station.

5. When the DX station responds:

- a. Remember there are many others waiting on the frequency to work the station. There may also be others who have modest stations that would like to work the DX-station. PLEASE, BE BRIEF!!!
- b. In the case of a full-blown DX-pedition, give a signal report and immediately turn it back to the DX station: "ROGER, YOU ARE 5 AND 9 OVER". Don't give your grid locator, city, state, and the name of your first born cat unless the DX station asks for it.

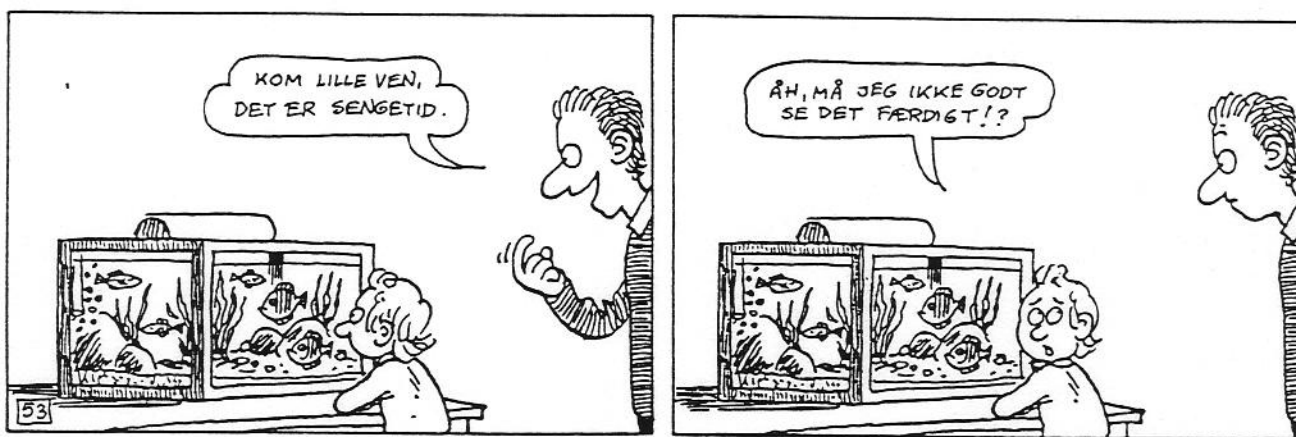
- c. For a normal (non-expedition) DX station, give a signal report, your name and location and turn it back to the DX station. If the DX station wants to "ragchew", he will let you know easily enough.
- d. Don't expect to "ragchew" with a DX-pedition, the purpose of the DX-pedition is to work as many stations as possible. It is typical on the birds to have large pileups during the early days of the expedition but they have a tendency to "burn" out. If the pileup has burned out, the operator will make it known that he is willing to ragchew.
- e. In the case of a DX-pedition don't ask for QSL information or other frivolous information. It only slows things down. Usually you will find QSL information in several publications or it is available from several DX'ers on the bird (145.890).

6. Finally :

DX-peditions cost money. It is a nice gesture if you include an extra green stamp(s) to help printing QSL cards, etc.

73 for now. Hope to hear you on 4th and 5th April from 3A on Oscar 13.

Andre - ON1AIG @ ON7RC.BEL.EU



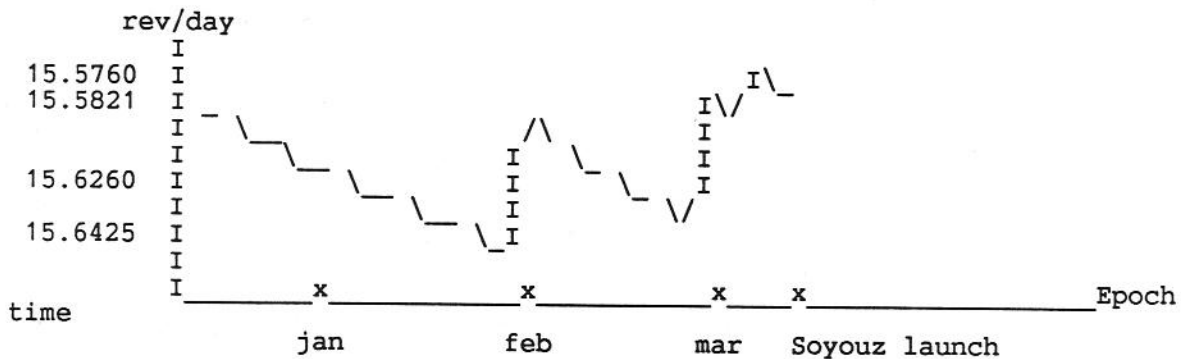
MIR hopper op og ned.

Der er ikke noget at sige til, at Kepler elementer for MIR skal opdateres ind imellem. FBIRCI har kikket på, hvordan det er gået fra slutningen af 1991 næsten indtil nu:

Date: 17 Mar 92 18:18

Subject: MIR Path summary= 77

TRAJECTORY SUMMARY MIR Complex
period= day 335 (1991) to day 77 (1992)



Adjustment orbit : January 28 and March 1

Soyouz tm14 launch: March 17

73 Jean-Claude

Er der nogen, der fik de sidste kontakter med 4MIR og 5MIR lige inden de kom ned ? Hvad med vores tyske ven ?

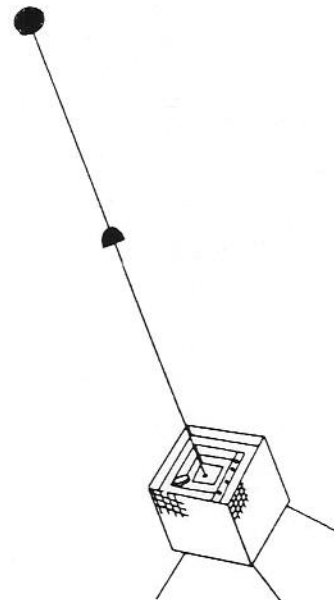
Science review på ØRSTED.

Den 6. marts blev der afholdt science review på den danske satellit ØRSTED.

En række forskere fra England, Sverrig, Holland, USA og Frankrig var inviteret til at sige deres mening om projektet.

Det forløb, for mig at se, i god ro og orden - og der var fin opbakning til missionens vigtighed. Det drejer sig i første række om at kortlægge jordens magnetfelt.

Der var forbavsende meget snak om selve satellittens opbygning. ØRSTED minder meget om UoSATérne fra University of Surrey. Dvs den har en lang bom, som magnetometrene sidder på. Bommen virker samtidig som stabilisering, idet bommen vil pege bort fra jordens center.



Frekvenser m.m.

Oprindelig var frekvenserne planlagt i VHF/UHF området (gæt hvor?). Nu er det sådan, at ESA (European Space Agency) ikke vil have frekvenser i VHF/UHF mere og samtidig er kravene til overføringshastigheden så store, at det er uheldigt. Planen er nu, at benytte S-bånd. Dvs i området 2025-2110MHz til uplink og 2200-2290MHz til downlink.

Modulationen bliver med stor sandsynlighed BPSK (Bi-Phase Shift Keying) med en overføringshastighed på 100KB/s med mulighed for at drosle ned til 10KB/s i kritiske situationer. Der er måske grund til at understrege, at ØRSTED ikke er en amatørsatellit.

Opsendelse

ØRSTED skal sendes op sammen med ERS II i begyndelsen af 1995, så der er nogen, der snart får travlt.

De foreløbige Kepler elementer er:

Epoc time: 91124.086261574
Eccentricity: 0.00136
Inclination: 98.515
Asc node: 198.965
Arg. perigee: 114.178
Mean An: 285.028
Mean Motion: 14.3467967
Drag: sæt til 0.0

Disse er baseret på ERS I's Kepler elementer.

Som man kan se minder de meget om både UO14, AO16-19 og UO22. Det er da også forståeligt, da det stort set er samme forhold ved opsendelsen.

Mere om ØRSTED, når den er lidt længere i planlægningen.

1MY

Lidt klip fra blade

SA AMSAT TO INTRODUCE A COMMAND STATION DEVELOPMENT PROGRAMME

SA AMSAT has announced details of a development programme to help Radio Amateurs to set up a satellite ground control station. The programme called CSDP was launched earlier this month.

In the commercial satellite field there is a vast network of command stations situated around the world to perform the routine control and command tasks on satellites used in a large number of diverse applications. This control network is largely invisible to the everyday user of these satellite services which is a tribute to the excellent performance given by the command stations.

The Radio Amateur Satellite Service by contrast relies essentially on the efforts of a small band of dedicated volunteers and the ever increasing number of amateur radio satellites is placing a heavy burden on these individuals.

SA AMSAT, and South Africa, is on the brink of entering the satellite world with the AMSAT OSCAR Phase IIID and SUNSAT projects. These projects will need experienced ground control and telemetry support stations. It was recently decided to start a CSDP to ensure that a sufficiently large number of suitably qualified radio amateurs will be available in Southern Africa for assisting the official command stations when these satellites are launched in a few years time. The programme will be run by Jan Hattingh ZS6BMN

Full details on how to participate in the development programme are available from SA AMSAT, P.O.Box 13273, Northmead 1511.

NEWS FOCUS AFRICA LAUNCHED

December 1 saw the first transmission of NEWS FOCUS AFRICA, an Amateur Radio News Programme for Africa which is transmitted by the SARL on behalf of the IARU Region 1 PADC Working Group. News Focus Africa is on the air on Sundays at 07:15 and on Mondays at 17:00 UTC on 14282 and 21282 kHz. It is also relayed on AM on 3660 and 7095 kHz. Reception reports and comments are most welcome and should be sent to ZS6NFA, SARL, P.O.Box 807, Houghton 2041.

De næste sider bliver frekvensplanerne for 2m, 70cm og de højere bånd. Det er jo aldrig nogen skade at repetere dem en gang imellem.

IIC

144-146 MHZ BANDPLAN

IARU Region 1 bandplan		Usage
144.000	a) CW	144.000 — Moonbounce
		144.025 — CW calling
		144.050 --> Random MS CW ref.freq. f)
		144.100 --> Random MS CW ref.freq. f)
		144.140 — FAI activity CW
144.150	SSB	144.150 — FAI activity SSB
		144.160 — SSB calling
144.500	ALL MODES	144.300 --> SSB calling
		144.400 --> Random MS SSB ref.freq.f)
		144.500 --> SSTV calling
		144.600 --> RTTY calling g)
		144.625 --> Digital communications h)
		144.650 --> Digital communications h)
		144.675 --> FAX calling
144.845	b) BEACONS	144.700 --> FAX calling
		144.750 --> ATV calling/talk-back
144.990	RO	
145.000		
12.5/ 25 kHz spacing	c) REPEATER INPUT (NBFM)	
145.175	R7	
145.225	S9	
	c) SIMPLEX CHANNELS (NBFM) 12.5/25 kHz spacing	145.300 --> RTTY local
145.575	S23	145.500 --> (Mobile) calling
145.600	RO	
12.5/ 25 kHz spacing	c) REPEATER OUTPUT (NBFM) d)	
145.775	R7	
145.800	e) SATELLITE SERVICE	
146.000		

430 - 440 MHZ BANDPLAN

IARU Region 1 bandplan	Usage
430.000	430.025 — FRU1
	25 kHz Repeater output channels (F/PA) g) channel spacing 1.6 MHz shift
	430.375 — FRU15
	430.400 — Digital comm. links
	430.575 — Digital comm. (repeater channels) h) i)
	430.600 — R52
	430.925 — R65
	430.975 — R67
	(R67/R68/R69 RTTY)
	25 kHz Repeater input channels (HB/DL/OE) g) channel spacing 7.6 MHz shift
	431.825 — R101
	431.625 — FRU1
	25 kHz Repeater input channels (F/PA) g) channel spacing 1.6 MHz shift
	431.975 — FRU15
	432.000 — Moonbounce
	432.025 — CW centre of activity
	432.050 --- CW centre of activity
	432.200 --- SSB centre of activity
	432.350 --- Microwave talk-back centre of activity
	432.500 --- SSTV (narrow-band)
	432.600 --- RTTY (FSK/PSK)
	432.700 --- FAX (FSK)
432.000 — CW a)	
432.150 — SSB/CW	
	Narrow band DX segment
432.500 — LINEAR TRANS-PONDERS e)	
Input 432.600 —	
Output 432.800 —	
432.990 — BEACONS b)	
433.000 — RU0	
25 kHz REPEATER INPUT (Region 1 system) f)	
spacing 1.6 MHz shift	
433.375 — RU15	

(continued)

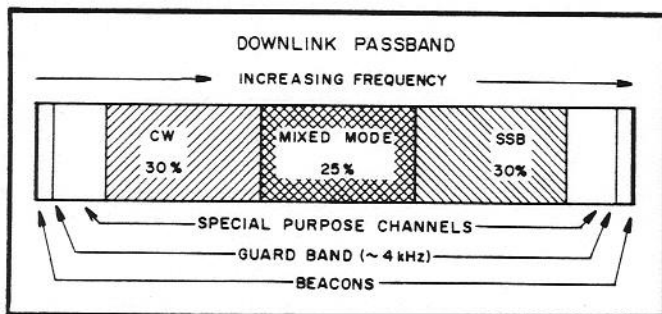
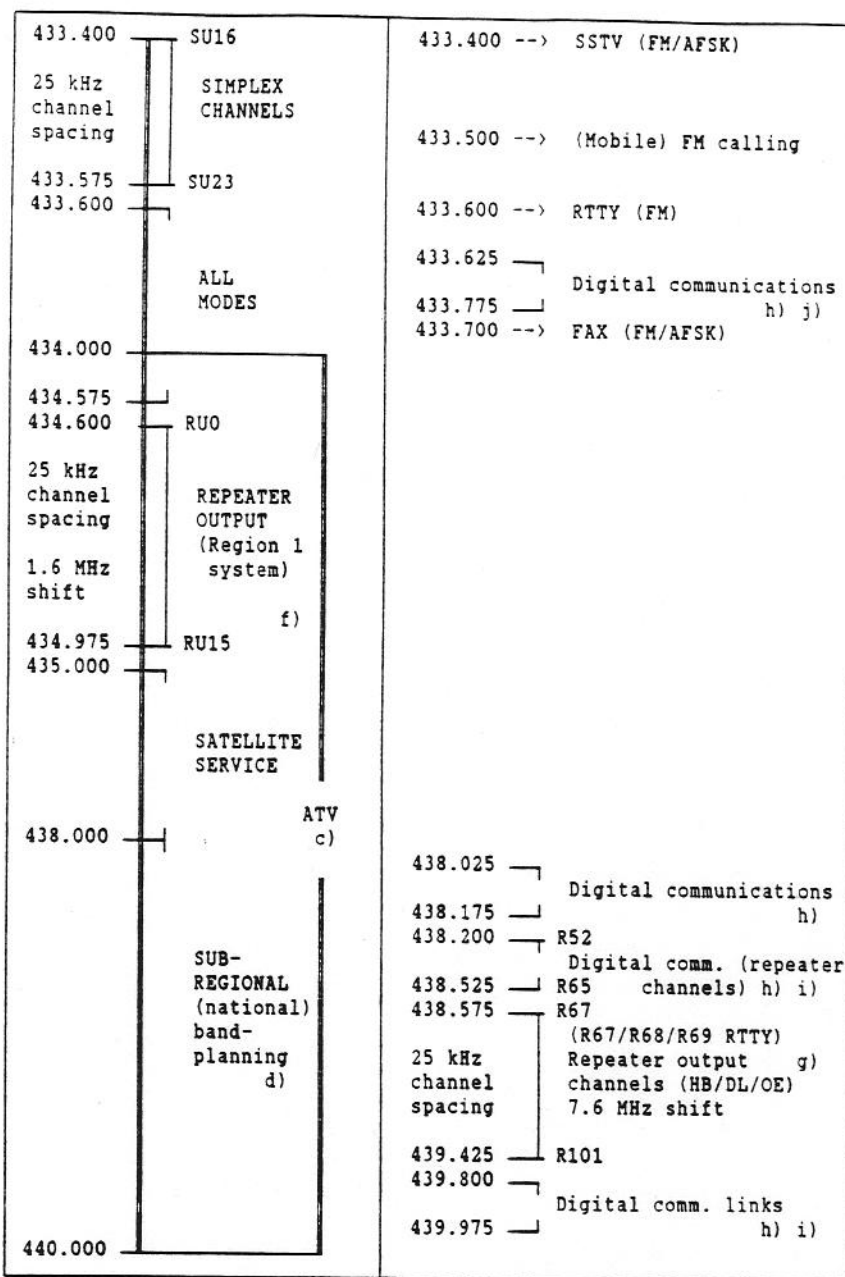


Fig 10-3—Linear Transponder Band Plan: General downlink band plan for OSCAR satellites. The special-service channels (SSCs) are meant to be used in a coordinated manner for special activities such as bulletins by national societies, code practice, emergency communications and computer networking. Channels are designated H1, H2, . . . (high end), L1, L2, . . . (low end); with H1 and L1 being closest to the beacons.

1240 - 1300 MHZ BANDPLAN

IARU Region 1 bandplan	Usage
1240.000	1240.000
1241.000	1241.000
ALL MODES	Digital communications
ATV	
1257.000	1258.150
1260.000	1259.350
ALL MODES	R20 Repeater output
SATELLITE SERVICE	R36
1270.000	
ATV	
1286.000	
1291.000	
ALL MODES c)	
RMO	
25 kHz spacing	
REPEATER INPUT (NBFM)	
1291.475	1293.150
1291.500	1294.350
RM19	R20 Repeater input
ALL MODES	R36
1296.000	1296.000
1296.150	1296.025
CW a)	Moonbounce
SSB	1296.200 --> Narrow-band centre of activity
Narrow-band DX segment	1296.500
1296.800	1296.600
BEACONS b) EXCLUSIVE	Input Linear transponders Output
1296.990	1296.700
1297.000	1296.500 --> SSTV
RMO	1296.600 --> RTTY
25 kHz spacing	1296.700 --> FAX
REPEATER OUTPUT (NBFM)	
1297.475	
RM19	
	(continued)

1297.500	1297.500	--> FM activity centre
25 kHz spacing		
SIMPLEX d) CHANNELS (NBFM)		
1297.975		
1298.000		
SM20		
SM39		
ALL MODES	1298.500	Digital d)
1300.000	1300.000	communications

PROVISIONAL MICROWAVE BANDPLANS

1. 2320 -2450 MHz

IARU Region 1 bandplan	Usage
2300.000	
2320.000	2320.000
2320.150	2320.025
2320.800	2320.200
2320.990	
2321.000	
2322.000	2322.000
	2355.000
	2365.000
	2370.000
2390.000	2390.000
2392.000	2392.000
2400.000	2400.000
2450.000	

SUB-REGIONAL (national) band-planning *)

CW EXCLUSIVE

CW & SSB Narrow-bandwidth segment

BEACONS EXCLUSIVE

SIMPLEX & REPEATERS (NBFM)

ALL MODES

ALL MODES

AMATEUR SATELLITE SERVICE

EME (Moonbounce)

SSB centre of activity

ATV

Digital communic.

Repeaters

ATV

EME (Moonbounce)

Digital communic.

*) See footnote d) on the 430 - 440 MHz bandplan!

NOTES ON THE PROVISIONAL 2300 - 2450 MHz BANDPLAN

a) In countries where the ALL MODES segment 2322 - 2390 MHz is not allocated to the Amateur Service, the FM SIMPLEX & REPEATER segment 2321 - 2322 MHz may be used for digital data transmissions.

b) In countries where the narrow-band segment 2320 - 2322 MHz is not available, the following alternative narrow-band segments can be used:

2304 - 2306 MHz
2308 - 2310 MHz

2. 3400 -3475 MHz

IARU Region 1 bandplan	Usage
3400.000	
3456.000	3456.200
3458.000	
3475.000	

ALL MODES

NARROW BAND CW/EME/SSB

ALL MODES

Centre of activity

3. 5650 - 5850 MHz

IARU Region 1 bandplan	Usage
5650.000 ———┐ AMATEUR SATELLITE SERVICE (up-link) 5670.000 —┘ ALL MODES 5768.000 —┘ NARROW-BAND ¹⁾ CW/EME/SSB 5770.000 —┘ ALL MODES 5830.000 —┘ AMATEUR SATELLITE SERVICE (down-link) 5850.000 —┘	 5768.200 -> Centre of activity

¹⁾ As of 1 January 1991 (Torremolinos, April 1990)

4. 10000 - 10500 MHz

IARU Region 1 bandplan	Usage
10000.000 ———┐ ALL MODES (ATV, DATA TRANSMISSION, FM SIMPLEX, DUPLEX AND REPEATERS 10368.000 —┘ NARROW-BAND CW/EME/SSB/BEACONS 10370.000 —┘ ALL MODES 10450.000 —┘ AMATEUR AND AMATEUR SATELLITE SERVICE (ALL MODES) 10500.000 —┘	 10368.200 -> SSB centre of activity

NOTE ON THE PROVISIONAL 10000 - 10500 MHz BANDPLAN

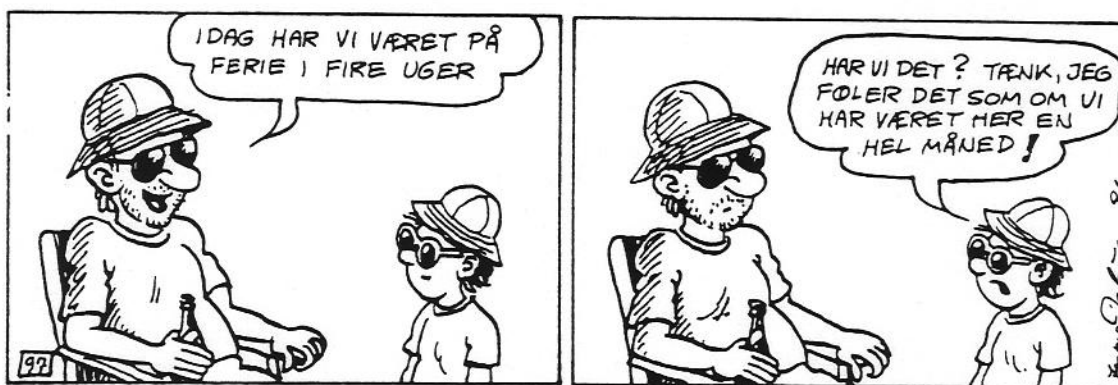
In those countries where the narrow-band segment 10368 - 10370 MHz is not available, the segment 10450 - 10452 MHz is suggested as an alternative narrow-bandwidth segment.

5. 24.0 - 24.25 GHz

IARU Region 1 bandplan	Usage
24000.000 24048.000 24050.000 24250.000	AMATEUR SATELLITE SERVICE NARROW-BAND CW/SSB/BEACONS ALL MODES
	24048.200 -> Centre of activity 24125.000 -> Preferred operating frequency wide-band equipment

6. 47.0 - 47.2 GHz

IARU Region 1 bandplan	Usage
47000.000 47200.000	
	47088.000 -> Centre of narrow-band activity



Og et Hollandsk fly, som måske kan høres/køres.



NETHERLANDS AIR FORCE RADIO AMATEUR SOCIETY

P.O. Box 1049
7940 KA Meppel
the Netherlands

Mr. I. Stauning OZ7IS
Bartholinstraede 20
DK-2630 Taastrup
Danmark

Meppel, 8 March 1992.

Dear Sir,

For your info the following:

Special Event Station PI4NAF/AM calling from high altitude.

The Netherlands Airforce Radio Amateur Society (NAFRAS) is a society for radio amateurs that work or have worked for the Royal Dutch Airforce (Koninklijke Luchtmacht).

This year we are celebrating our fifth anniversary and to celebrate the fact we are QRV from an Aeroplane during the Open Day and flightshow of the Royal Dutch Airforce on Saturday 20 June 1992 at Gilze-Rijen Airbase.

Seeing that we will be flying at high altitude, it is quite possible that (radio) amateurs from your country would have the opportunity to contact PI4NAF/AM.

The frequency is 145.450 MHz in FM mode and the station will be on the air from 14.00 until 16.00 Dutch Local Time.

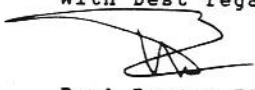
A contact "QSO" with PI4NAF/AM counts for five points for the NAFRAS Award.

Perhaps it would be worth while to inform your members of this via your club news letter.

For skeds write to:

Chris Fraikin, PA0CJN
Sperwerhorst 90
2317 ZP Leiden
the Netherlands.

With best regards,



Paul Panjee PA0SPP
secretary.

Saksede Kepler elementer. Hentet på OZ6BBS.

Satellite: AO-10 Catalog number: 14129 Epoch time: 92086.34275609 Element set: 804 Inclination: 26.2691 deg RA of node: 91.8960 deg Eccentricity: 0.6057790 Arg of perigee: 330.2431 deg Mean anomaly: 5.9509 deg Mean motion: 2.05881265 rev/day Decay rate: 6.1e-07 rev/day ² Epoch rev: 3807 Checksum: 301	Satellite: FO-20 Catalog number: 20480 Epoch time: 92084.30047494 Element set: 299 Inclination: 99.0664 deg RA of node: 18.6129 deg Eccentricity: 0.0541330 Arg of perigee: 24.9945 deg Mean anomaly: 337.6356 deg Mean motion: 12.83207424 rev/day Decay rate: 5.3e-07 rev/day ² Epoch rev: 9961 Checksum: 310	Satellite: AO-16 Catalog number: 20439 Epoch time: 92087.24012606 Element set: 420 Inclination: 98.6482 deg RA of node: 170.2827 deg Eccentricity: 0.0013065 Arg of perigee: 53.6935 deg Mean anomaly: 306.5451 deg Mean motion: 14.29658111 rev/day Decay rate: 7.25e-06 rev/day ² Epoch rev: 11357 Checksum: 291
Satellite: UO-11 Catalog number: 14781 Epoch time: 92085.61481977 Element set: 204 Inclination: 97.8630 deg RA of node: 124.7570 deg Eccentricity: 0.0012200 Arg of perigee: 355.8758 deg Mean anomaly: 4.2348 deg Mean motion: 14.68397052 rev/day Decay rate: 2.518e-05 rev/day ² Epoch rev: 43087 Checksum: 314	Satellite: AO-21 Catalog number: 21087 Epoch time: 92086.79729324 Element set: 310 Inclination: 82.9456 deg RA of node: 23.8864 deg Eccentricity: 0.0034692 Arg of perigee: 186.1963 deg Mean anomaly: 173.8777 deg Mean motion: 13.74473717 rev/day Decay rate: 1.63e-06 rev/day ² Epoch rev: 5798 Checksum: 349	Satellite: DO-17 Catalog number: 20440 Epoch time: 92085.17066882 Element set: 420 Inclination: 98.6486 deg RA of node: 168.3277 deg Eccentricity: 0.0013141 Arg of perigee: 58.8602 deg Mean anomaly: 301.3867 deg Mean motion: 14.29776153 rev/day Decay rate: 7.84e-06 rev/day ² Epoch rev: 11328 Checksum: 317
Satellite: RS-10/11 Catalog number: 18129 Epoch time: 92086.84470523 Element set: 105 Inclination: 82.9274 deg RA of node: 209.2202 deg Eccentricity: 0.0012859 Arg of perigee: 115.4001 deg Mean anomaly: 244.8490 deg Mean motion: 13.72274100 rev/day Decay rate: 1.75e-06 rev/day ² Epoch rev: 23849 Checksum: 281	Satellite: RS-12/13 Catalog number: 21089 Epoch time: 92086.92775568 Element set: 209 Inclination: 82.9218 deg RA of node: 253.7430 deg Eccentricity: 0.0028042 Arg of perigee: 207.9480 deg Mean anomaly: 152.0176 deg Mean motion: 13.73982151 rev/day Decay rate: 1.62e-06 rev/day ² Epoch rev: 5710 Checksum: 306	Satellite: WO-18 Catalog number: 20441 Epoch time: 92087.23569249 Element set: 422 Inclination: 98.6466 deg RA of node: 170.4252 deg Eccentricity: 0.0013692 Arg of perigee: 55.1892 deg Mean anomaly: 305.0580 deg Mean motion: 14.29777426 rev/day Decay rate: 7.06e-06 rev/day ² Epoch rev: 11358 Checksum: 316
Satellite: AO-13 Catalog number: 19216 Epoch time: 92078.16721807 Element set: 347 Inclination: 56.8959 deg RA of node: 36.6168 deg Eccentricity: 0.7291892 Arg of perigee: 280.7795 deg Mean anomaly: 11.6748 deg Mean motion: 2.09710799 rev/day Decay rate: 2.13e-06 rev/day ² Epoch rev: 2879 Checksum: 356	Satellite: UO-14 Catalog number: 20437 Epoch time: 92085.75059351 Element set: 521 Inclination: 98.6408 deg RA of node: 168.2707 deg Eccentricity: 0.0011752 Arg of perigee: 60.7490 deg Mean anomaly: 299.4862 deg Mean motion: 14.29587588 rev/day Decay rate: 7.60e-06 rev/day ² Epoch rev: 11335 Checksum: 329	Satellite: LO-19 Catalog number: 20442 Epoch time: 92085.23503098 Element set: 417 Inclination: 98.6484 deg RA of node: 168.5399 deg Eccentricity: 0.0014071 Arg of perigee: 58.5535 deg Mean anomaly: 301.7021 deg Mean motion: 14.29856054 rev/day Decay rate: 7.03e-06 rev/day ² Epoch rev: 11330 Checksum: 298

Satellite: UO-22
Catalog number: 21575
Epoch time: 92087.20838636
Element set: 132
Inclination: 98.5119 deg
RA of node: 163.4461 deg
Eccentricity: 0.0007316
Arg of perigee: 185.4950 deg
Mean anomaly: 174.6167 deg
Mean motion: 14.36592129 rev/day
Decay rate: 9.73e-06 rev/day²
Epoch rev: 3648
Checksum: 323

Satellite: MIR
Catalog number: 16609
Epoch time: 92086.94628082
Element set: 178
Inclination: 51.6017 deg
RA of node: 300.3993 deg
Eccentricity: 0.0015552
Arg of perigee: 230.7577 deg
Mean anomaly: 129.1820 deg
Mean motion: 15.59034215 rev/day
Decay rate: 4.3199e-04 rev/day²
Epoch rev: 34944
Checksum: 313

Satellite: SARA
Catalog number: 21578
Epoch time: 92086.21492253
Element set: 227
Inclination: 98.5170 deg
RA of node: 162.5461 deg
Eccentricity: 0.0004967
Arg of perigee: 194.0906 deg
Mean anomaly: 166.0192 deg
Mean motion: 14.37489605 rev/day
Decay rate: 3.702e-05 rev/day²
Epoch rev: 3634
Checksum: 305

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 92086.83898875
Element set: 22
Inclination: 99.1499 deg
RA of node: 112.0076 deg
Eccentricity: 0.0014895
Arg of perigee: 351.4322 deg
Mean anomaly: 8.6614 deg
Mean motion: 14.13357169 rev/day
Decay rate: 7.87e-06 rev/day²
Epoch rev: 37558
Checksum: 343

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 92086.71083065
Element set: 860
Inclination: 98.5416 deg
RA of node: 108.4720 deg
Eccentricity: 0.0013209
Arg of perigee: 176.6215 deg
Mean anomaly: 183.5025 deg
Mean motion: 14.24610382 rev/day
Decay rate: 9.57e-06 rev/day²
Epoch rev: 28691
Checksum: 311

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 92083.35434785
Element set: 652
Inclination: 82.5401 deg
RA of node: 197.4738 deg
Eccentricity: 0.0016426
Arg of perigee: 317.2638 deg
Mean anomaly: 42.7243 deg
Mean motion: 13.84615626 rev/day
Decay rate: 2.69e-06 rev/day²
Epoch rev: 20945
Checksum: 322

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 92083.29253254
Element set: 892
Inclination: 82.5416 deg
RA of node: 180.9891 deg
Eccentricity: 0.0017060
Arg of perigee: 138.6750 deg
Mean anomaly: 221.5676 deg
Mean motion: 13.16945351 rev/day
Decay rate: 5.4e-07 rev/day²
Epoch rev: 17586
Checksum: 320

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 92086.78646524
Element set: 775
Inclination: 99.0729 deg
RA of node: 49.3272 deg
Eccentricity: 0.0010934
Arg of perigee: 257.1773 deg
Mean anomaly: 102.8143 deg
Mean motion: 14.12636462 rev/day
Decay rate: 9.88e-06 rev/day²
Epoch rev: 18050
Checksum: 322

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 92086.96235100
Element set: 616
Inclination: 82.5205 deg
RA of node: 71.4494 deg
Eccentricity: 0.0015037
Arg of perigee: 352.5136 deg
Mean anomaly: 7.5793 deg
Mean motion: 13.84266665 rev/day
Decay rate: 1.40e-06 rev/day²
Epoch rev: 15531
Checksum: 299

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 92087.07371828
Element set: 523
Inclination: 82.5525 deg
RA of node: 120.3314 deg
Eccentricity: 0.0015709
Arg of perigee: 150.4701 deg
Mean anomaly: 209.7312 deg
Mean motion: 13.15991218 rev/day
Decay rate: 4.3e-07 rev/day²
Epoch rev: 11629
Checksum: 270

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 92087.09267468
Element set: 370
Inclination: 82.5467 deg
RA of node: 133.4902 deg
Eccentricity: 0.0014283
Arg of perigee: 268.3988 deg
Mean anomaly: 91.5546 deg
Mean motion: 13.84113625 rev/day
Decay rate: 2.25e-06 rev/day²
Epoch rev: 8827
Checksum: 329

Satellite: FY-1/2
Catalog number: 20788
Epoch time: 92086.99359139
Element set: 341
Inclination: 98.9111 deg
RA of node: 119.2090 deg
Eccentricity: 0.0015337
Arg of perigee: 107.1496 deg
Mean anomaly: 253.1350 deg
Mean motion: 14.01265942 rev/day
Decay rate: 9.0e-07 rev/day²
Epoch rev: 7995
Checksum: 310

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 92087.02248333
Element set: 364
Inclination: 82.5232 deg
RA of node: 72.1328 deg
Eccentricity: 0.0013275
Arg of perigee: 158.1098 deg
Mean anomaly: 202.0631 deg
Mean motion: 13.83478319 rev/day
Decay rate: 1.39e-06 rev/day²
Epoch rev: 7545
Checksum: 286

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 92086.82073881
Element set: 162
Inclination: 82.5527 deg
RA of node: 24.0792 deg
Eccentricity: 0.0019449
Arg of perigee: 67.8258 deg
Mean anomaly: 292.4905 deg
Mean motion: 13.16801830 rev/day
Decay rate: 4.3e-07 rev/day²
Epoch rev: 4444
Checksum: 300

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 92086.77089249
Element set: 215
Inclination: 98.7042 deg
RA of node: 117.7856 deg
Eccentricity: 0.0014142
Arg of perigee: 70.8954 deg
Mean anomaly: 289.3756 deg
Mean motion: 14.21968360 rev/day
Decay rate: 9.99e-06 rev/day²
Epoch rev: 4505
Checksum: 337

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 92086.74751854
Element set: 225
Inclination: 82.5609 deg
RA of node: 330.5134 deg
Eccentricity: 0.0014836
Arg of perigee: 68.0795 deg
Mean anomaly: 292.1856 deg
Mean motion: 13.16807990 rev/day
Decay rate: 4.40e-06 rev/day²
Epoch rev: 2953
Checksum: 322

Sidste nyt fra BBS

MARCH 17, 1992
"Project Artemis" de Walt, N3KVQ
While flying an amateur spacecraft
to the Moon with the DigiMoon
device is out of the question, riding

on a US, European, Soviet, or
Japanese lunarlander is possible. In
fact, NASA is conducting studies
right now for "Project Artemis," a
small, low-cost (in relative terms)
lunar lander to be launched in 1995
or 1996.

I'm a professor of Aerospace Engi-
neering and my area of specialty is
spacecraft design. In my senior de-
sign course right now, I have two-
groups of students working on lunar
landers along the lines of the NA-
SA Artemisproposal. I suggested to
the students that they include some
sort of amateur radio payload, but
they did not include one. Still,
their work can be useful as a re-
ference in the future. I will be glad
to send you a copy of each final-
report at the end of the semester if
you are interested.

The two-week long lunar night
poses difficult design challenges for
both the electrical power and ther-
mal control subsystems. Even if
DigiMoon was a separate payload
in its own container, it would have
to be designed to withstand the very
cold temperatures of the lunar
night. Solar power works
well for the lunar day, but not for
the night.

Pointing and zooming a camera-
would be pretty difficult.
73, Walt (N3KVQ @ KA3RFE.MD-
.USA.NA)

Feedback regarding the DIGIMO-
ON project may be directed to LU-
7AKC using any of the following
paths:

PACKET : LU7AKC @ LU-
7AKC.#COL.CF.ARG.SOAM
SATELLITE: LU7AKC @ LU8-
DYF (or any packet SATEllite
GATEway)
MAIL: Eduardo Sweet, LU-
7AKC

DIGIMOON Project
Ramon Freire 487,
Buenos Aires, (1426),
Argentina,
South America.

[Info via Eduardo Sweet, LU7AKC,
DIGIMOON Project manager]
S

Subject: RS14/AO21 commanding
today!

RS-14 / AO-21 comman-
ding experiments again!

Today on 29.03.92 at 21:38 utc
RS14/AO21 is planned to do RE-
SET command. If all go right the
set #1 will be ON and Rudak-2
beacon activated. Telemetry 400 bps
(as AO-13) can be heard on 145.983
MHz. This happens over the south
part of Indian Ocean, our Amsat-
SA (ZS6) friends can watch switch-
ing ON Rudak and capture first
telemetry data. Reports to Am-
sat-U (ua3cr@rk3kp) and Am-
sat-DL (db2os@dk0mav) would be
greatly appreciated.

Next orbit from 22:44 till 22:58 utc
Rudak group in DL starts comman-
ding and loading s/w.

We request God not to switch
Satellite status at least 2-3 orbits
without commanding from ground
station...

73, de Leo ua3cr@rk3kp