DUBUS

INFORMATIONEN FÜR UKW AMATEURE

Überreichweiten

Zusammengestellt von der DUBUS Gruppe

INFO: 4/83

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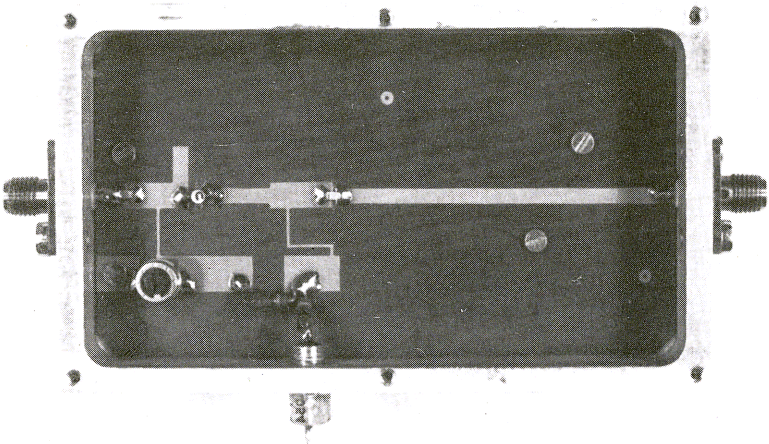

DL7QY's Amplifier for 9 and 13 cm

Private Communication from Radio Amateurs for Radio Amateurs
Private Mitteilungen von Funkamateuren für Funkamateure

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COVERPICTURE: BY DL7QY

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D U B U S A F F A I R S

This is the last issue of "DUBUS Info" which has been edi - ted and printed in Berlin. The next issues will be made by DL7QY in Kreßberg. I take the opportunity for looking back on DUBUS work in the past.

It all began on December 20th, in 1971 - just 12 years ago, when 7 hams founded the "Berlin DUBUS Group" for local activities. One of them, Alex, DC7AS, invented the"DUBUS Info" for the information of the members. Yet other OM wanted copies also, and soon the first hundred of copies had to be delivered. Growing continued, until the group could no longer bear the costs alone, when a volume of 400 copies was attained. Now a jump to veritable "European Size" was necessary for survival. Distributors in most european countries were found. The number of copies raised so that the single contribution fell to an acceptable amount for each amateur, who wanted to participate in that exchange of "Private Com - munication from Radioamateurs for Radioamateurs".
Yet growing continued further. External editors and translators were gained and the name of the group lost the local sign "Berlin" in the cover head line.
The last issue has 2000 copies. They are shipped into more than 30 countries by the aid of 25 distributors.
We thank those innumerable hams which have made the journal with their reports to an interesting paper.
Our special acknowledgments are dedicated to those high-minded hams, who had sponsored DUBUS with their donations in hard times, when"the pot" was empty again.

On the next page you will find a list of DUBUS co-workers in chronological order as they have joint the group. Most of them were cooperating for many years. Many of them were working until today. All have worked free of charge.

We all hope, we may have given a contribution to international friendship and to the understanding of the peoples.

Vy 73 ur DL 7 HG

Dieses ist die letzte Ausgabe des "DUBUS-Info", die in Berlin redigiert und gedruckt wurde. Die nächsten Ausgaben werden von DL7QY in Kreßberg gemacht. Ich ergreife diese Gelegenheit für einen Rückblick auf die DUBUS-Arbeit in der Vergangenheit.
Alles begann am 20. Dezember 1971 -also vor gerade 12 Jahren- als 7 OM die "Berliner DUBUS-Gruppe für lokale Aktivitäten gründeten. Einer von ihnen, Alex, DC7AS, erfand das "DUBUS-Info" zur Information der Mitglieder. Andere OM jedoch wollten auch Exemplare haben und bald mußte das erste Hundert ver-teilt werden. Die Interessentenzahl wuchs weiter und bald wurde bei einer Zahl von 400 ein Zustand erreicht, bei dem die Gruppe die Kosten nicht mehr alleine tragen konnte. Um zu überleben, war ein Sprung auf "europäische Größe" notwendig. Für viele europäische Länder wurden Distributoren gefunden. Die Auflage wurde so sehr erhöht, daß der einzelne Beitrag so weit gesenkt werden konnte, daß er für jeden Amateur akzeptabel wurde, der an dem Austausch von "Mitteilungen von Funkamateuren für Funkamateure" interessiert war. Die Auflage jedoch wuchs weiter. Externe Redakteure und Übersetzer wurden gewonnen und der Name der Gruppe verlor die lokale Bezeichnung "Berlin" im Kopf der Titelseite.
Die letzte Ausgabe hat 2000 Exemplare. Sie wurde in über 30 Länder mit Hilfe von 25 Distributoren verschickt.

Wir danken jenen unzähligen OM, die mit ihren Beiträgen das Heft zu einem interessanten Papier gemacht haben.
Ganz besonders danken wir denjenigen hochherzigen Hams, die die DUBUS-Arbeit unterstützten mit ihren Spenden in den schweren Zeiten, als "der Topf" mal wieder leer war.

Weiter unten finden Sie eine Liste der DUBUS-Mitarbeiter i n chronologischer Anordnung, wie sie sich der Gruppe angeschlossen haben. Die meisten von ihnen haben jahrelang mitgearbeitet. Viele waren bis heute dabei. Alle haben ehrenamtlich ohne jede Entschädigung gearbeitet.

Wir alle hoffen, daß wir einen Beitrag zur internationalen Freundschaft und zur Verständigung der Völker geleistet haen.

Vy 73 ur DL7HG Peter

1971 : DL7QY, DL7HG, DC7AC/DL7ACG, DC7AS, DC7CA/DL7XW, DC7CR + xyl, DC7CW/DL7YC;
1972 : DC9CS †
1973/1974: DC7DG/DL7DS, DC7GE, DL7KM, DL7QZ, DC7GU;
1976/1977: DC7HM, DL7QC, DC7BQ, DC7CN;
1978/1979: DK2ZF, DK3UZ, DC7JS/DL7ABR, DL7RU, F1EIT, GW4BXE;
1980/81/82: DL9KR, DF2ZC, DL7APV, DL7AFB, DC7SN, DHØHAR, DF7VX.

TECHNICAL REPORTS

Edited by DL 7 APV

Because of much qrl and no article from you this time is not so much technical reports, but next time it will be more. Merry christmas and a happy new year, Bernd DL 7 APV.

Abhandlung über Mikrowellen GaAs Fets

D. : Die Geschichte von der Wandlung der Mikrowellen-Nachrichtenübertragung, genauso gut wie andere Nachrichtenübertragungstechnologien, zur Festkörperelektronik ist lang. Erste Fortschritte wurden bei Empfängern gemacht, dann erst bei den Sendern. Fortschritte in der bipolaren Transistortechnik und die Produktion von neuen Halbleiterkristallen in den 60-ziger Jahren machten die Entwicklung von neuen Mikrowellendioden möglich, wie die GUNN und IMPATT. Aus diesem Grunde wird dises Jahrzehnt die Renaissance der Mikrowellenhalbleiter genannt. Eine Serie von Mikrowellenverstärkern erschien in der ersten Hälfte der 70ziger Jahre, die GUNN-und IMPATT;Dioden verwendeten. Sie spielten eine große Rolle bei der Vorwärtsentwicklung der Festkörpertechnologie. In der Mitte des selben Jahrzehnts erschien ein kommerziell gefertigter Gallium Arsenid Feldeffekttransistor (GaAs FET), und die Anwendungen dieser Idee wurden immer größer. In der letzten Hälfte der 70ziger wurden die Forderungen an die Zuverlässigkeit der Systeme größer, als die GUNN-und IMPATT-Dioden erfüllen konnten. Die Anwender forderten größere Zuverlässigkeit und solche, die sich der Forschung und Entwicklung verpflichtet hatten, begannen auf dieses Ziel hinzuarbeiten. Die Arbeit geht auch heute noch weiter.

Die Forderungen der Industrie verlagerten den Schwerpunkt des Wettbewerbes der Hersteller von der Neuentwicklung zur Entwicklung besserer Qualität und größerer Betriebssicherheit. Durch die kommerzialisierung derGGaAs FETs wurde der Energieverbrauch gesenkt und die Systeme und Mikrowellenbausteine wurden kleiner. Das sind die interessantesten Eigenschaften heute. Durch neue Entwicklungen in der Informatiom, Kommunikation und bei den Mikrowellensystemen, wurde der GaAs FET zu einem unentbehrlichen Bauteil.

1952, als Shockley die Struktur der FETs entwickelte, legte er dar, daß der FET auch für Verstärker zu gebrauchen ist. Durch die Herstellungsschwierigkeiten (teilweise in der Produktionstechnologie) war der FET noch sehr unbekannt in den frühen 60ziger Jahren. Der Stand der Technologie zu dieser Zeit machte es sehr schwer für die Leute die Wichtigkeit der FET zu begreifen. Mit den Fortschritten in der Planar Technologie wuchs die Mikrowellenhalbleiterindustrie explosiv.

Es gibt drei hauptsächliche Typen von FETs. Die einfachste Art der drei, ist der Junktion FET (Sperrschicht) JFET. Weil er so einfach ist, war er auch der erste, der kommerziell hergestellt wurde. Das war etwa zu der Zeit, als der erste bipolare Mikrowellentransistor auf den Markt kam. Mit der Entwicklung der Halbleiterproduktionstechnologie und dem Bedürfnis nach geringerem Energieverbrauch erschien der Metall-Oxid-Schicht FET (MOSFET). Der MOSFET wie der JFET wurden erst in Schaltungen mit hohen Impedanzen, z.B. Eingangsstufen von Meßgeräten benutzt. Der FET, besonders der MOSFET wurde dann allgemein bekannt, als sie im UHF-Bereich eingesetzt worden sind. Wie auch immer über Jahre hinaus erschien im Mikrowellenbereich nichts besseres, als der bipolare Transistor.

Zu dieser Zeit erreichte Silizium die Spitze der Anwendung als Transistormaterial. Schottky und Sperrschicht FETS aus Gallium-Arsenid erschienen auf dem Markt und erreichten schnell eine große Popularität, durch die hohe theoretische Entwicklung. Dieses neue Bauteil, bekannt als GaAs FET zeigte Eigenschaften die denen der bipolaren Transistoren weit Überlegen waren. Dieses neue Teil zeigte weniger Rauschen und höhere Verstärkung in etablierter Festkörpertechnik. Es hat auch eine hohe Frequenzcharaktaristik, die von bipolaren Transistoren nicht erreicht wurde. Das wurde erreicht durch die Verwendung von Gallium-Arsenid, eine Halbleitermischung, die seit der letzten Hälfte der 60 ziger Jahre Erforscht wurde. Die Elektronenbeweglichkeit von GaAs ist fünf bis siebenmal höher, als bei Silizium. Die GaAs Kristall Technologie wurde dann benutzt um GUNN-Dioden zu produzieren, Varaktor und Schottky Dioden; und diese hatten dann wesentlich bessere Daten, als Silizium Bausteine vor allem bei hohen Frequenzen. Eine GUNN-Diode aus Silizium wäre undenkbar, so hat das erscheinen gleichzeitig des GaAs FETs sehr stark dazu beigetragen die Entwicklung und Kommerzialisierung der GUNN-Diode zu fördern. Der Grund dafür ist, daß selbst wenn der GaAs MESFET ein Dreipol ist, er ist einfach in der Struktur und seine Eigenschaften beruhen ausschließlich auf der Kristallgüte. Fortschritte in der Kristalltechnologie haben die kommerzielle Herstellung von FETs möglich gemacht. Der GaAs FET ist , wie man hauptsächlich sagt, ein "Selbstleitender Typ". Der Basis-Unterschied zum MOSFET besteht darin, daß eine Schottky-Sperrschicht im Gate benutzt wird, statt einer Oxid Schicht. Das ist ein sehr wichtiger Punkt. Anders gesagt, fast keine GaAs FET Gates sind isoliert vom D-S Kanal aufgebaut. Die maximale Gatespannung muß daher O V betragen. Er brauch kein Dielektikum wie der MOSFET, sodaß wenn eine positive Spannung am Gate angelegt wird, der Strom direkt durchfließt. Weil das Gate ein sehr kleines Stück Metall ist (0,5u-1u-2u), verschmiltzt die Gate-Elektrode in fast allen Gehäusen. Fig. 1 zeigt das Kennlinienfeld eines MESFETs. Eine Linearverstärkerschaltung ist meistens die Grundlage für die Vorspannungserzeugung des GaAs MESFETs. Das ist Praktisch und auch bei anderen Schaltungen vorteilhaft, aber es berücksichtigt nur die Gate-Vorspannung allein, der Bereich muß von Idss (Vg=O) bis Ids=O (bei abklemmen) Vg=Vp reichen. In diesem Bereich hat die Spannung Vds nur geringen Einfluß auf den Strom Ids. Durch Änderung der Gatespannung Vg kann der Drain-Source-Strom kontrolliert werden. Fig. 2 zeigt die Übertragungskennlinie eines GaAs FETs mit N-Kanälen. Diese FET Übertragungskennlinie ist ein wichtiger grundlegender Parameter für Schaltungseinzelheiten, weil sie die Vorspannung und den Arbeitspunkt bestimmt. Die Arbeitspunktlinie in Fig. 2 steht in direktem Bezug zur Steilheit g_m.

Die Steilheit ist definiert als Verhältnis der Änderung im direkten Strom zu der kleinen Spannungsänderung zwischen Gate und Source. Dieses wird allgemein als quadratische Kennliniencharaktaristik beschrieben und die Gleichung dazu zeigt $Id=Idss(1-Vgs/Vp)^2$ (1)
Wenn Id im Ausdruck (1) nach Vgs differentiert wird ist das Ergebnis

$$\frac{dId}{dVgs} = -\frac{2Idss}{Vp}\left(1-\frac{Vgs}{Vp}\right)=g_m \qquad (2)$$

und die Steilheit kann für jeden Wert von Vgs errechnet werden.

Vorspannung und Arbeitspunkt

Die wichtigste Eigenschaft, die zu berücksichtigen ist, wenn man eine Vorspannungserzeugung eine Vorverstäker GaAs FET-Schaltung konstruiert ist die frühe Berücksichtigung der Kennlinien. Hauptsächlich gibt es zwei Methoden um die Vorspannung für den GaAs FET zu erzeugen. 1. Zwei Spannungsquellen Fig. 3 zeigt eine Vorspannungserzeugung mit zwei Spannungsquellen, mit der Beziehung $Vp< Vgs< O$, die praktisch erfüllt sein muß, Vgs kann aus (1) hergeleitet werden

$$Vgs = Vp\left(1-\sqrt{\frac{Id}{Idss}}\right) \qquad (3)$$

2. Selbstvorspannungserzeugung

Fig. 4 zeigt die universellste Methode um das Potential zwischen Gate und Source zu senken, wenn nur eine Spannungsquelle vorhanden ist. Wenn der Sourcewider-

stand Rs ist und der Betriebsstrom Id, dann ist der Spannungsabfall an Rs = Id x Rs. Die Spannung zwischen Gate und Source ist nun Vgs = - Id x Rs (4); die negativ ist, sodaß der FET angesteuert werden kann. Der Wert von Rs ist aus den Gleichungen (3) und (4) zu errechnen.

$$Rs = -\frac{Vgs}{Id} = -\frac{Vp}{Id}\left(1-\sqrt{\frac{Id}{Idss}}\right) \qquad (5)$$

Fig. 5 zeigt die fünf grundlegenden Vorspannungserzeugungsvarianten, A bis E. A ist die Version mit zwei Spannungsquellen, die hauptsächlich für höhere Frequenzen geeignet ist. Wenn das Source direkt auf Masse liegt, kann die Sourceinduktivität sehr klein gehalten werden. Bei dieser Methode wird höhere Verstärkung und eine bessere Eingangsrauschzahl erreicht, speziell bei höheren Frequenzen. Alle anderen Methoden haben eine Kapazität (Abklatsch - C) in der Sourceableitung. Selbst wenn der Kondensator hochfrequenzmäßig sehr Verlustarm ist, bleibt ein Verlust (tan δ), der durch das Dielektrikum des Materials bedingt ist. Sogar bei Chip-Cs ist immer noch ein induktiver Anteil vorhanden, dadurch muß man speziell bei höheren Frequenzen vorsichtig sein. Typ D und E in fig. 5 benötigen nur eine Spannungsquelle, sie sind vergleichbar mit der oben beschriebenen Methode. Ein Vorteil dieser Methode ist, wenn die Sourcespannung ansteigt, dementsprechend auch die Potentialdifferenz an Rs ansteigt, der in Reihe mit dem Source liegt; Rs x ΔId. ΔId ist die Änderung des Drainstromes hervorgerufen durch die Änderung der Sourcespannung. Eine Drainstromerhöhung wird so automatisch unterdrückt, durch die entsprechend negative Gate Vorspannung. Wenn nur eine Spannungsquelle zur Verfügung steht sollte man Typ D auswählen, bei negativer Spannung Typ E.

Fig. 5 zeigt auch eine Anordnung wenn zwei Spannungsquellen zur Verfügung stehen. Es ist zu Verhindern, daß zuviel Strom durch den FET fließt. Der GaAs FET von dem hier die Rede ist, hat eine sehr große Steilheit und eine sehr gute Frequenzcharkteristik. Wenn die Gatespannung nahe null ist und die Steilheit g_m maximal, dann kann es vorkommen, daß der FET schwingt. Aus diesem Grunde sollte eine Vorspannungserzeugung benutzt werden, die eine negative Gatevorspannung hat und dann das Drain mit positiver Spannung ansteuert. Es gibt leichte Unterschiede in der Vorspannungserzeugung für Leistungs-FET-Stufen und Kleinsignalverstärkerstufen, aber die beschriebenen Methoden können für beide Fälle berücksichtigt werden.

Nun ein Schritt weiter; es wird eine praktische Vorspannungsschaltung untersucht. Es ist wichtig:

1) Die richtige Betriebsspannung und den richtigen Strom zu haben
2) Ein hohes Maß an Stabilität zu sichern

Fig. 6 zeigt die Vorspannungslinie und alle möglichen Arbeitspunkte. Die Vorspannung kann in diesem Bereich wie folgt berechnet werden:

$$Vgsq = Iq \times Rs$$

Mit einem gegebenen Vorspannungsbereich kann der Arbeitspunkt für maximale Amplitude, P, bzw. für kein Signal Q berechnet werden. Der Unterschied des Stromes von Punkt P zu Punkt Q, oder Δ Iq ist dann folglich

$$\Delta Iq = Iq(max) - Iq(min)$$

Dies zeigt, daß bei einer Änderung von Iq die Drainspannung sich nur mit Rd x ΔIq ändert. Wenn der Signalmittelpunkt (Nulldurchgang bei einem Sinus zB.) nicht im Mittelpunkt von der Vorspannungslinie liegt und herausragt in eine Richtung, wird die Wellenform verändert. Auch die Verstärkung geht zu rück und Gleichspannung fließt durch das Gate. Die maximale Spannungsänderung zwischen Gate und Source, wenn kein Signal anliegt ist

$$\Delta Vgsq = Vgsq(max) - Vgsq(min)$$

Iq ist eine Funktion aus Temperatur und Vgsq Iq = f(T,Vgsq). Bei einer Temperaturänderung von δT, ändert sich Iq nur mit δTq.

$$\delta Iq(1+g_m \times Rs) = \frac{\partial Iq}{\partial T}\delta T$$

Wenn Rs = $\emptyset$, dann ist die Gleichung so zu betrachten, als ob kein Serienwiderstand vorhanden wäre :

$$\frac{\partial Iq}{\partial T} \times \delta T = \delta Iq(0)$$

Diese Gleichung repräsentiert den Drift. Der Vorspannungsstabilitätskoeffizient ist definiert als

$$S = \frac{\text{Schwankung von Iq in Beziehung zu Rs}}{\text{" von Iq unabhängig von Rs}} = \frac{\delta Iq}{\delta Iq(0)} = \frac{1}{1+g_m x Rs} \qquad (6)$$

Das bedeutet, daß die Schwankungen im Gesamtzusammenhang geringer sind durch die Rückkopplung über Rs. Dieser Effekt ist teilweise wichtig, wenn Kleinsignalstufen mit FETs konstruiert werden sollen. Fig.7 gibt ein Beispiel für eine Vorspannungsschaltung. Es können Änderungen von Idss und Vp auftreten; es ist sehr wichtig , daß die Vorspannungserzeugung diese Änderungen ausgleichen kann, der optimale Arbeitspunkt erhalten bleibt und auch Temperaturschwankungen neutralisiert werden können. Die Schaltung in fig.7 ist grundsätzlich eine feste Vorspannungserzeugung und nicht eine mit Selbsterzeugung. Die Gegenkopplung ist in der Schaltung gewährleistet durch Rs in der Sourcezuleitung.

Die Spannung zwischen Gate und Source ist Vgs = - Id x Rs in einer selbsterzeugten Vorspannungsschaltung; und wenn Id bekannt ist, kann Rs berechnet werden. In solch einer festen Vorspannungserzeugung ist die Gatespannung abhängig von Rs und Id. Folgendermaßen ist es Verständlich wenn der Wert von Rs höher sein kann, als bei einer Selbsterzeugten Vorspannung; und der Stabilitätsfaktor S kann dadurch verbessert werden.

In diesem Teil werden Beispiele mit Erklärung für GaAs FET Anwendungen gegeben. Als erster Faktor wird die Kreuzmodulationsfestigkeit betrachtet, wo der FET dem bipolaren Transistor überlegen ist. Danach Schaltungen für Kleinsignalverstärker und Leistungsstufen.

1. Klirrfaktor

Die Übertragungscharakteristik von einem GaAs FET kann annähernd erreicht werden; wie in Ausdruck (1) gezeigt würde. Wenn die Übertragungscharakteristik perfekt mit solch einer Gleichung dargestellt werden könnte, dann erhöht sich die zweite Harmonische zu ihrem Maximum und schließt die höheren harmonischen Komponenten mit ein. Um den Wert festzustellen , der 2. Harmonischen für eine Grundfrequenz, wird die gesamte Eingangsspannung und der gesamte Ausgangsstrom in eine Gleichung eingesetzt. Wenn kein Signal anliegt, ist der Drainstrom

$$Id = Idss\left(1 - \frac{v\,ge}{Vp}\right)^2 \qquad (7)$$

Wird nun eine einfache Sinusspannung (V sin wt) zu dem (nicht)-Signal addiert folgt daraus vgs = Vgsq + V sin wt

Wenn der Ausdruck geordnet und in den folgenden eingesetzt wird, dann ist der Klirrfaktor KF

$$KF = \frac{\text{Relativwert der 2. Harm.}}{\text{" der Grundwelle}} = \frac{V}{4 \times (Vgs - Vp)} \qquad (8)$$

V ist die maximale Amplitude des Signals. Wie Gleichung (8) zeigt, ist der Klirrfaktor am niedrigsten, wenn Vgsq null ist. Wenn das Eingangssignal größer wird und in die nähe der Gatevorspannung kommt erhöht sich natürlich auch der Klirrfaktor.

Als nächstes sehen wir uns das Kreuz-(Inter)modulationsverhalten an, das entsteht, wenn zwei verschiedene Sinusspannungen zugleich verstärkt werden. Vgs = Vgsq + V1 sin wt + V2 sin wt

Wenn der Ausgangsstrom die Summe und Differenz von zwei Sinuskomponenten enthält, dann ist der Intermodulationsfaktor (IM) wie folgt definiert :

$$IM = \frac{\text{relativer Wert vom Intermodulationsanteil}}{\text{" " " Grundfrequenzanteil}}$$

$$= \frac{V1 \times V2}{2\,(Vgsq - Vp)\,(V1^2 + V2^2)^{1/2}} \qquad (9)$$

Der Abschluß folgt in Heft 1/84

Broadband Amplifier for 13 and 9 cm

by Claus Neie, DL 7 QY

The following described amplifier is useful as a preamplifier, but also as a linear amplifier for 13 or 9cm. The transistor is a HXTR 3101. This transistor costs about 15 german mark. The box-dimensions and the technical dates are shown at fig. 1 .

The construction of the amplifier is very easy and absoulutly uncritical at using. The print board is made of RT5880 Durcid, with a thighness of 0.79 mm. The layout is shown at fig. 3 and the circuit at fig. 2 .

If the amplifier is used as a preaplifier the collector current has to be 10mA. The noise figure at 13cm amounts 3dB and at 9 cm about 4 dB.The gain on 13 cm is abt.10 dB and at 9 abt. 8 dB. Fig. 4 shows the transmission characteristics from 2 - 4 GHz with the marks for 13 and 9.

Fig 5 shows the transmission characteristics from 10 MHz to 20 GHz. the line REF 1 isthe marker for 0 dB gain. The mark on the transmission character shows the 0db gain point at 4519 MHz.

If the amplifier is used as a power amplifier it is possible to set the collestor current to 20mA and the output is now abt. 35 mW, at 3dBccompression.on 13, or 30mW on 9.

HXTR 3101, board and SMA jacks are obtainable by DL 7 QY, order price list with stamped envelope.

F16 1

Recommended Maximum Continuous Operating Conditions(1)

Symbol	Parameter	Value
V_{CBO}	Collector to Base Voltage	25V
V_{CEO}	Collector to Emitter Voltage	16V
V_{EBO}	Emitter to Base Voltage	1.0V
I_C	DC Collector Current	30mA
P_T	Total Device Dissipation	300mW
T_J	Junction Temperature(2)	200°C
T_{STG}	Storage Temperature	-65°C to +150°C

Notes:

1. Operation of this device in excess of any one of these conditions is likely to reduce device median time to failure (MTTF) to below the design goal of 1 x 10^7 hours at T_J = 175°C based on Activation Energy = 1.5 eV.
2. Total H_{JA} (Junction-to-Ambient) will be dependent upon the heat sinking provided in the individual application.

Absolute Maximum Ratings*

Symbol	Parameter	Value
V_{CBO}	Collector to Base Voltage	30V
V_{CEO}	Collector to Emitter Voltage	18V
V_{EBO}	Emitter to Base Voltage	1.5V
I_C	DC Collector Current	50mA
P_T	Total Device Dissipation	600mW
T_J	Junction Temperature	200°C
T_{STG}	Storage Temperature	200°C

*Operation in excess of any one of these conditions may result in permanent damage to this device

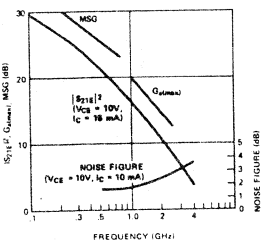


Figure 1. Typical $|S_{21E}|^2$, $G_{A(max)}$, Maximum Stable Gain (MSG) and Noise Figure vs. Frequency

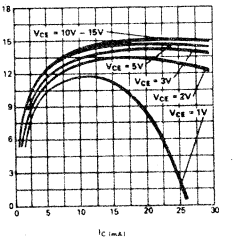


Figure 2. Typical $|S_{21E}|^2$ vs. Current at 1000 MHz

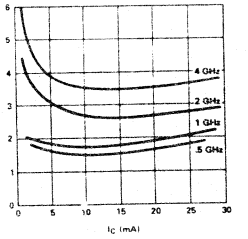


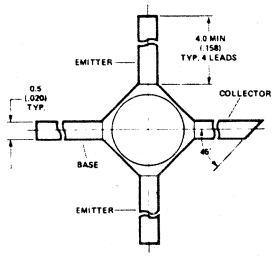
Figure 3. Typical Noise Figure vs. Collector Current (V_{CE} = 10V)

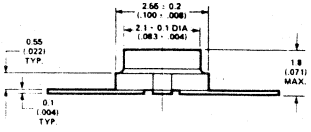
Typical S-Parameters (V_{CE} = 10 V, I_C = 10 mA)

Freq. (MHz)	S_{11}		S_{21}			S_{12}			S_{22}	
	Mag.	Ang.	(dB)	Mag.	Ang.	(dB)	Mag.	Ang.	Mag.	Ang.
100	0.705	-50	27.7	24.266	149	-36.7	0.015	60	0.903	-20
300	0.606	-110	23.5	14.962	116	-30.4	0.030	43	0.624	-36
500	0.565	-139	20.1	10.116	101	-28.9	0.036	41	0.499	-40
800	0.559	-162	16.5	6.683	89	-27.4	0.043	43	0.430	-41
1000	0.571	-169	14.5	5.330	78	-25.7	0.052	44	0.408	-43
1500	0.574	174	11.2	3.627	63	-23.6	0.066	48	0.394	-48
2000	0.591	161	8.9	2.774	49	-21.9	0.080	48	0.392	-57
3000	0.619	143	5.7	1.936	25	-18.8	0.115	45	0.427	-81
4000	0.639	125	3.4	1.488	1	-16.2	0.155	39	0.470	-107

V_{CE} = 10 V, I_C = 15 mA

Freq. (MHz)	S_{11}		S_{21}			S_{12}			S_{22}	
	Mag.	Ang.	(dB)	Mag.	Ang.	(dB)	Mag.	Ang.	Mag.	Ang.
100	0.641	-60	29.5	29.854	144	-37.6	0.013	57	0.863	-23
300	0.565	-122	24.5	16.788	112	-31.8	0.026	44	0.556	-38
500	0.551	-149	20.7	10.839	98	-30.1	0.031	44	0.444	-40
800	0.553	-168	17.1	7.161	87	-28.1	0.039	50	0.387	-41
1000	0.560	-175	15.1	5.709	77	-26.4	0.048	49	0.363	-42
1500	0.564	171	11.8	3.869	62	-23.6	0.066	54	0.356	-47
2000	0.583	159	9.4	2.955	49	-21.6	0.083	52	0.354	-56
3000	0.611	142	6.3	2.058	26	-18.4	0.120	47	0.389	-81
4000	0.633	124	4.0	1.587	2	-15.9	0.160	39	0.431	-106





DIMENSIONS IN MILLIMETERS (INCHES)

OUTLINE HPAC-100X
Product Identification : U

FIG. 1B

Electrical Specifications at T_{CASE} = 25°C

Symbol	Parameters and Test Conditions	MIL-STD-750 Test Method	Units	Min.	Typ.	Max.
BV_{CBO}	Collector-Base Breakdown Voltage at I_C = 100 μA	3001.1*	V	30		
I_{CBO}	Collector-Base Cutoff Current at V_{CE} = 15 V	3036.1**	nA			500
h_{FE}	Forward Current Transfer Ratio at V_{CE} = 10 V, I_C = 10 mA	3076.1*		50		180
f_T	Gain Bandwidth Product at V_{CE} = 10 V, I_C = 15 mA		GHz		6	
$\|S_{21E}\|^2$	Transducer Gain at 1000 MHz at V_{CE} = 10 V, I_C = 15 mA		dB		15	
F_{MIN}	Minimum Noise Figure at 1000 MHz at V_{CE} = 10 V, I_C = 10 mA		dB		1.8	
MAG	Maximum Available Gain at 1000 MHz at V_{CE} = 10 V, I_C = 15 mA		dB		19.5	

*300 μs wide pulse measurement ; 2% duty cycle
**Measured under low ambient light conditions

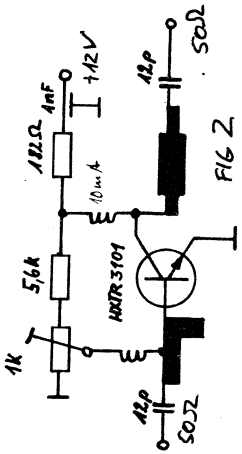


FIG. 2

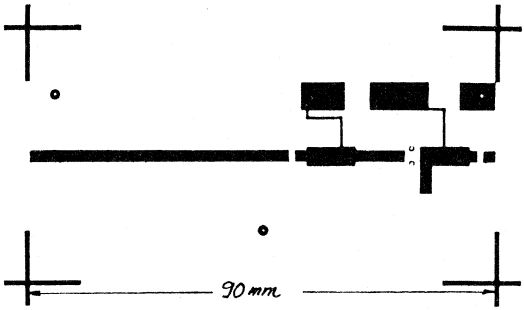


FIG. 3

DL7QY

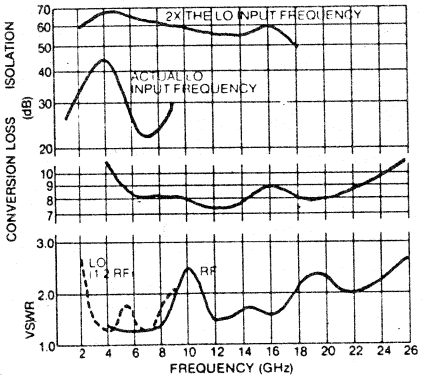
Continued on page: 301

TECHNICAL NEWS

BY DL 7 QY

Even HARMONIC MIXER coverage to 26 GHz available from RHG. RHG engineering has made a major breakthrough in the state of the double balanced mixer art. Using an eight diode configuration, a high performance broadband design has been developed which generates the second harmonic of the LO input internally, and provides efficient conversation at this 2x frequency. Unlike most devices which suffer from high conversion loss in the harmonic mode, mid band conversion loss of 10 dB is provided. The use of an LO at 1/2 the normally required frequency provides some very significant benefits. Rejection at the RF input of 2x the LO frquency is typically 50 to 70 dB. Also, the input LO frequency is now so far removed from the RF signal that normal RF pre-selection can reduce fundamental LO leakage below the level of noise. The design is especially useful for extending the frequency range of an existing ECM receiver without requiring LO change. Required LO injection of +5dBm not only reduces LO reradiation further, but eases the problems of LO source, since it is at a lower frequency and power level than normally needed.

TYPICAL PERFORMANCE
DME4-18 WITH LO AT 1/2 FREQ AND AT +5 dBm



New UHF medium power transistor from Motorola providing as much as 200 mA of Collector current and a gain-bandwidth product of 5 GHz typ, models MRF 580 and / 581 npn high frequency transistors suite use for CATV operation and as rf preamps in UHF / 800 MHz radios. The devices are housed in the manufactories 3-lead macro T and 4-lead macro X packages, repectively. Power dissipation is 2.5 Watts at a case temperature of 50 degrees C. Minimum power gain at an optimized noise figure is 11 dB for the 580, 13 dB for the 581. Maximum noise figure is 3 dB for both models. MFR 580, 2 US$, 581 2.15 US$ (100).

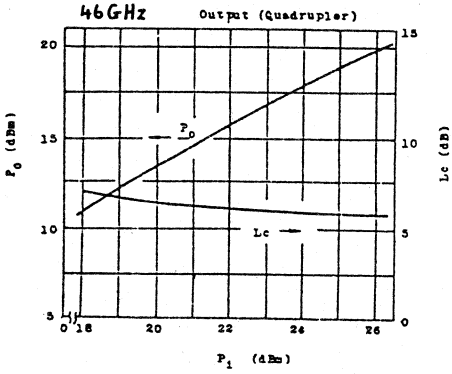
Flexible Microwave cable. Sucoflex 104 microwave cable assemblies exhibit low loss: 1.6 dB typical at 18 GHz for 1 m assembly; excellent flexibility and flexlife; and phase, attenuation, v.s.w.r. not sensitive to vibration, banding, twisting and temperature. Suhner Electronics Ltd, Telford road, Bicister, Oxon. OX6 0LA, England.

50 GHz noise sources. The range of solid state coaxial and waveguide noise sources covers the frequency range 1 MHz to 50 GHz. Systems types have rf output excess noise ratios of between 21 and 30 dB, while other models are configured for noise figure meter use at 15.5 dB. Coaxial units are available from 1 MHz to 26.5 GHz in the multioctave bands, while the waveguide units have either full cutoff bandwidths or are narrow band units in the range 12.4 to 50 GHz. March Microwave Ltd, England.

High power attenuator from Weinschel Engineering. The model 45 can handle 250W CW or 10 kW peak bidirectionally from DC to 1.5 GHz. The

model 45 can withstand high levels of shock and vibration. It has resistive elements with low temperature coefficients, low aging rates and immunity to momentary overload. Use of troublesome, oil heat dissipative baths is eliminated. Operating temperature range is from -55 to 125 deg. C.

The first specified 30 GHz GaAs FET available from TOSHIBA JS8830-AS. This low noise KU band FET provides at 18 GHz 9.5 m.a.gain and a noise figure of 2.0 dB. At 30 GHz 7.5 dB m.a.gain and a noise figure of 4.0 dB. Gate length is .25 micron. The output power 1 dB compression point is at 18 GHz 10 dBm.



GaAs pn Epitaxial Planar mm Wave Frequency Multiplier diode available from Toshiba typed S3041B. The diode provides a very high Cutoff Frequency of 850 GHz (typ.), low parasitic reactances Ls = .25 nH Cp = .1 pF and high power output and high efficiency in Quadrupler. Po= 100 mW, n = 25%, fo = 46 GHz. Beside, the typical performance of multipliers power output and conversion loss Vs. power input.

S-AU4 UHF Linear RF Power Module for Amateurradio use available from Toshiba. The usable frequency range covers 430 to 450 MHz. Power output is 17 W rf and 19.2 dB gain. DC supply voltage is 12.5 V.

CHARACTERISTICS (T_c=25°C)

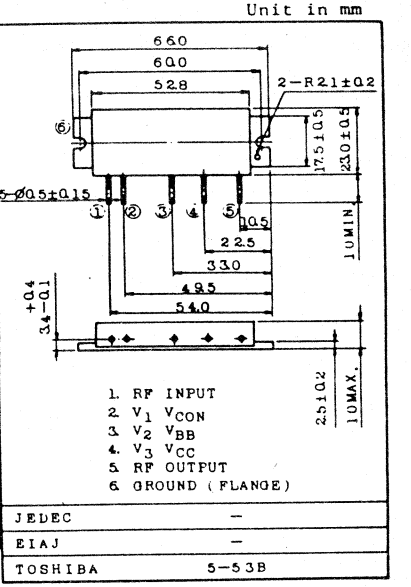
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	-	430	-	450	MHz
Output Power	P_o	P_i=200mW V_{CC}=12.5V, V_{CON}=12.5V Z_g=Z_l=50Ω	17	20	-	W
Power Gain	Gp		19.2	20	-	dB
Total Efficiency	η_T		35	45	-	%
Input VSWR	$VSWR_{in}$		-	1.5	2	-
Harmonics	HRM		-	-30	-25	dB
Load Mismatch	-	V_{CC}=15V, V_{CON}=12.5V P_o=20W VSWR load 20:1 all phase	No Degradation			-
Stability	-	V_{CC}=12.5V, P_i=200mW V_{CON}=0~12.5V VSWR Load 3:1 all phase	All spurious output than 60dB below desired signal			-
Intermodulation Distortion Ratio	IMD	f_1=440.000MHz, f_2=440.002MHz V_{CC}=V_{CON}=12.5V, V_{BB}=9V P_o=13W_{PEP}	-	-32	-	dB

UHF POWER AMPLIFIER MODULE (HAM SSB/FM)

FEATURES:

- Output Power : $P_O \geqq 17W$
- Minimum Gain : Gp=19.2dB
- Efficiency : $\eta_T \geqq 35\%$
- 50Ω Input/Output Impedance
- Guaranteed Stability

Unit in mm

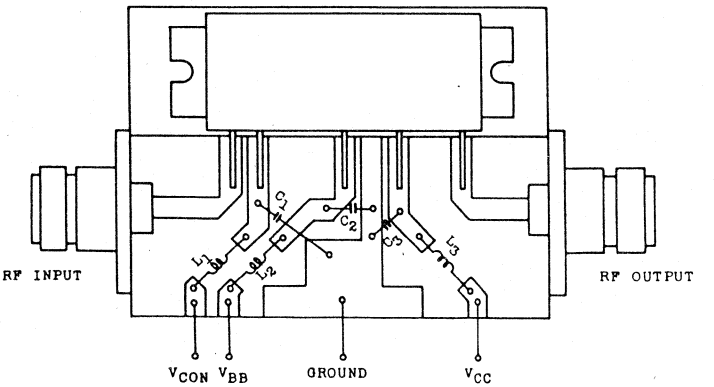


JEDEC	—
EIAJ	—
TOSHIBA	5-53B

MAXIMUM RATINGS (Tc=25°C)

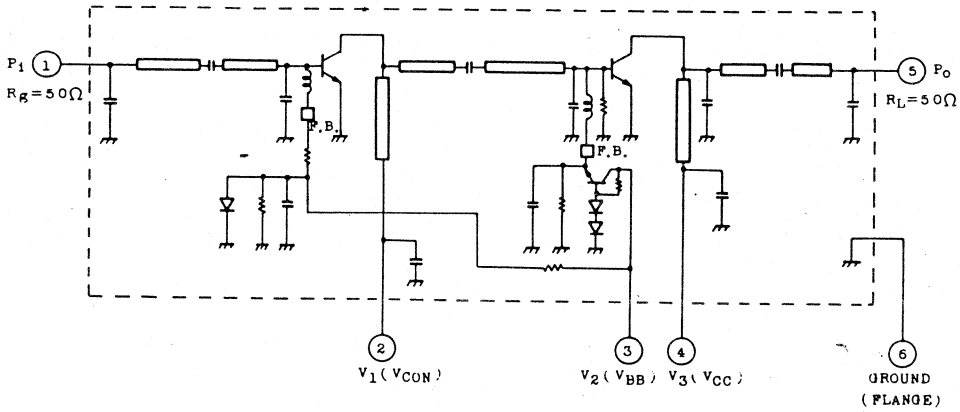
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	16	V
DC Supply Voltage	V_{CON}	16	V
RF Input Power	P_i	300	mW
Operating Case Temperature Range	Tc(OP)	-30~100	°C
Storage Temperature Range	Tstg	-40~110	°C

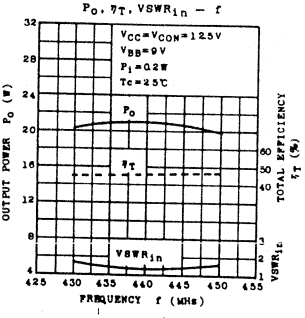
TEST MOUNT

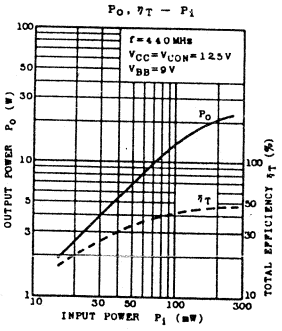


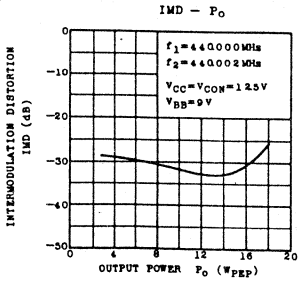
C_1, C_2, C_3 : 1500pF, 10μF

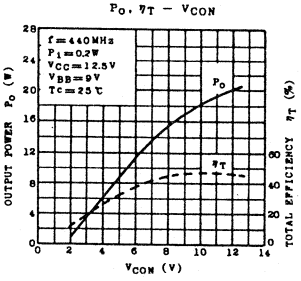
L_1, L_2, L_3 : Ø0.8 COPPER WIRE , 8T, 5ID











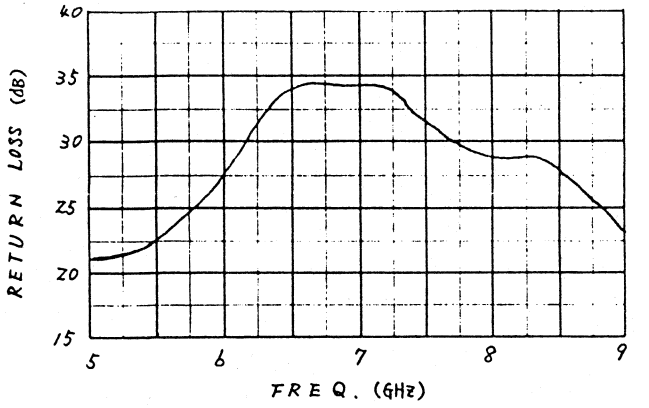
Power GaAs FET's information:
In this issue of DUBUS we will inform you about what is available up to 1 W rf output from different companies in the frequency range 2 to 12 GHz. In DUBUS 1/84 we continue reporting for power GaAs FET' above 1W rf power.
Now, NEC offers for the frequency range 2 - 8 GHz the NE 8001, 8002 series. The 8001 gives at 9 V drain voltage and 150 mA 26dBm output at 7.2 GHz with 8.5 dB gain and the 8001 with 300 mA, 29dBm output at 8 dB gain. The transistors are not internally mached, but S- parameters are

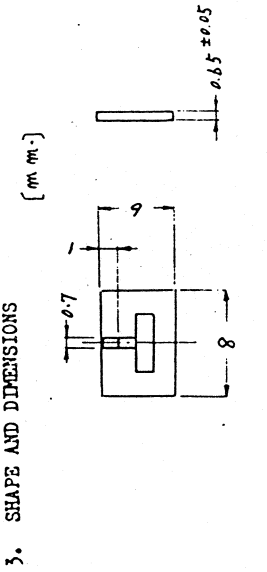
available. The NE8001, 8002 offering a unique ressed gate structure which provides high breakdown and operating voltages. These devices are operated with a drain voltage of 9V for CW and SSB and up to 13V for pulsed circuits.

From FUJITSU are available the FSX, FLC and FLX series. The FSX51X is specified at 8 GHz, VDs 8V-IDs 30mA with 18dBm output and 10 dB gain. The FSX52X at 8V- 75mA with 23 dBm output and 10 dB gain. The FLC series, also specified at 8 GHz: FLC081X with 28.5 dBm output and 6.5 dB gain at VDs 10V- 200mA; the FLC151X with 30.5 dBm output and 5.5 dB gain at 10V- 400mA. Now the FLX series is specified at 12 GHz. FLX03X with 23 dBm output and 7 dB gain, VDs 10V- 150mA; the FLX06X with 26 dBm output and 6 dB gain at 10V- 300mA. The transistors are not matched but S- parameter are available.

TOSHIBA provides 4 types in the 4 - 8 GHz range. The GaAs FET's are specified at 8 GHz: S8812 16.5 dBm output at 9.5 dB gain, S8803 23 dBm output at 7 dB gain, S2740 27.5 dBm output at 6 dB gain and the S2741 30 dBm output at 5 dB gain. All types are not matched but S parameter are available.

A new kind of "Dummy Load" provides FUJI. The model Nr. CD-7GDL is specified in the frequency range 5 to 9 GHz. A printed resistor on a AL203 Ceramic is used. Max. dissapation power is 100 mW. and the V.S.W.R is specified with 1.2 max which is similar to 21 dB returnloss. To every resistor is added an "inspection data sheet" containing the measured returnloss. The big surprise is the price, 20.--DM only!





3. SHAPE AND DIMENSIONS

If you want some more detailed informations abt prices or delivery, write to DL7QY.

MICROWAVE NEWS

BY DL 7 QY

SUGGESTED TIME SEQUENCING AND BEAM HEADINGS FOR MICROWAVE WORKING IN NORMAL CONDITIONS by G 3 SEK.

The big problem with the UHF and Microwave bands is that there seems to be very little activity between DX openings. But many stations who are S 9+ in openings could also be worked with weaker signals under normal conditions. The problem is to know were to beam and when to transmit. The operating procedures suggested here will increase your chances of making QSO's under normal conditions. This will encourage activity on the higher bands, which in turn should bring even more activity.
Obviously this procedures will not always be necessary. You must decide when to use them. The important thing is to know that suggested procedures exist, and that other stations might also be using them. Good luck.

1. Always keep your watch or station clock within a few seconds of Standard Time .
2. If your beam is pointing within plus/minus 90 degrees of the direction of the minute-hand of the clock (12 o'clock = North), then transmit for the first 30 seconds of every minute of Standard Time. If your beam is pointing away (plus/minus 90 degrees) from the minute-hand, then transmit for the second 30 sec. of every minute.*
3. When making skeds, agree with the other station to use timed transmit/receive periods according to rule 2.
4. If a QSO gets into trouble and you are not sure when to transmit and when to listen, use rule 2.
5. Usually you will know the best way to beam to get a QSO. Listen to beacons.
If you have no other idea which way to beam, point your beam in the same direction as the minute-hand of the clock (12 o'clock = North), or in exactly the opposite direction. Remember that other stations may be doing the same thing, and pointing their beams at you!
Call CQ for 30-sec. periods according to rule 2.

* Examples:
If the time is 0030h, the minute-hand points to 180 degrees. For all beam directions in the semicircle 90 - 180 - 270 degrees, transmit for the first 30 sec.
If the time is 0050h, the minute-hand points to 300 degrees. For all beam directions in the semicircle 30 - 150 -210 degrees, transmit for second 30 sec.

VORSCHLÄGE ZUM ZEITABHÄNGIGEN ANTENNENAUSRICHTEN IM MIKROWELLEN BEREICH BEI NORMALEN BEDINGUNGEN von G 3 SEK.

Das große Problem bei den Mikrowellenbändern ist, daß es anscheinend kaum Aktivität gibt, wenn keine Bedingungen sind. Aber viele Stationen, die bei Bedingungen mit S 9+ ankommen, könnten auch bei normalen Bedingungen mit schwächeren Signalen gearbeitet werden. Das Problem ist es zu wissen, wohin man die Antenne ausrichten soll und wann man senden soll. Die hier vorgeschlagenen Arbeitsabläufe werden Ihre Chance, QSO's bei normalen Bedingungen zu machen, erhöhen. Das wird auf den höheren Bändern zu mehr Aktivität führen, was wiederum noch größere Aktivität

hervorruft. Sicherlich werden die beschriebenen Vorschläge bei Bedingungen hinfällig. Sie müssen entscheiden, wann Sie sie benutzen. Wichtig ist es zu wissen, daß diese Vorschläge existieren, und daß auch andere Stationen sie benutzen. Viel Glück!

1. Stellen Sie sicher, daß Ihre Stationsuhr immer auf wenige Sekunden genau geht.
2. Wenn die Antennenrichtung mit der Richtung des Minutenzeigers der Uhr übereinstimmt, plus/minus 90 Grad, (1200 Uhr = Norden) dann senden Sie in den ersten 30 Sekunden jeder Minute. Ist die Antennenrichtung eine andere als die des Minutenzeigers, plus/minus 90 Grad, wird in der zweiten Minutenhälfte gesendet.*
3. Bei Verabredungen vereinbaren Sie mit Ihrer Gegenstation in welchen Perioden wer sendet oder empfängt. (Regel 2)
4. Wird ein QSO schwierig, und Sie wissen nicht, wann Sie senden oder empfangen sollten, benutzen Sie Regel 2.
5. Normalerweise kennen Sie Ihre Antennenrichtungen, in denen Sie die meisten QSO's machen können. Baken beobachten. Wenn Sie nicht wissen in welcher Antennenrichtung Sie arbeiten wollen, drehen Sie Ihre Antenne in die gleiche Richtung wie der Minutenzeiger Ihrer Uhr zeigt (1200 Uhr = Norden), oder in die genaue Gegenrichtung. Bedenken Sie, daß andere Stationen die gleiche Verfahrensweise benutzen und somit Ihre Antennen auf Sie richten.

Rufen Sie CQ in 30 Sekunden Perioden, in Übereinstimmung mit Regel 2.

* Beispiele:
Um 0030 Uhr zeigt der Minutenzeiger auf 180 Grad. Für alle Antennenrichtungen im Halbkreis 90 - 180 - 270 Grad in den ersten 30 Sekunden senden.
Ist es 0050 Uhr zeigt der Minutenzeiger auf 300 Grad. Für Richtungen in diesem Halbkreis, 30 - 150 - 210 Grad in den zweiten 30 Sekunden senden.

DC8UG (DK59j) wkd from Oct. 22nd to Nov. 10th on:
1296 MHz G4SHP AL, G4KIY ZM, G4LRT ZM, G8TFI YL, F1DED BI, F1FHI ZH, F6DZK AI, G8KBQ YL, G4KPX ZL, ON5GF CK, G3PBV YK (ODX), G4MAW YK, PA0GUS CN, OE2CAL GH, PE1GHG CL, DL7QY FJ and DK0NA FK.
2320 MHz G4LRT ZM, PE1AKJ CL, DB2VY DJ, PA0FRE CL, PE1GHG CL and PA0CRA CM.
3456 MHz DC6TV DK and DB3UU EJ. tks fer info Harald.
DC9BU/A (EK60b) wkd on Oct. 1st on 1296 MHz at 1419 HB9AMH/p (DH66c) 51 52, 2151 DB4LB (EO70e) 55 53. On Oct. 2nd at 0224 OK2PD/p (IK77g) 52 59, 0245 OE3LFA (II52g) 52 54 and at 0326 PA0GUS/p (CN68f) 51 52. tnx fer info Heinrich.
DC9XO (EM14a) wkd on 1296 MHz on July 6th G3ZQU AM 52 58, July 11th G3DY ZM 59 59, ON600 CL 58 57, G3MCS ZL 55 59+. On July 12th GM8PNN/p YP 53 55, G8SSL ZM 59 55, G8FEZ AL 56 57, G3NWU ZO 58 59+, G6CGY ZO 59 59+, G6ADE ZN 57 59+, F1CMA BJ 57 59, ON1JE BL 55 57, G8GHD AL 54 59+, F6DWG BJ 56 59+, GJ8KNV YJ 55 59, F1COW BI 54 53. On July 13th G8GP ZL 51 52, G3TDG AL 56 57. On July 14th PA2JOK/SM1 IQ 57 59, F1KBF/p AJ 52 55, F1FHR BI 52 56. On July 22nd G8ECI AN 58 59+. On July 30th LA9DL FT 51 41, LA6LCA FT 58 59. July 31st SM6GWA FS 58 59. On Sept. 25th PE1GHG CL 59 59+, F1DPX ZH 58 56, F1FHI ZH 57 58, F6DZK AI 58 56. During the IARU UHF Contest 1/2. Oct., Manfred wkd 63 Stns giving a score of 13806 points. ODX during the Contest was G4ALE/p in AL47d 51 54 526km. On Oct. 23rd wkd OK1KHI/p HK 58 55, OK1QI/p IK 59 59+, ON5GF CK 58 59+, PA0WJA CL 51 59, PA0MJK CL 55 58, ON600 CL 58 59, PA0WMX DM 58 59, ON1FF BK 58 59+. On Oct. 24th PA0HRK CL 52 59. On Nov. 12th PA0LPE CK 41 52 and PA0GUS CN 53 53.
On 2320 MHz: On July 9th DL7QY FJ 53 53, July 13th PE0ESN DM 59 57. On July 22nd PE1HQO DN 59 59+. July 30th OZ2OE EP 57 53, DK1ZD EO 59+ 59+,

LA8AE FT 55 57 (0.5W qrb 701km). Sept. 23rd DK5QI EL 58 58. Sept. 25th PE1GHG CL 58 58. Oct. 1st DF9LN FO 59 59, DC0DA DL 56 53, DF5QZ DL 58 55, DK3UC FN 57 55, DK2UO DL 55 55, DL4BV DN 56 59, DK1ZD EO 59 59, PA0GUS/p CN 58 54, PE1DPX DM 58 58, DK2NH FN 53 54, OZ1ABE GP 58 57, PI4ALK/A CM 41 51, PE1HQO DN 57 57, PE1CQQ DM 57 55, DK0HT/p EK 53 51, DF9ZT/p EK 58 57, DL5FAU EK 51 51, OK1KIR/p GK 58 55. On Oct. 2nd PE0MAR/p CL 54 51, PE0AGO DM 56 56, PA0EZ CM 58 54, PA3BPC/p CM 58 58, DL7QY FJ 52 41, DK1UV EL 57 53, PA0TAB DN 59 57, DC4BK EN 59 59, DK0NA FK 52 52. On Oct. 23rd ON5GF CK 59 55 and ON6OO CL 58 59+20 (0.5W rf). On 3456 MHz: On Sept. 25th DF9LN FO 58 53, DF5JJ DL 31 52, PE1DPX DM 55 51. On Oct. 1st DF9LN FO 56 58, DC0DA DL 52 51, DF5QZ DL 41 54, DK3UC FN 31 51, DK1ZD EO 55 59, PE1DPX DM 41 57, PE1CQQ DM 31 51, DF5JJ DL 53 53. On Oct. 2nd PA3BPC/p CM 52 52, DK1UV EL 55 54, PA0TAB DN 56 55, DC4BK EN 54 59, DK0NA FK 41 51. On Oct. 23rd PE1ESN DM 59+ 59 (90 mW). DD1GE/p (EI74b) wkd on 1296 MHz (1W rf, NE57835 preamp. 3m dish) Sept. 29th OE3EFS HI69g 59 59, DK0NA FK58b 59 55, G3XDY AM77g 59 57, DL8FAA EL58a 59 59, G3LQR AM67b 59 59, ON6UG BL79g 59 59, PA0MJK CL19j 59 59, DC8DC/A DL53e 59 59, PA0DUO CL19a 53 53. Now I have improved 23cm TX to 5 W rf and I will try to be 1984 qrv on 13cm. For tropo skeds call 07725/3141. tks fer info Klaus.

DF5QZ (DL30g) worked on Nov. 9th on 5760 MHz PA2DOL 326km. Station: Waveguidemixer 1N23g + 2 stage preamp. 2x MGF1200. Transmitter waveguidemixer + YD1060 (ref. DUBUS 1/83) output 2W rf. Antenna 65cm parabolic refl. PA2DOL was using 8 W rf from TWTA and 45cm dish. Receivers were similar to each other. Reports were 53 54. tks fer info.

DK5AI (FL33b) wkd on 23cm on Sept. 26th at 1826 DJ6GQ (EI) 59 57 and 2225 OK1AIY/p (HK) 59 59. On Sept. 28th at 1943 G3XDY (AM) 59 59, 1954 ON5GF (CK) 55 51, 2010 G8HPU (AM) 58 57, 2018 PA2DRV (CL) 59 59, 2023 PE1GHG (CL) 59 59, 2039 G4CBW (YN) 539 519, 2050 PA3AOH (DL) 59 59, 2053 PA3AGS (CM) 59 59, 2105 PA0HRK (CL) 559 559, 2120 OK1CA/p (HK) 58 57, 2136 PA0JMY (CM) 56 59 0.1W!, 2141 G4MAP (YM) 59 59 1W!, 2145 G4KIY (ZM) 51 51, 2148 PA0JCA (CM) 59 58, 2150 PA3BPC (CM) 57 56, 2209 G4FXW (ZN) 55 55, 2217 DF5JJ (DL) 59 59 and 2223 OK1AXH/p (HK) 59 59. On Oct. 1st at 1657 OE5XXL/2 (GH) 539 559, 1904 DL9MCC/p (FH) 529 519, 2041 OK1KIR/p (GK) 59 59 and 2208 OK1KTL/p (GK) 579 579. On Oct. 2nd at 0135 OE3XUA (HH) 539 539, 0150 OE5XBL (GI) 539 539, 0608 OK1CA/p (HK) 539 559 and 0936 PA3BPC/p (CM) 559 559. On Oct. 3rd at 1540 Y23FL/p (FK) 55 59 First DL-Y2 on 23cm??. tnx fer info Wolf.

DL7QY (FJ61e) wkd on 1296 MHz Sept. 22nd at 2158 F1DPX (ZH02a) 59 59. On Sept. 23rd at 1059 G3AUS (YK32j) 519 539, 1734 G4KIY (ZM40j) 55 58, 1748 PE1GHG (CL03c) 41 59, 1826 ON5GF (CK55h) 57 59, 1900 G3LQR (AM67b) 539 52, 2137 F6BSJ (CG24f) 57 59, 2142 PE1CQQ (DM01e) 41 53, 2204 F6GCT (BI16j) 419 57, 2321 PA0MJK (CL19j) 59 59, 2326 PE1FOT (CL06a) 57 59, 2327 PA3BBR (CL03e) 55 53, 2330 PA2HWG (CL49g) 52 55 and at 2331 PA0DUO (CL19a) 53055. On Sept. 24th at 0931 DF5LQ (EO) 59+ 59+, 1902 OE3XUA (HH10b) 55 54, 1601 F1DLT/p (CH29f) 52 52, 1723 F6GCJ (AG13a) 59 59, 1850 F1BUU (ZE08e) 59+ 59+, 1853 F6KFN/p (BG01h) 59 59, 2000 F6ETI (YH24c) 55 57, 2044 IW1AHH (DF15c) 41 51, 2150 OZ5NM (FP34f) 539 559 and at 2254 OZ1HDA (ER49c) 41 53. On Oct. 1/2nd at 1521 PA0GUS/p (CN68f) 52 52, 2221 SP6LB/6 (HK18f) 529 419, 1221 F6CIS/p (BF21j) 41 519 and at 1252 HB9AOF/p (DG32a) 419 519. On Oct. 3rd at 2235 PE1HQO (DN71a) 52 52. On Oct. 4th at 2043 OE3RLC (HH09a) 42 55. On Oct. 26th wkd at 1136 G4DGU (XK09j) 529 539, 2050 F1ELL (BI02h) 56 56, 2107 F1DQK (BI23a) 51 53 (400 mW!) and at 2309 F6DZK (AI20d) 59 59. On Nov. 8th wkd DH4NAG (FK58b) with 59++ and on Nov. 10th wkd at 2020 PA1GHG (CL03c) 54 59, 2021 PA2DRV (CL03d) 54 59, 2307 DC8UG (DK59j) 51 53 and at 2338 PA0FRE (CL03j) 529 539.

On 2320 MHz I wkd on Sept. 23rd at 1833 ON5GF (CK55h) 54 57 and at 2008 PA0FRE (CL03e) 419 529. On Sept. 24th at 0007 DB4LT (EO70e) 55 59, 0944 DC0ZS (EK35h) 57 56 and at 2019 OZ2OE (EP10f) 529 539. On Oct. 1/2nd at

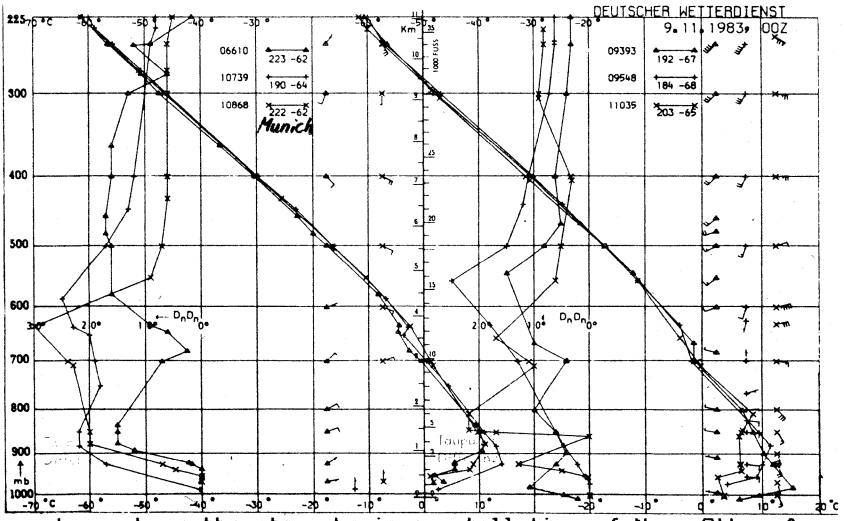
1548 DL6NAQ/p (EK60b) 59 59, 1628 DKØNA (FK58b) 56 56, 1918 OE1ERC/9 (FH41h) 59 59, 1948 DJ5AP/p (EH11h) 59 59, 2027 DL5FAU (EK57j) 52 55, 2029 DFØHT/p (EK57j) 51 51, 2206 OK1KIR/p (GK45d) 59 55, 2256 DF9LN (FØ61a) 51 51, ØØ55 DK2DB (EIØ3g) 56 56, Ø940 DC9XO (EM14a) 41 52, 1ØØ2 DF9ZT/p (EK34e) 56 58 and at 1310 DK2UO (DL74e) 519 539. On Oct. 3rd at 2250 PE1HQO (DN71a) 419 419. On Oct. 26th test at 1140 with G3AUS (YK32j). He heard my signal with 529 but unfortunately his PA was not operational so we could not get a two way contact. At 1715 wkd DL3NQ (EJ34j) 53 54. On Nov. 8th wkd at 1840 DH4NAG (FK58b) 59++ and at 1916 DL7YC (GM47j) 529 529.

On 3456 MHz I wkd on Sept. 29th at 1542 DL6NAQ/p (EK60b) 59 59. On Oct. 1/2nd at 1522 DL6NAQ/p (EK60b) 59 59, 1633 DKØNA (FK58b) 529 53 and at 1950 DJ5AP/p (EH11h) 57 55. On Oct. 3rd heard DC9XO (EM14a) with 519. On Nov. 8th wkd at 1841 DH4NAG (FK58b) 59++ and at 2200 DC2CT (FI68j) 57 54 and on Nov. 10th at 2200 PAØCRA (CM75a) 519 529.

On 5760 MHz I wkd on Sept. 23rd at 2307 DC8NV (FI79h) 51 51. On Sept. 24th at Ø714 DKØNA (FK58b) 59 59. On Nov. 8th at 1844 wkd DH4NAG (FK58b) 59+ 59+.

On 10368 MHz I wkd on Sept. 23rd DKØNA (FK58b) at 2244 59+ 59+. On Nov. 8th wkd DH4NAG (FK58b) 59++. On Nov. 10th wkd at 1904 DF2CA (FK69b) 57 51 and again DKØNA (FK58b) with SUPER STRONG signals. Condx were really great for the distance of 171km to Michael DKØNA. I reduced my power on 10 GHz from 2.5 W rf down to 10 micro Watts! Even then DKØNA copied my 10 GHz Signal with 52!! So it doesn't need any big power on the microwaves under such good tropo condx, much more important is to be QRV at all!! In this first Nov. week, tropo condx were very good over a small distance, up to 250 kms, but no good for DX. Mni 73's de DL7QY

MESSUNGEN IN DER FREIEN ATMOSPHAERE AM 9.NOVEMBER 1983

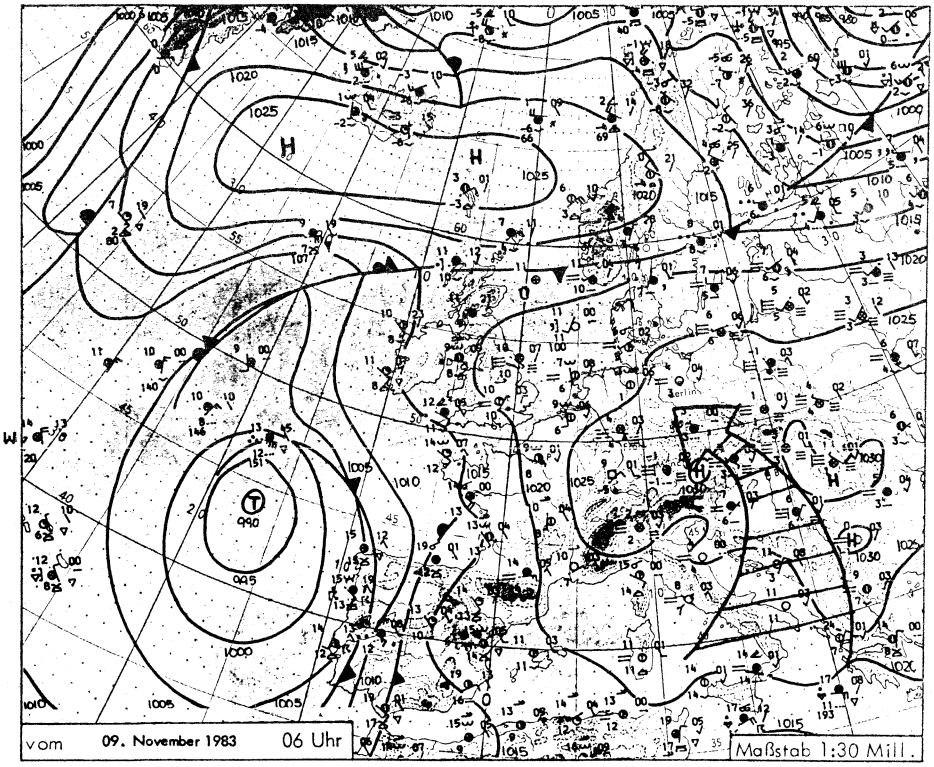


ten

The map above shows the atmospheric constellation of Nov. 9th. As you can see there is a sharp temperatureinversion in abt 800m high when the temperature change to plus 6 degrees C within abt. 150m only, over Munich (FI68). Very good Microvawe propagation came up, but only for short distances. Die Karte vom 9. Nov. zeigt die Temperaturverhältnisse in der Atmosphäre über München. In ca. 800m erkennt man eine scharfe Temperaturinversion, an der die sonst nach oben abfallende Temperatur in einem Bereich von nur etwa 150m wieder auf +6 Grad C. ansteigt. Die

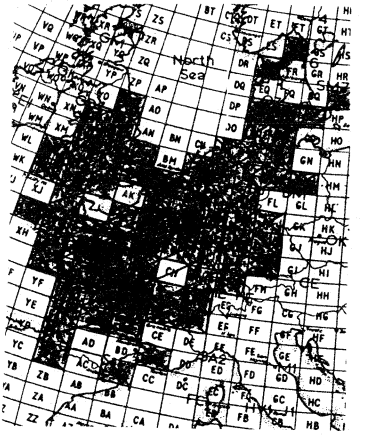
Folge waren hervorragende Ausbreitungsbedingungen im Mikrowellen-Bereich, aber leider nur über kurze Entfernungen, weil die Inversion zu niedrig lag.

The following map shows the weathersituation over Europe from Nov. 9th. High pressure over southern Germany and humid air were carried from Southeastern Europe. Die nachfolgende Karte zeigt Europa am 9. Nov. Hoher Druck über Süddeutschland transportierte feuchte Warmluft aus Südosteuropa nach Süddeutschland, welche sich über die dort stehende Kaltluft lagerte und absank.



F1FHI (ZH63d) worked via tropo on 1296 MHz: March 10th DL7QY (FJ61), DL3NQ (EJ34)j, F1SA (CI15c) and G6GN (YL48h). On May 4th F6ETI (YH24c). On June 5th F6HMQ/p (XI50c)!, F6CIS/p (AE21g), F1KBB/p (ZI75c), F1FYP/p (ZF80j). On June 12th F1FEN/p (CF74c) and F1AAM (CD46h). On June 19th GJ8SBT (YJ70g). On July 2nd HB9AMH/p (DH66c), G4JAR/p (YK31b), G3VMO/p (YK30e), F1KNO/p (BH20c) and F1GTR (ZG65g). On July 14th SM6HYG (FS58f) 1508km, July 15th DJ5BV (DK26h), July 22nd F1FEN/p (BE09c), Aug. 4th F6KNO/p (BC33e), Aug. 29th GJ8SBT (YJ70g), SM6GWA FS27j 1538 km, and SM6HYG (FS58f). On Sept. 9th F1SA (CI15c). Now a report from the Super DX on Sept. 25/26, contacts over 900 km!! OZ2OE (EP10), GM8MBP (YR60e) first F/GM?!, DF9LN (FO), DF5LQ (EO), OZ1HDA (ER49c), SM6HYG (FS58f), DC4BK (EN75d), OZ7LX (FP49c), DK9MN (FI78a), DKØNA (FK58b), SM7DEZ (GP35c), DC9XO (EM14a), OZ7VX (FO28h), PE1HQO (DN71a), OE9XXI (EH49a), SM7CFE (HQ68a) 1538 km, OZ1ABE (GP16j) and DL7ZL (GM47c). All together

worked from Sept. 24th to 26th on 23cm 100 stations in 50 different QTH squares from 14 countries! Picture left DL7QY right F1FHI in DL7QY's shack. QTH score on 23cm from F1FHI. tnx fer info Jean.



YH square now qrv on 1296 MHz. F6ETI fineshed his 23cm equipment in May 1983 with F6CER transverter and abt 500 mW into 2x 23el. GaAs FET NE72089 as preamp. The first QSO was done on May 4th with F1FHI in ZH. On June 6th he worked F1BUU in ZE. On July 2nd G4JAR/p in YK, July 3rd F6DZK (AI), July 10th F1DED/p (ZD), F1CIS (ZE) and F1GTR (ZG). On July 15th F1SA (CJ), July 16th F6APE (ZH), Aug. 4th F1KBF/p (ZC) and on Aug. 29th SM6HYG (FS) 319/519-319 in cw 1528 km.
Now Philippe is qrv with more power "2W".He worked on Sept. 23rd F6DZK (AI), on Sept. 24th F6CER (BI), F6DZK (AI), F1ELL (BI) and F6CIS (ZE). On Sept. 25th wkd HB9AMH/p (DH) 784 km, G4CBW (YN) 603 km, G3AUS (YK), G4DGU (XK), F1DLT/p (CH) 664 km and DL7QY (FJ) 997 km, heard at 1935 the beacon GB3CLE (YM) and at 1936 GB3BPO (AM). Wkd PA0FRE (CL), PA0EZ (CM), PA0WWM (CM), PE1GHG (CL), DF5JJ (DL) 827 km, DL7ZL (GM) 1295 km and DJ5BV (DJK) 819 km. On Oct. 1st wkd F1BUU (ZE), F1ELL (BI) and F1DOE/p (BJ). tnx fer info Philippe.
G3LQR (AM67b) writes...things have been quite good over here with some nice wx and some nice dx to north east. Only have low power on bands above 13cms but seems enough on the water path to SM. Have 200 mW on 9cm at antenna, 100 mW on 6cm and 40mW on 3cms but hope to increase this during the winter with a rebuild.
On 2320 MHz wkd on Feb. 18th ON5GF (CK). On June 6th DK2UO/OZ (ER). On June 18th DF9LN (FO), DL4BV (DN), DK3UC/p (FN) and DC9XG (EM). On July 12th DK7LF (FO). On July 28th DK1UV (EL). On July 30th OZ2OE (EP) and on Aug. 31st OZ7IS (GP).
On 3456 MHz wkd on June 18th DF9LN (FO). On June 25th PA3BPC (CM). On June 26th PA2DRV/A (CL). On July 3rd PE1GHG (CL). On July 28th DK1UV (EL) and on July 11th SM6HYG (FS) ODX 925kms.
On 5760 MHz wkd on July 11th SM6HYG (FS) ODX 925kms.
On 10368 MHz wkd on July 2nd PA0PLY/A (CM) and PE0MAR/p (CL). On July 3rd PA0AWN (CM) and on July 12th PA0EHG (DM) ODX 376kms. tnx fer info Simon.
G4BYV (AM) wkd on 23cm on Aug. 29th DC7QH (GM)...I now have a 1.8m dish with DL7QY feed which works well. tnx fer info John.
G4LRT (ZM45d) writes...very good conditions on June 18th. 6 new squares worked on 2320 MHz! I was qrv from 2000 hrs untill 0200 on the 19th and

worked: PE1DPX (DM) 483 km, PE1CQQ (DM), DC9XO (EM) at 619 km, PA1FEI (CM) 447 km, G4FRE (AL), DL4BV (DN) 572 km, G4BYV (AM), DC4BK (EN) 677 km, DD2EK (DL) 509 km, DC9XG (EN) 698 km 59+30dB and DF9LN (FO) at 766 km.
Also on 3456 MHz I heard DC9XG, PE1CQQ and G4BYV. I listened for DF9LN but nothing heard. Unfortunately no two way contacts were made due to only 50 mW output this end. At one time on 2320 MHz three stations replied to a CQ call.
On 25.8. on 2320 MHz I worked OZ1AXX (FQ) at 835 km and OZ2OE (EP) at 806 km which is the 20th square worked.
Some rare squares have been activated on 1296 MHz during the summer month and I have had contacts with: On July 2nd G4AXL/p (YP69c). On July 3rd GD4KMI/p (XO59f). On July 29th GM4NBS/p (XQ80d). On July 30th GM4NBS/p (YP20j). On Aug. 6th GM4KNZ/p (YQ07j) and on Aug. 7th GB2XN from XN57a. tnx fer info Steve.
SM6HYG (FS58f) reports....here are some lines about the tropo season as seen from the west coast of Sweden. After a really wet and cold spring with no real DX at all we finally got a high pressure on June 18th giving the "usual" PA0 and DL stations. One June 20th also some G's were worked. The following 2 months there was repeated highs coming and going, giving us here a tropo season to remember. After long struggling with our PTT I finally got a temporary licence for 1983 on 3456 MHz. This gave me some really nice contacts with all European Reg. I countries where this band is permitted. In all 4 new DX records were set: 1296 MHz July 12th SM6HYG-F1BUU (ZE08e) 1685 km, on 2320 MHz on Aug. 29th SM6HYG-G3AUS (YK32j) 1290 km, 3456 MHz on July 2nd G3LQR (AM67b) 925 km and 5760 MHz on July 12th G3ZEZ (AL16f) 980 km.
On 1296 MHz there were over 170 QSO's during the period, I think too many to list here, HI. Some of them were ODX and First's a selection as follows: July 9th LA5X DT, ET. On July 11th G8ECI (AN). On July 12th F6DWG (BJ) and F1BUU (ZE). On July 31st OE3LFA (II). On Aug. 28th G6GN (YL). On Aug. 29th F6ETI (YH).
On 2320 MHz wkd on June 18th DL4BV, PE1CQQ (DM), PE1CNP (CN), PE1AEO (DM), DD8BD (DM), PA0JGF (DM), OZ2OE (EP) and DC9XO (EM). On June 20th G4BYV (AM) and DK2UO/OZ (ER). On June 24th G8VLL (AM), PE1HQO (DN) and PA0GUS (CN). On July 6th LA6LCA (FT) (first SM-LA). On July 9th LA8AK (DS). On July 10th OZ1AXX (FQ). On July 12th G4LOJ (AM), PE1AKJ (CL), PA0EHG (DM), DK3OL (DL) and DL3NI (DL). On July 23rd LA8AE (FT). On July 30/31st G3LQR (AM), DB4LT (EO) and OZ7IS (GP). On Aug. 10th PE0AGO (DM). On Aug. 27th DC4BK (EN) and on Aug. 29th G3AUS (YK) ODX 1290km!On 3456 MHz June 25th PA0CRA (CM) and PA3BPC (CM) (first SM-PA). On June 26th PE1CKK (CM). On July 11th G3LQR (AM) (first SM-G). On July 13th PA0EHG (DM). On July 30th G4BYV (AM) and on July 31st DF9LN (FO) (first SM-D).
On 5760 MHz: On June 25th PA0CRA (CM)(first SM-PA). On July 11th G3LQR (AM) (first SM-G) and on July 12th G3ZEZ (AL) ODX 980 km. tnx fer info Carl.
SP9FG (JJ70b) heard on Sept. 29th 1983 between 09 and 10 gmt on 23cm DB0VC with 559. On Oct. 23rd hrd on 1296 MHz DB0VC 55-59 and wkd OZ7LX andOZ1ABE. tks fer info Jurek.

TROPO · NEWS

BY DL 7 QY

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DH1LAC (FO42f) wkd on June 18th the following squares: AL, AM, AK, BL, YL, ZK, ZL and ZM. On 22nd LA9GX in FT. On 24th/25th wkd stns from YP, YQ, YL, YM,-YN, ZL, ZP, ZM, ZO and ZN. On July 30th GM8TIC/p YP, GM8YPI YP, GM4OBD YR and GM6VDQ YR. On Aug. 5th GM3OUR/p YQ. On 7th SP6GZZ IL and SP2FAV JO. On Aug. 11th stations from FT, FU, GS and GT. On Sept. 23rd HB0POM/p EH, F1CYB BH, HB9CRQ EH, LX1JA CJ, OE5MKM HI, F1FVZ AI, F6INI BI and ON1BG CK. On Sept. 25th wkd stns from ZL, ZK, YM and TO6HRP YI, F1GHP ZG, F1FYE/p AI, F1DWP/p YI, F1DED BI and F9NW AJ. On Oct. 10th several stations from G until Y line and GI4OPH XO, GW6IWY XN, GW6DDB XN, GU6PGS YJ, G4LZD YK and OK1KKH/p HJ. On Oct. 23rd G3YGJ XL, GJ6TMM YJ, SP2JGP JN, OK2KYC/p JJ, OK1AUN GK, UB5PAZ ML, UP2BJB LP, OK2KZR/p IJ, SP5EPT KM and OK3CAF KJ. Tnx fer info Carsten.

F1FHI (ZH63d) wkd on 2m qrb >1200 km: On June 28th DL4OX/IS0 in EA39b. On July 3rd OK1KRG (GK05h) and OK1KRA (GK45f). On July 14th OZ1EKI (EP41h), OZ5VHF (FQ35f), SM7LNS/OZ (FQ), SM6MNS (GR11g) and OZ1OF (FQ). On Aug. 12th SM7AFD (GQ and F1DPV/IS0 (EY03b). On Aug. 29th GM6LXN (YQ22f), OZ1GOK (EP76e), OZ9PW (EQ27j), LA6VBA (ES), LA8EW (DS78g), OZ3YG (EQ68c), LA9KM (FT71g), LA6HL (CS), LA1ZX, LA9RAA (CS39j), OZ1FRO (EQ79b), LA6ZW (ES54g), OZ1FGP (EQ68a), SM6HDY (FS80g), SM6EKP (GR31g), LA9LS (DS70d), LA9ZV (FT44j) and SM4CJK (GT49f). On Aug. 30th SM4VA (GT47a). Heard during all the night Aug. 29th to 30th the beacon SK4MPI in HU max. with 59+20dB. QRB 1900 km!. wkd now over 1400kms. On Sept. 22nd OK3TBY (II58b), and OK3CNW (II58b). On Sept. 25th LA9RAA (CS39j), SM5CNQ (HS46c), SM6JDO (GQ02c), SM6JWH (GQ26g), SM6JDM (GR18g), SM6KEG (GR11j), SM6NHP (GR25b), SM6AEK (GQ25b), SM6HQT (FR37j), OZ1FOW (GO02a), SM6KWJ (FR30e), SM7GEP (HR24h), SM6MNS (GR11g), SM6EKP (GR31g), SM7MXO (HR24e), SM7NKP (HR24e), SM6FYU (GQ03e), OZ1CSI (HP75h), SM6SSD (GQ03e), SM6MFK (GQ03e), SM7ASN (GQ69c), SM7HFW (GQ69d), OZ1JDU (HP75g), and OK1JKT (GK46c). On Sept. 26th SP1FPG (HN33c), SP6GZZ (IL54c), SP5AD (KM66g), SP6AZT (IL76h), SP5AOK (KM56f), OK2VSF (JJ33d), OK1VLA (HK70g), SP6LB (HK19a) and OK1KGS (HK63f). And many others between 800 and 1800 km QRB. tnx fer info Jean.

F6ETI (YH24c) wkd via tropo qrb >800 km: on 1983 Jan. 22nd DF5JB (DL), DF7KF (DK), DK2LM (EJ), DL6OAR (EL), Y23FG (FM), PA3CGR (DM), DK7BX (EM), DL4RBK (FJ), PE1GHV (DM), PA3BRS (CM), DJ3TF (FJ), PA0OOS/A (DN), PE1CQQ (DM), hrd Y41B in FN28f and DL0PR in EO, wkd OK1MBS (HK) 1397km. On Jan. 23rd LA6HL (CS) 1382km. On March 6th HB9Y/p (DG), DL0HN/p (EJ) and DF6WCY (EI). On July 15th DK8SG (EI).

On Aug. 29th PE1FMU (CM), PE1IST (CM), DL5LAH (EO), PE1IXI (DN), DC9BI (DN), DL1BBX (DN), DL0PR hrd, OZ1HDA (ER) 1392km, OZ1DPR (EP) 1179km, SM6GWA (FS) 1555km, LA9RAA (CS) 1345km, LA6ZW (ES) 1424km, PA3BBV (CM), OZ1HNE (FR) 1414km, OZ1EYE (FQ) 1330km, OZ1QZ (EP) 1282km, SM4CJK (GT) 1706km, OZ3GW (FQ) 1352km, SM6CEN (FR) 1501km, SM6CMU (FR) 1492km, OZ1OF (EQ) 1281km, hrd at 2203 GB3ANG (YQ) 559, wkd SM4VA (GT) 1698km, OZ1IVW (FQ) 1330km and SM6CEN (FR) 1501km. On Aug. 30th hrd SK4MPI (HU) 529. Wkd OZ9FW (GP) 1376km, OZ1GDZ (FQ) 1306km, SM5LXA (HS) 1722km odx tropo 2m and PA0JUS (CM).

On Sept. 31st wkd EA3MM (BB). On Sept. 25th wkd OZ1OF (EQ), PE1JSB (DM), OZ1IWZ (FQ) 1321 km, PA3BRS (CM), PA0XMA (DM) and OZ1EKI (EP) 1239 km. Hrd at 1723 OZ7IGY and at 1725 DL0PR.

On Oct. 10th wkd DL7QY (FJ), OK1KKH/p (HJ) 1368 km, OK2KFA/p (JJ) 1602 km, OK1KSI/p (HK) 1418 km, DG8NAQ (FJ), DF8IK (EJ), OK1KRA (HK) 1306 km and DB7UZ (FK). tnx fer info Philippe.

G4MAW (YK43g) wkd on Aug. 28th OZ9IT (EQ), DC2XK (EN), DF6HT (FN), DK1KO (FN) and DG1BP (DN). On Aug. 29th OZ1HDA (ER), OZ1FEF (EQ), OZ1IPU (FR), SM6CMU (FR), OZ1CDQ (ER), SK6AB (FR), OZ1QZ (EP), SM6FYU (GQ) and OZ1AXX (FQ). The OZ and SM contacts are over 1000 kms. tnx fer info Mark.

G4MCU (AL23f) wkd via tropo on Oct. 22nd OK2KFA/p JJ, SP6FUN IL, Y22SA GN. On Oct. 23rd SM1MKY JR, UP2BIG LP, SM4AIQ HT, SP2LU JN and SP1AAY IO. tks fer info Jon.

HB9CRQ (EH61b) wkd >700km via tropo Sept. 23rd 42 x AL, 8 x AK, 10 x AM, 4 x ZK, 19 x ZL, 25 x ZM, 4 x ZN, 2 x ZO, 1 x YK, 1 x YL, 4 x YM, 9 x YN, 1 x CN, 2 x FN, 3 x EN, 1 x FO, 1 x FP, 1 x EQ and 3 x GQ. On Sept. 25th 4 x XK, 5 x YI, 1 x ZK, 5 x AL, 5 x ZL, 1 x YK, 2 x XI, 3 x GP, 1 x GR, 1 x EO, 1 x ZH, 1 x ZI, 1 x ZG and 1 x YJ. tks fer info.

I3LGP reports on tropo activity. He includes in this list the contacts via propagation FAI, denoted by a * near the call. On June 7th 1743 F1CAU (DD) 53 53, 1809 F1JG * (CD) 51 52/4, 1836 EA3AIR * (BB) 51 51 and 1839 EA3DXU * (BB) 51 51. On June 10th 0825 F1JG * (CD) 51/6 52/3 with many pings. On June 28th at 1901 EA3AIR * (BB) 55 53, 1905 EA3DXU * (BB) 53 51, 1926 F1JG * (CD) 54 55, 2000 EA3EHQ * (AB) 53 55 and 2010 EA3LL * (AB) 552 52. On July 1st 1843 LZ1FA * (ND) 559 559. On July 2nd at 2156 ED3RCM * (BC) 55 55. On July 7th 1957 EA3EHQ * (AB) 53 53. On July 15th 1230 F6GRB CF 55 53 and 1240 F6FHP/p (CE) 55 53. On July 20th 1720 F6FHP/p (CE) 57 53. On July 21st 0557 C31XV * (AC) 55 55 hrd till abt 0730 and at 1224 F1JG (CD) 52 52. On Aug. 5th 0908 Y23MF GL 559 549. On Aug 11th 1900 F1CAI/p 51 51. On Aug. 14th 1930 LC1DB (DJ) 569 559. On Aug. 15th 1205 F8OP (CG) 519 419. On Aug. 16th 1200 F8OP (CG) 549 549. On Aug. 17th 1205 F8OP (CG) 539 519 and 1215 F1GIK (CF) 51 51. On Aug. 18th 1159 F8OP (CG) 559 529, 1717 DF7KF (DK) 529 519, 1209 F6DQX (CF) 52 52 and 1930 EA3LL * (AB) 55 53. On Aug. 19th 1014 F1GIK (CF) 52 51, 1200 F8OP (CG) 569 549 and 1830 F1JG * (CD) 56 55. On Aug. 20th 1205 F8OP (CG) 529 519. tnx fer info Giuliano.

LA8AE (FT) wkd via tropo July 30/31st OK2VSF (JJ), YU1POA (KE), YU7AR (KF), HG1YA (IH), OK1MAC (HJ), HG1KZC (IG), SP6ASD (HL), OE2CAL (GH) and OE5EFM (HI). tnx fer info Ole.

ON5QW (BL80f) wkd via tropo on July 3rd OK1KVK/p (GK). July 12th LA1BM (CT), LA5EH (CU), LA8OJ (CS), LA4IAA (CS), SM6CMU (FR), LA1HCA (CU) and LA2RZ (CU). On July 14th SM7GEP (HR), SM7BYU (GP) and SM5MIX (HS). On July 28th SP6ASD (HL). On July 29th OK2KZR/p (JJ), SP6FUN (IL), SP6GZZ (IL) and OK3CPZ/p (GK). On Aug. 10th SM4KL (GT), LA9UX (FU) and LA3UL (FT). On Aug. 24th GM4LBE (ZU). tnx fer info Robert.

OZ1EYX (GP13b) wkd via tropo on 144 MHz on Aug. 22nd OZ1DOQ/mm QTH CQ. On Aug. 29th GM3JIJ WS69c and G6PRK/p ZM04a. On Aug. 30th F1GXB XI48j, G4SFQ AM18a, GW3JXN/A XM78a and G3CHN YK61b. On Aug. 31st GW6IWY XN59c and OZ1DOQ/mm in BR. Hrd a few EI's, but very weak. Wkd on Sept. 25th F3DJ ZF05e, F5XV BF16g, F1GXX ZF50h, F1HAR BI12a, F6HVK CH55c, F1GTW/p AG54d, F1EAN AG22f, ON7RB BL80f, F1EQE ZF49a, HB9CRQ EH62b, F6HEO BG06b, F1BYM ZE25e, F1EA DI39c and F6CIS ZE25f odx 1577 km 59+. Whole opening like super long time Es!! No EA stns heard, sri. tks fer info. PA3BIY (CM72c) wkd via tropo on 144 MHz: Jan. 21st 1983 F8RZ (ZF50h). On 22nd EA1KC (XD32d) and EA1NU (XD32d). On 23rd EA1YY (XD32h). On July 12th LA1BM (CT47c), LA1HCA (CU76b) and LA4IAA (CS09h). On July 14th F6FHP/p (CE01b) and PA0OOM/SM1 (JQ01c). On July 28th SP6GZZ (IL54h), OZ1CSI (HP75h), SP6ASD (HL39c) and DL7RK (GM37j). On July 31st SM5MIX (HS66g), SM7IWG (HR54c) and hrd SK4MPI beacon in HU 529. Wkd on Aug. 10th GB2XN (XN59a). On Aug. 11th SM5AKU (HT80f), SM5MIX (HS66g), SM5KX (IT33a) and hrd SK4MPI in HU 569. On Aug. 24th GM3XOQ (ZT04j) and LA5IH (CU47j). tnx fer info.

SP1FPG (HN33c) wkd on 2m via tropo qrb >1000 km on Sept. 25th F6EOQ/p (YI34j), TO6HRP (YI35d) and F9NW in AJ46a. On Sept. 26th F6FYZ (BI02f), F6GLH (ZI72j), F6FHP/p (AE21g) and F1FHI (ZH63d). tks fer info Henryk.

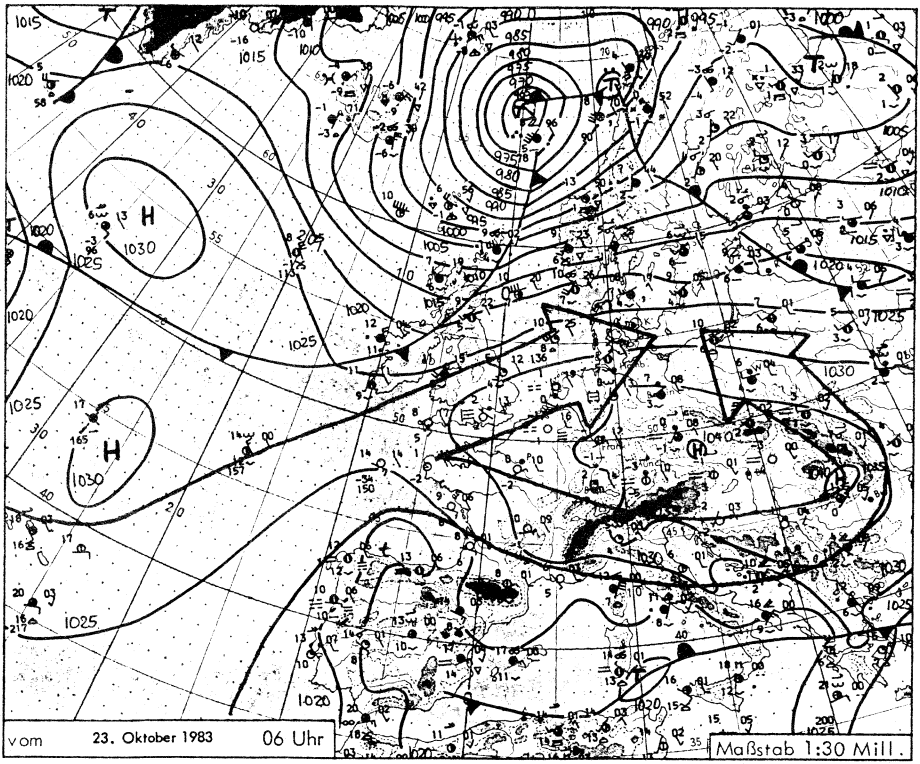
Y22ME (HM53a) wkd via tropo on Aug. 6th UC2ABN/p (MN!), SP4DCS/4 (KN), UK2CBB (NN) and UC2LBL in (MM!). tnx fer info Jürgen.
YU2EZA (IG54f) wkd via tropo on Sept. 14th SP6ASD HL. On Sept. 24th SP6AZT IL, OK3CAF KJ. On Nov. 6th IØRGS/6 GC, DKØAA EJ and DF5ZP EK. On Nov. 10th DG5FO in EK. tks fer info.
YU2JL (HD30a) wkd via tropo on May 5th: OK3CPY/p (JI), YO2IU/p (KG), OK3CPZ/p (KJ),OK2KQQ/p (JJ), OK2KYC/p (JJ), OK3KKF/p (JI), OK3EA (II), HG6KVB/p (KH) and HG7KSV/p (JH). On May 8th IT9TQH/9 (HX), IT9OWA/9 (GY), OK3KTR/p (JI), DKØOG/p (GI), OK1KPA/p (HJ), OK2KZR/p (IJ), OK2KHD/p (II), OK1KHI (HK), OK3KDY/p (II), OK3RMW/p (JI), OK3KVL/p (JI), OK1KSF/p (HI), OK2KVI/p (JJ), HGØDG (KH) and F1BAV (DD). On May 21st IR2IFU (EF), IW1AQV (EE), I1DMP (DF), OK3EA (II), TO6BAV (DD) and IW2BXY/4 (EE). On May 22nd DL5MCG (FI). On June 1st IT9GSF (GY), IT9WGZ (GY), IT9VHS (GY), IW9AJZ (GY), IT9LYF (GY), IT9OIP/9 (GY), IW9AOR (HY), I8PMH (HZ) and F6FXP (DD). On June 2nd IT9TDN (HY), IW9AJZ (GY), IT9LYF (GY), IW8PCW (HY) and IW9AOR (HY). On June 4th IO9DWV/9 (GY), IT9JLG (GY), IT9VHS/9 (GY), IT9TDN (HY), IT9DQZ/9 (GY), OK3KEF/p (II) and I1ANP/1(EE). On June 5th DF7RG/p (GI), DF9RJ (GI), OK3CDR (II), OK3KPV/p (JI), OK1KPA/p (HJ), OK1KRU/p (HJ), OK1DOZ/p (HJ), OK2BQR/p (II), OK2BFN/p (II), OK3KOM/p (JI), OL8CRA/p (II), OE5VRL/5 (GI), OK1MBS (HK), OK1ATQ (HK), OK3EA (II), OE5UKL (GI), OE3WXU (II), OE5UML (GI), OE5UAL (GI), OE5MKM (HI) and IT9XJJ (GY). On June 6th OE3LFA (II) and OE5GDL (GI). On June 18th F6EBF (DD). On June 19th YO2KHC/p (KG). On July 2nd IT9OWA/9 (GY), OK2KOZ/p (IJ), OK1KZS/p (JI), OK1KRN/p (JI), OK3KFY/p (II), OK3KEF/p (JI), HG9KOB/p (KI), OK1KRY/p (HI), OK2KMB/p (HJ), OK3KKF/p (JI), OK3KYV/p (JI), OK3KXM/p (II), OK2KZR/p (IJ), OK2KTE/p (IJ), OE1ELW/6 (HH), OK1KRU/p (HK), OK3RLA/p (JI), OK1KPL/p (HJ), OK1KTL/p (GJ), HG6KNI (JI), OE1MSS (II), I1BPU/2 (EE), I2UIY/2 (EE) and I2XAV/2 (EE). On July 4th FC1FQG (EC). On July 6th I1DEP (EF) and F1EYB (CD). On July 8th IT9TDN (HY), I8TUS (IZ), OE3LFA (II) and F1FEN (CF). On July 11th IWØBCU/IT9 (GY), F1KLI/p (EC), IT9QPF (GX), IØNLK/IT9 (GY) and IK1BXW (DD). On July 12th IW9AJZ/IH9 (GW), IT9TDN (HY), IT9DTU/9 (HY) and IT9JLU/9 (HY). On July 16th IW9AJZ/IH9 (FW), IW9AOR (HY), I8TUS (IZ) and I2UIY/2 (EE). On July 17th I2ZZZ/2 (EE), I1KTC/4 (EE), YU1HFG (KC) and F8OP (CG). On July 19th IK1COW (EF) I2ZQN (EF) and YO2FP (KF). On July 23rd OK3KEE (II), FC1FQG (EC), OE5EFM (HI) and HB9CRQ (EH). On July 25th OE2KMM (GH), DL8MAS (FI) and DL5MAE (FI). On July 26th I1NU (DF), IW1AUQ/1 (DF), I1KTC (EF), I1TXD (EF), I2OWR (EF) and I2VUC (EF). On JUly 31st DL9MCC (GH) and DL3MBG (GI). On Aug. 7th IT9ZGY/9 (GY), IT9SAS/9 (HY), IW9AOO/9 (GX), IT9CYH/9 (HY), IT9BMT/9 (HY), IT9WPO/9 (HX), IW3ESW/IT9 (HY), IT9ZRQ/IF9 (GY), IT9TDN/ID9 (HY), IW3FCN/IT9 (HY), I8TUS (IZ), I1WKN/1 (DE), IK1AMF/1 (DF), F1DPU/ISØ (EA), IW2BNA (EF), HG9KOB/p (KI), OK2KZR/p (IJ), OK3KFY/p (II), OK3KMY/p (II), OK3KVL/p (JI), OK1KRU/p (GK), DKØOG/p (GI), OK1ATQ (HK), TO6HWY/p (DD), OE3LFA (II), OE5XXL (HI) and DL7ZL/I7 (JZ). On Aug. 11th F6BQJ (CF) and F6CJG (BF). On Aug. 12th YT5IL (LB). On Aug. 13th TO6HWY/p (DD) and IW4AJS/1 (DF). On Sept. 9th IT9OWA/9 (GY), IW9AOR (HY), IT9TDN (HY), IT9TQH/9 (GY), IW9AOO (GX), I8TUS (IZ), I1KTC/4 (EE), I2UIY/2 (EE), I4EAT/ISØ (EZ), ISØDKU/ISØ (EZ), IW2AI/2 (EF), OK2KVI/p (JJ), OK2KAJ/p (JJ), OK2KZR/p (IJ), DL7WCY/p (GI), OE6TGD (HH), OK7ZZ (II), YU7BCD/5 (KA) and YO5KAS/p (LG). On Sept. 4th OK1ATQ (HK), OK2KOZ/p (IJ), OK3KPV/p (JI), OK2KQQ/p (JJ), LZ2KTS/p (LD), IW1AVG/1 (DF), I1AXE/1 (DE), HG6KVB/p (KH), OK1KUU/p (IK), OK1KRU/p (GK), OK3YDZ/p (JJ), HG9KOB/p (KI) and YO7DL (LE). Tnx fer info Boban.

70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-

DC9XO (EM14a) wkd via tropo on June 6th G4FJW (AL), G3JXN (ZL), G6CSY (AL), G4NQC (??), G6JJY (AL), G8FBZ (AL), G4LRT (ZM), G3LQR (AM), G3SHK

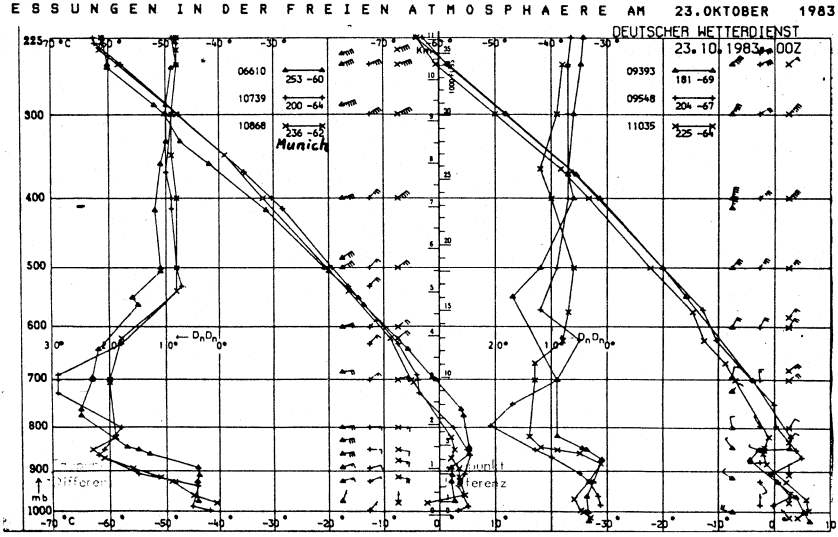
(ZK), G4MKF (ZL), G4ANT (AM) and G8VLL (AM). On June 11th ON5BW (BL) and ON6AT (BL). On June 26th ON4ASL (BL). On July 2nd DKØOX (EI), OK1KRA (GK), HB9MIN/p (DH), DG4GAN (EI), DG1NZ (FJ), G4LOJ/p (AM), G8TFI/p (AL), DF4CS (FI), DL1MAX (FI), DF6GX/p (EH), DF3GY/p (EI), DG6GP (EI), DFØTH/A (EJ), OE9XXI/9 (EH) and DF9OO/p (FH). Description of my station is TS77Ø, PA 1x 2C39BA. Preamp GaAs FET MGF14ØØ. Ant.: 4x 20el yagi (DL6WU), 12m above ground and 6Øm asl. tnx fer info Manfred.
DK5AI (FL33b) wkd via tropo over 5ØØ kms on Sept. 25th G4CBW (YN), F6DWG (BJ); OZ1HDA (ER), F6ECI/p (AF), F6GCJ (AG), F6EZV (BI), F5NS/p (ZJ), F6CCH (ZG), F6ETI (YH), F1GYA/p (BF), F2LQ (ZI), GU2FRO (YJ) and F1BUU (ZE). On Sept. 26th SP6ASD (HL) and OK2KZR/p (IJ). On Sept. 28th G4BVY (YM), EI9Q (WM), G4LU (YM), GW4WSS (YN), GW6IGY (YN) and GW6EUT/p (YM). On Oct. 1st HB9BDI/p (EG), SP6LB/6 (HK), SP6ASD (HL), SP3TL (HM), G6EKR/p (AL), HG2KRD (IH) and YU3DMN/3 (HG). On Oct. 2nd F6CTT/p in AJ. tnx fer info Wolf.
DL7QY (FJ61e) wkd via tropo qrb >7ØØkm on Sept. 22nd 2154 F1DPX (ZHØ2a) 59+ 59+, 2209 F1EAN (AG22f) 59 59, 2219 F1FHI (ZH63d) 59 59. On Sept. 23rd 1Ø54 G3AUS (YK32j) 59 59, 1730 G4KIY (ZM4Øj) 59 59, 1758 G3APY (ZN64) 58 57 and 2217 G6CBN (ZO23g) 55 53.
On Sept. 24th at ØØ3Ø SM6HYG (FS58f) 53 53, Ø616 F6ETI (YH24c) 57 57, Ø826 F2LQ (ZI72c) 52 54, 1Ø1Ø OZ2OE (EP1Øf) 59+ 59+, 1Ø38 F8OD (ZH63c) 53 57, 1Ø4Ø F6GNR (ZH63g) 57 59, 1Ø42 F6GAF (ZH48h) 53 59, 1923 F6APE (ZH57b) 59+ 59+4Ødb and 1938 F6CCH (ZG11a) 55 59.
On Sept. 25th at 1513 F1GGS/p (BF29c) 54 56, 1534 F1GYA/p (BF16g) 57 59, 1620 F1FYE/p (AI46j) 59 59, 1636 F6ABZ (BF16j) 52 58, 1719 F1DYQ (AI77c) 53 59, 1721 F6CGJ (AG13a) 59+ 59+, 1803 F6ETI (YH24c) 59 59, 1806 F1DV (BG78a) 54 55, 1815 F6CJF (ZH7Øa) 59 59, 1821 F6CBC (ZE18a) 59 59, 1847 F1BUU (ZEØ8e) 59+ 59+, 1918 G6VEM/p (AK14h) 59 53, 1926 F1FVZ (AI67d) 59 59, 1933 F6ECI/p (AF57b) 59 59, 2ØØ7 F1FVP (ZF8Øj) 57 59, 2Ø35 IW1AHH (DF15c) 57 56, 2Ø52 F6BEG (CF15f) 529 56, 2114 GJ3YHU (YJ7Øh) 559 579, 2130 OZ1HDA (ER49c) 59 59 and 2355 SP1FPG (HN43c) 519 57.
On Sept. 26th at ØØØØ G4MVN (AK12f) 59 59, ØØ53 SM7CFE (HQ68d) 59 59, Ø15Ø OZ1CFT (HP74b) 58 58, Ø232 F1FBE (AD28c) 59 59, Ø249 F6EXK (AFØ5j) 59 59, Ø825 F9XG (AJ31a) 59 59, Ø83Ø G3VVB (XK57f) 57 59, Ø857 GU2FRO (YJ49g) 52 55 and Ø927 F1FTB (ZH45d) 59 59.
On Oct. 1/2nd during the contest: at 1450 I4LCK/4 (FE67e) 57 58, 1654 F6CTT (AJ14j) 55 55, 2229 OK1DJW/p (IK41d) 53 57, Ø222 HB9RBB/p (EGØ3f) 59 57, Ø246 OK2JI/p (IK76c) 559 579, Ø9Ø5 HB9BDI/p (EG13f) 59 59, 1153 F6CIS/p (BF21j) 58 59, 1240 F1FEN (CF74c) 59 59 and at 1259 F1DPX (ZHØ2a) 59 59.
In the night from Oct.12th to 13th hrd the beacon FX1UHF (BI) 539/599. Only one QSO was made with F1EHN in BI11d with 59 59 reports at 2339. F1EHN asked me to move to 2m band because he did not work "FJ" square on 2m and after qsy it was very hard to complete a QSO there with 41/52 reports. On 7Ø cm signal reports with similar ERP were much more stronger as well as 59+2Ødb.
On Oct. 2Øth a small opening from over here into west toke place during the evening hours. At 1756wkd F6EYTI (YH24c) 53 54, 2ØØ5 F1FHI (ZH63d) 53 55, 2Ø1Ø F6ACA (BI24b) 59 59, 2116 F6GGF (BI12j) 519 58, 2124 F1DME (BI12j) 59 59, 2136 F6DWG (BJ41j) and at 2143 F1FYE (BI25f) 58 59.
On Oct. 22nd the band opened from over here (FJ61e) at 13ØØ gmt. Hrd following DX beacons: OZ2ALS (EP) max 4Ødb, OZ7IGY (GP) max 4Ødb, from 16ØØ LA3UHF (ES) max 25db, from 163Ø GB3MCY (ZN) max 25db and GB3ANG (YQ) 5db. After 193Ø SK6UHF (GR) max 1Ødb. Wkd at 1346 OZ9SL (FP74g) 59 59, 18Ø8 G6LTW (AL72c) 59 59, 1825 G4RNL (YN47d) 51 52, 1921 OZ1ABE (GP12j) 59 59, 1942 OZ1EYE (FQ41h) 51 56, 1945 OZ1IVW (FQ41h) 53 55, 1948 SM6CMU (FR5Øb) 41 52, 1959 OZ9TM (GP22b) 57 59, 2Ø22 OZ1HRA (EQ17d) 59+ 59+, 2Ø28 G6SVJ/p (ZN71d) 52 55, 2259 SM6CEN (FR4Øb) 419 54 and at 2351 OZ9IT (EQØ4h) 55 57.

The weathermap below shows the situation over Europe on October 23rd. Indrawn you can see the way of warm air into the region of tropo condx. Die Wetterkarte unterhalb zeigt Europa am 23. Oktober. Eingezeichnet ist der Weg der Warmluft bis in das Gebiet der überreichweiten.

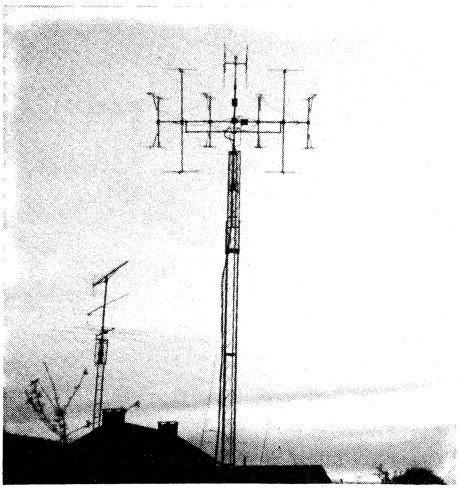


In the next picture the temperatureinversion is shown at abt. 1500m altitude when the temperature changes at abt. 400m 5 degrees C back to plus. The big distance of abt. 400 is the reason why condx on the microwaveaerea weren't as good as on VHF and up to 70cm. Das nächste Bild zeigt die Temperaturinversion am 23. Okt. in ca. 3000 m Höhe. Die Temperaturumkehr von ca. 5 Grad C bewegt sich über eine Strecke von etwa 1000 m, was zur Folge hatte, daß hier nur Bedingungen für 2m und 70cm auftraten und die Beugung für die Mikrowellenbereiche nicht mehr ausreichte.

On Oct. 23rd wkd at 0000 OZ1FAL (FQ61j) 57 59, 0109 G6CBN (ZO23g) 54 55, 0118 G3NWU (ZO24b) 51 55, 1018 OZ9DT (FP60c) 59 59+, 1041 SM4AXY (HT55c) 55 59, 1049 SM7NNJ (IQ22j) 57 59+, 1102 SM5EFP (HT50e) 519 55, 1106 SM0FMT (IT50h) 529 57, 1108 SM6DJO (GQ02c) 55 57, 1119 SM0BYC (IT70b) 59 59, 1127 SM0DJW (IS10d) 59 59, 1134 SM1BSA (JR22e) 57 58 and at 1143 SM7GWU (HS75c). After 1200 the band closed for long dx.



On Oct. 26th the band opened again into west in the morning hours. First dx contact were made with F1FHI in ZH63d (who else hi!) at 1120 59+ 59+. At 1131 G4DGU (XK09f) 59+ 59+, 1134 G3AUS (YK32j) 59+ 59+, 1202 G3VVB (XK57f) 59 59, 1232 G4MVN (AK12f) 59 59, 1238 ON7MB (BK50e) 59 59+, 1257 G6AIW (ZK18c) 57 59, 1338 G4NDG (YK03e) 55 59, 1343 G6EQM (XK50e) 53 53, 1406 G4HFO (XK56b) 59 59, 1454 G6LTW (AL72e) 55 57, 2030 G4MAW (YK43g) 59 59, 2101 F1DZB (ZJ78a) 56 58, 2104 F9LT (AI20d) 519 57, 2123 F9NW (AJ46a) 55 59, 2126 F6EMU (AI77j) 51 53, 2203 G8NDN (AK05b) 55 56, 2206 G6ETA (AL56a) 53 54, 2211 G3JXN (ZL39e) 54 37 and 2216 G3BPM (ZL48d) 52 52. No english beacons were heard. FX1UHF (BI) and FX3UHF (ZH) heard max. 40dB a.n.l.On Nov. 10th wkd at 2052 G3COJ (ZL37a) 55 57. Mni 73's de DL7QY.



F1FHI (ZH63d) wkd via tropo qrb more than 1100km: On July 3rd OE9XXI (EH39c) and DKØBN (FH33c).On July 14th SM6HYG (FS58f). On July 15th DJ9BV (EN40c), DF1XU (FN22e) and DC2XK (EN21). On Aug. 29th LA3FV (FT71b), LA3VW (ES34b), SM6HYG (FS58f), OZ1IPU (FR52d), GM6LNM (XP07e), SK6AB (FR30c), OZ1IVW (FQ41h), SM6GWA (FS27j), OZ1CDQ (ER30e), OZ1CFO (ER79j), SM6CEN (FR40b), SM6CMU (FR50b), OZ1OF (EQ78b), SM4CJK (GT49f) and OZ1HDA (ER49c). And now qrb more than 1300 kms: On Sept. 25th OZ9SL (FP74g), OZ1OF (EQ78b), OZ2OE (EP10f), OZ9PZ (EQ75b), SM6CMV (FR50b), OZ1CSI (HP75h), OZ7LX (FP49e), OZ3ZW (FO), OZ9FW (GP31b), SM7NJF (HP31j) and OZ1HTB (HP74a). On Sept. 26th SM7CFE (HQ68d), OZ1ABE (GP12j), OZ1CFT (HP74j), SP6AZT (IL76h) (3W!), OK1VLA

(HK70g), SP6LB (HK19a) and Y35YC (HN31f). Wkd between Sept. 22nd and 26th more than 300 stations from F, ON, G, GM, GW, GU, GJ, GI, PA, DL, OZ, SM, Y2, OE, OK, SP, I, HB, EA and OK. tnx fer info Jean.
F6ETI (YH24c) wkd qrb >600km via tropo on Jan. 11th 1983 G6ADE (ZN) and G8XPZ (ZN). Jan. 17th HB9RHM (DG). On Jan. 22nd PE1CQQ (DM), PE1FCQ (CM), PA0SHF (CM), PE1AVG (CN), DF5DL (EL), DL7APV (GM) 1295km, DK6AQ (FL) 3W + 2el 1078km, PA0BWL (CL), PE1GXU (CL), ON4ASL (BL), ON1ATV (CL), PA0WNB (CL), PA0ERW (CL), PA0ASL (CL), PA3BPC (CM), PA3CJP (CM), PA3BYI (CM), Y23FG (FM) 1174km, PA2GBK (CL), DL3EAG (DL), DL3YB/A (EM) 1081km, DB1BP (DN), HB9MTY (DG), hrd DB0AC (DJ55j) 529, wkd DL3NQ (EJ), DL1EY (FJ) 1074km, DL3NAE/A (FJ) 1079km, DB4AG/p (FL) 1068km, DG1NZ (FJ) 1071km, DK5AI (FL) 1084km, DC7QH (GM) 1299km, DJ5BV (DK), DL1SBE (EI), DL7QY (FJ), DB4LT (EQ) 1166km, DB5VT (DJ), Y22ME (HM) 1366km (odx), PA0EZ (CM) and DF7VX (EL).
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As the following weathermap shows, the best assumption for good tropo propagations, and it came true on Sept. 24th to 26th. As you can see on the map, the low pressure carried rather warm air from north-west Africa and the highpressure beside turned the air right over central Europe. Die folgende Wetterkarte für den 25. Sept. zeigt eine Wetterkonstellation, wie wir sie uns nur wünschen konnten. Das Tiefdruckgebiet transportierte sehr warme Luft aus Nordwest Afrika an seiner Ostseite nordwärts und das danebenliegende Hoch lenkte die

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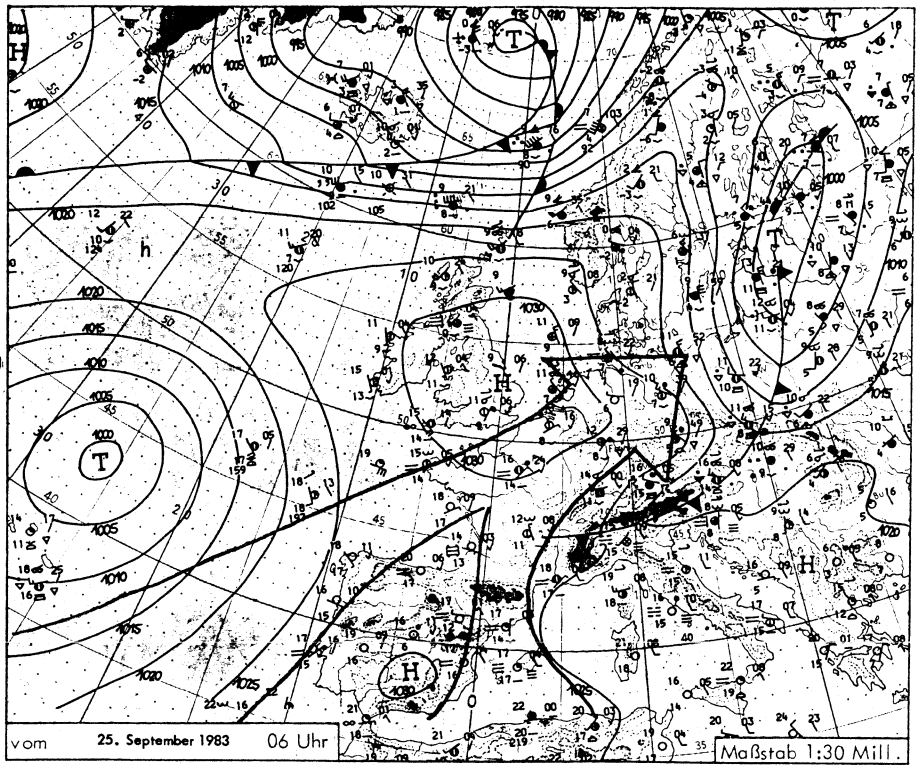

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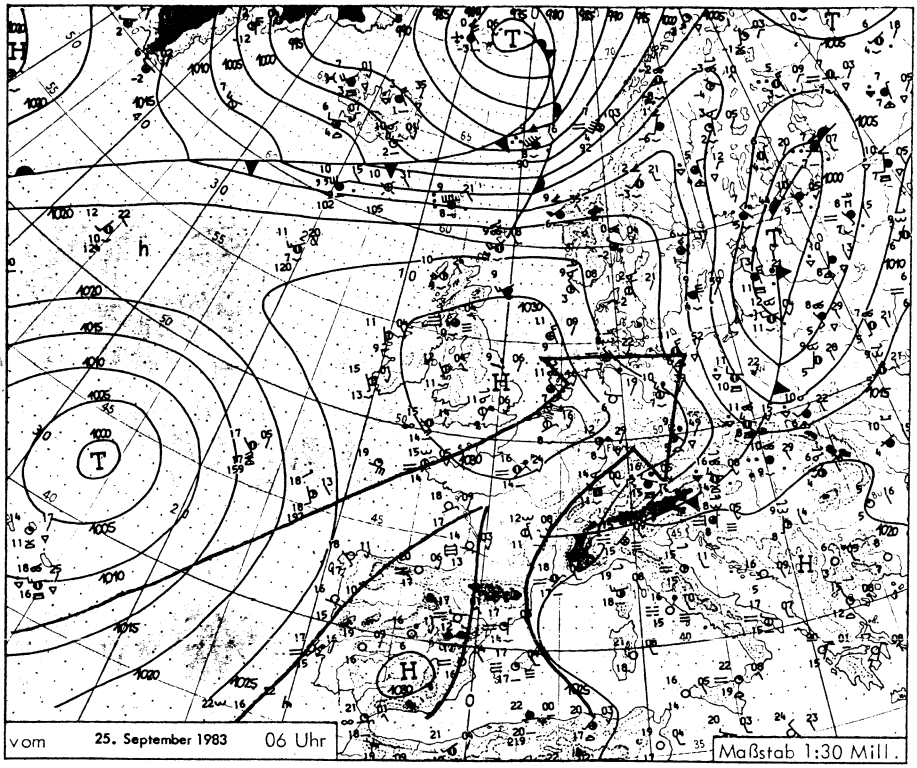

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Robinson, 15 Ferry Lane, Felixstowe, IP11 8VR, England. tnx fer info Dave.
G4MCU (AL23f) wkd via tropo on June 18th DF6LT FO. June 6th OZ9IT EQ, OZ1CFO ER, LA8AE FT. July 7th OZ1IPU FR, SM6CMU FR. July 30th LA6LCA FT, OZ9FW GP. Aug. 29th SM6HYG FS, SM6GWA FS, OZ1IPU FR, LA3FV FT, LA3VW ES, SM6CEN FR, SM4CJK GT. On Sept. 23rd HB9CRQ EH. Oct. 22nd Y23BD GM. Oct. 23rd OZ1HTB HP and Oct. 25th F1AJD AF. tks fer info Jon.
HB9MFL (DH69h) 430m asl wkd via tropo on Sept. 23rd at 2024 DD4QX/p 56 55 EM75b 550km, 2046 DB6EZ 53 53 DL56g 456km, 2055 DF5OP/A 55 53 DL17f 505km, 2058 DD4QW 52 53 EM73f 536km, 2106 DK2PH 54 52 EL03e 522km, 2108 DC8FU 57 55 EK73c 322km and at 2146 DG1BAU and DD1QE 54 52 DM48j 579km. On Sept. 25th at 0725 F6APE 51 51 ZH57g 623km. tnx fer info Armin.
LA8AE (FT) wkd on July 30/31st OE3XUA (HH), HG1KZC (IG), OE5EFM (HI) and SP6ASD (HL). tnx fer info Ole.
OK1DIG/p (GK40j) wkd qrb > 500 km: On May 7th DK5VI/p (DJ) and DJ5AP/p (EH). On Aug. 7th HG9KOB/p (KI) and OK0WCY (KI). On Oct. 1st OZ7LX (FP), OZ2LD (FO), SK7OA (GP), DK4LI (EO), HB9BDI/p (EG), DF6GX/p (EH), DK5VI/p (DJ), OZ7IS (GP), OZ9DT (FP), OZ6OL (FP) and SM6FYU (GQ). On Oct. 2nd YU2DG (JF), HB9KK/p (DG), F6BUF/p (DI), DL0GS (DJ) and DF0AP/p (DJ). And from home QTH HK41f wkd on July 31st LA8AE in FT. tks fer info Dan.
ON5QW (BL80f) wkd via tropo on June 21st OY9JD/p (WW). On July 11th OZ9IT/A (EQ). On July 12th LA8AK (DS), LA1YCA/p (DS), LA8AE (FT), SM6GWA (FS), OZ1AXX (FQ), SM6CMU (FR), OZ5GN (EQ), SM6AFV (GR) and SM6HYG (FS). On July 14th OZ1FHU (FP), OZ1EKI (EP), SM7FMX (GP) and OZ1HTB (HP). On Aug. 8th GM3YGF/p (YQ), GM5DTB (ZR), GM8AAP/p (YQ) and G8PNN (ZP). On Aug. 10th SM6FYU (GQ), LA9UX (FU), LA8AE (FT), LA6LCA (FT), SM6HCO (GR), LA9T (FT) and SK6AB (FR). On Aug. 11th OZ7LX (FP), LA8AK (DS), SM4FXR (HT), OZ9IT (EQ) and GB4ULX (XJ). tnx fer info Robert.
SP1FPG (HN33c) wkd via tropo on 70cm qrb >500 km on Sept. 25th PE1DCD (CL13a), PA3BP (CM66b) and DL7QY (FJ61e). On Sept. 26th F6DWG (BJ61e) and hrd HB9AMH/p (DH66c) and F1FHI (ZH63d). On Oct. 23rd PA0RDY CM, PA0EZ CM, DF5LQ EO, PE1ALA CM, DJ9BV EN, DJ8PB EO, DF1OH EM and hrd UA3LBO QO. tnx fer info Henryk.
SP9FG (JJ70b) hrd on Sept. 29th 1983 between 09 and 10 gmt on 432 MHz following beacons: DF0AAD 599, DL0UB 519, DB0AH 519 and OZ2ALS 519. Jurek wkd on Qvt. 23rd G4LOJ, 2 x PA, 3x OZ and mni DL. tks fer info Jurek.

Continued from page 309 :

and SM7GWU.
Strong wind started on 13.8. at 2200 GMT, peaking up to 150 km/h. Antenna brake was broken so any work was very difficult.
Tks fer info Boban.

70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-

G4PVM (XJ05h) wkd:

12.08.83	2000	2400	DK1PZ	EL	26	26		C

Tks fer info Paul.

Dear OM's, please note for the future:
If possible enclose in your MS reports the complete QTH locators as well as the number of bursts and pings and the duration of the longest reflection in a QSO or sked. Vy 73 de DL7QY.

METEOR SCATTER NEWS

by D F 2 Z C
PO Box 16 12
2390 Flensburg

Some facts and personal comments about the change in DUBUS-Work in 1984:

1. This will probably be the last MS-News edited by DF2ZC.
2. After a long term of discussion the meeting of the Berlin-DUBUS-Group on 20.09.83 decided to hand over all the manufacturing of the DUBUS-Issues to DL7QY; so that DUBUS is made by 7QY only in future, starting with No. 1/84.
3. Moreover they asked all the remote editors of special columns as MS,Es etc to get into contact with DL7QY to discuss about their futural (team)work with him. The remote editors were informed of that in October.
4. About the middle of November DL7QY sent a letter to all DUBUS-Editors and wrote that until then only 2 of them had contacted him to talk about continueing their columns. (I myself had not yet talked to him; 1/84 is usually printed about March/April so there were about 5 months and not so great need to hurry).
   Claus also asked the others to send their infos they had received via direct to him because he already wants to make the 4/83(contrary to the agreement with the group, as above!!).
   I phoned to the others in Berlin who told me that this was not true. So I answered to Claus that I did not send my infos to him but make my MS-Column like all the time before. Moreover I wrote that referring to his letter from November I must think that his main interest is to make a DUBUS of his own, a "DL7QY-News" because he obviously doesn't want anybody else within it. I told that it was not because Iwanted to retire that I had not answered yet; really I wanted to continue my work. Iasked him to write me a letter or phone me until Dec.6 1983 if I shall continue the MS-News and therefore my conclusions above were wrong. Until today (Dec. 6, 1983) no letter or phone call from 7QY has reached me.....
   (Dec 6th was deadline for Dubus 4/83)
   So I am very sorry to having to stop my work but I do not beg anyone.

vy 73s to all, see you on 2m
yours Bernd
D F 2 Z C

There are still MS-Lists available at my address.
Costs 3 IRC + 1 IRC for mailing.

Supplements to the MS-List this time on page 4/MS

DL7AN DN36a wkd:

7.o8.	13oo-15oo	DLØIV/I7	JZ	26	26	1o	2o	C	
1o.o8.	o4oo-o515	I3LGP	GF	26	--	3	7	NC	
	17oo-18oo	HG6KVB	KH	26	26	17	15	C	
	21oo-22oo	F6CTW	BC	26	--	19	23	NC	nil after
11.o8.	o4oo-o5o5	YU3FM	HG	26	26	2o	18	NC	213o
	18oo-19oo	YU3TSB	HF	26	--	1	1	NC	
	2ooo-21oo	OE1APS	II	26	26	1o	12	C	
12.o8.	o743	F1JG	CD	27	27	1		C	RANDOM
	o754	EA3ADW	BB	37	37	1		C	RANDOM
	o8oo-o811	F1EFW	CG	26	26	2	4	C	
	o93o-o94o	YU7NTU	KF	26	26	1o		C	RANDOM 6os
	1o3o-113o	SM3JAW	JX	26	26	12	8	C	2os
	2ooo-21oo	YO2IS	KF	26	26			C	
	21oo-213o	YU1MBO	JE	26	26	7	9	C	
13.o8.	o6oo-o63o	I4YNO	FE	26	--	3		NC	
	o645-o735	SM3AZV	IX	26	26	24	8	C	
	o9oo-1ooo	TO6DMD	DD	26	--	16	13	NC	7os
	1o41-1o43	I4YNO	FE	38	26	1		C	2 min
	114o-12oo	F1KBF	ZC	26	27	8	4	C	1os
	163o-174o	LA1K	FX	26	26	12	4	C	5s
	2ooo-2o45	HG4XH	JH	26	26	12	6	C	
	223o-23oo	IT9GSF	GX	26	26	7		C	
14.o8.	o1oo-o2oo	YU6AA	JB	26	26	6	6	C	

NIL:YU7KMN,HG1KSO,G3BW,YU7AU,F1GCA,IW2BNA,I5WHC,IT9GSF,YO4AUL, EA5DFY,YU1AWW,I1KTC/4

vln dk fer info, lbr Manfred

G3LTF reports about perseids:

5.o8.	oo45-o14o	YU2JL	HD	27	27		C	RANDOM
6.o8.	2ooo-2o47	YU4GJK/4	JE	26	27		C	
7.o8.	22oo-23oo	YU1POA	KE	26	--		NC	
	2337-o14o	YU2ANB		26	27		C?	RANDOM
9.o8.	23oo-oooo	HG8ET	KG	26	26		C	
1o.o8.	223o-231o	YU3FM	HG	26	36		C	2os
11.o8.	o6oo-o633	HG1KSO	IH	--	--	1	NC	
	23oo-24oo	I1ANP	EE	27	26		C	2os
12.o8.	o2oo-o245	EA3LL	AB	26	27		C	
	2ooo-2o3o	HG1KSO	IH	--	36		NC	
	21oo-2127	IW2BZY	EF	26	27		C	15s
	22oo-231o	YU2DI	JF	26	36		C	
13.o8.	oo52-o118	YU3ZW		26?				RANDOM SSB
	o128-o151	F1FIB	BD	26				" "
	o152-o232	I1KTC/4	EE	36				" "
	o7oo-o742	TO6DMD	DD	26	27		C	
	o938-1ooo	I4YNO	FE	26	--		NC	
	1o1o-1o25	I4MKN	GE	26	26		C	
	2158-2159	YU1AWW	KE	37	27		C	
	22oo-2247	HG1KSO	IH	26	--		NC	
	2325-24oo	IV3EU	36	38			NC	no rogers

NIL: OH7PS,IW2BNA,YU6AA/6,I1KTC/4,I4YNO

mni tnx fer info

SM6EOC (GQ25f) wrkd MS

					S	R	B	P		
JUN	29	04.00-06.00	UK6LDZ	TH	26	-	1	-	NC	
JUL	17	05.00-05.55	DL3MBG	GI	26	27	6	24	C	3s
JUL	20	08.00-09.00	C31XV/p	AC	-	-	-	-	NC	C31XV Not QRV,stormy WX
JUL	21	12.00-12.40	C31XV/p	AC	26	26	7	16	C	2s
JUL	21	19.20-20.05	F8OP	CG	27	26	6	15	C	2s
JUL	22	06.55-07.20	F6FHP/p	CE	26	26	7	12	C	3s
JUL	24	06.00-07.00	IW5AVM	FC	-	-	-	-	NC	NIL SSB
JUL	25	07.00-09.00	F6DRO	AD	-	-	-	-	NC	NIL
JUL	28	06.00-07.00	UB5LNR	RJ	-	-	-	-	NC	LNR PA FAILURE
JUL	28	08.00-08.40	F6DRO	AD	26	27	10	24	C	3s
JUL	29	00.00-01.45	ISØPUD	EZ	26	27	4	15	C	4s
JUL	29	21.55-22.50	SM2IUE	IZ	26	26	6	9	C	1,5s
JUL	30	01.00-03.00	UA6ALT	UF	-	-	-	-	NC	NIL
AUG	2	04.00-04.35	F9HS	BD	26	26	13	17	C	2s
AUG	3	12.10-13.05	F8CS	CH	26	27	4	8	C	2s
AUG	3	21.00-21.40	LA9IC	HB	37	26	5	11	C	8s
AUG	4	06.00-06.07	F1KBF/p	ZC	26	26	2	1	C	10s SSB
AUG	4	21.30-22.15	IV3IBX	GG	27	27	5	14	C	3s
AUG	6	14.30-15.30	DK9TU	EI	27	25	3	1	C	20s
AUG	6	19.00-20.30	DLØIV/I7JZ	-	-	-	-	-	NC	NIL
AUG	7	02.00-03.00	F1EIT	BG	-	-	-	-	NC	SSB
AUG	7	06.28-06.42	TO6DMD	DD	27	27	4	7	C	5s
AUG	7	22.00-22.40	SM2GGF	KZ	27	26	17	MNI	C	6s
AUG	8	04.00-05.20	UB5LNR	RJ	26	27	6	11	C	4s
AUG	8	09.00-10.00	I3YXQ	FF	-	-	-	2	NC	SSB
AUG	8	10.00-11.05	DLØIV/I7JZ	27	26	4	13	C	2s	
AUG	8	17.00-18.00	YO6XR/p	MF	-	-	-	-	NC	NIL
AUG	9	22.00-22.55	YU4WEU	IE	26	27	15	18	C	6s
AUG	10	08.00-09.00	EA4AAW	WZ	-	-	-	-	NC	SSB
AUG	10	10.30-11.45	SMØFSK/3GY	27	26	12	11	C	4s	
AUG	10	14.25-15.30	UK5IAZ	SH	-	-	-	-	NC	NIL
AUG	10	20.00-21.10	YU7AJH/5LB	27	26	7	6	C	4s	
AUG	10	22.00-23.05	IK2ABJ/2FF	26	27	8	10	C	2s SSB	
AUG	11	04.00-05.00	YU2EZA/2IC	26	28	7	9	C	2s	
AUG	11	11.00-11.32	G4NFD	XJ	27	27	MNI	MNI	C	15s
AUG	11	12.00-13.00	OH7TN/8	PZ	27	27	7	9	C	3s
AUG	11	14.35-14.55	OY5NS	WW	37	27	MNI	MNI	C	14s RAND.
AUG	11	20.00-21.00	HG9KOB	KI	27	26	3	5	NC	3s OTHER QSO ON FQ
AUG	11	22.00-24.00	LZ1YU	MC	-	-	-	-	NC	NIL
AUG	12	00.00-02.00	HG4KXG/3JG	-	-	-	-	-	NC	NIL
AUG	12	07.00-09.00	CT1WW	WB	-	-	-	-	NC	NIL
AUG	12	09.00-10.00	DB5ML	FI	37	-	1	-	NC	10s SSB
AUG	12	10.00-12.00	UA6BAC	SE	-	-	-	-	NC	QRM ON FQ
AUG	12	12.00-12.30	F1DPU/ISEY	26	-	2	1	NC	10s SSB	
AUG	12	13.00-14.00	YU6AA/6	JB	26	26	6	5	C	23s
AUG	12	14.00-15.00	UA3MBJ	SR	27	27	4	2	C	16s
AUG	12	16.00-17.15	OH7UE/7	PW	27	27	6	9	C	11s
AUG	12	22.40-23.05	SM4AXY/2LC	26	27	4	6	C	2s RAND.	
AUG	12	23.05-24.00	IT9GSF	GX	37	-	1	1	NC	8s SSB
AUG	13	00.00-01.00	EA1BLA	VD	-	-	-	-	NC	SSB
AUG	13	01.00-02.00	EA1OD	XD	-	-	-	-	NC	SSB
AUG	13	02.00-03.00	IW9AJZ	GY	26	-	2	-	NC	SSB
AUG	13	10.00-10.40	I6CXD/6	GD	-	-	-	-	NC	SSB
AUG	13	10.40-11.00	EI2CA	WM	37	26	7	4	C	15s RAND.

AUG	13	13.20-14.00	LZ1ZH	NC	-	-	-	-	NC	NIL	
AUG	13	16.00-18.00	UA3IDQ	QQ	-	-	-	-	NC	NIL	
AUG	13	22.00-22.55	UA6YBH	UG	-	-	-	-	NC	NIL	
AUG	13	22.55-23.20	SM4AXY/2	LA	37	26	8	4	C	9s	RAND.
AUG	14	06.00-07.00	OH7PS	OX	26	-	2	1	NC	SSB	
AUG	14	22.40-23.10	SM4AXY/2	JY	37	36	5	11	C	14s	RAND.
AUG	15	22.55-00.15	SM2LTA	JY	37	27	6	13	C	6s	
AUG	16	03.00-03.55	OH7UV/8	NY	26	28	4	9	C	27s	
SEP	1	04.00-04.45	YU7AU/5	KA	26	26	4	11	C	4s	
SEP	5	06.00-06.40	F6CRP/p	YG	37	26	12	MNI	C	11s	
SEP	11	04.00-06.00	UA3RFS	UM	26	27	4	2	C	2s	
SEP	16	04.00-04.45	DK6AS/ISØEA	26	27	4	7	C	2s		
SEP	19	22.00-23.45	YU1AWW	KE	26	26	6	8	C	1,5s	

73 de SM6EOC

I2 FAK (EF77G) WKD. IN SSB :

02.08	0600-0612	GW3NYY	XL	26	27			C		
04.08	0700-0800	PA2GFL	DM	26	27			C		
06.08	0600-0635	GW4EAI	YL	26	27			C		
07.08	0500-0525	SM6AFH	GQ	26	26			C		
08.08	0600-0700	SP6ASD	HL	26	-			NC		
09.08	0600-0612	F6DDV	XI	26	26	7P	3B	C	10S	
09.08	0700-0800	G8TGM	ZK	26	-	5P	1B	NC		
09.08	1700-1712	G8KWX	XJ	27	27	20P	4B	C	5S	
10.08	0900-0958	DH1LAC	FO	26	26	14P	7B	C	3S	
10.08	1400-1436	OZ1CSI	HP	26	26	17P	6B	C	6S	
10.08	2100-2147	SP6FUN	IL	26	27	8P	2B	C	4S	
11.08	0400-0421	GW6APZ	XM	26	26	12P	3B	C	5S	
11.08	0700-0800	SP6GZZ	IL	26	-	5P	1B	NC	2S	
11.08	0900-0930	PE1HWO	CL	27	26	8P	3B	C	12S	
12.08	0100-0125	OZ1IVW	FQ	26	27	12P	6B	C	5S	
12.08	0700-0735	SM6CMU	FR	26	27	15P	7B	C	5S	
12.08	0900-0930	G6CMJ	ZN	26	26	8P	3B	C	6S	
12.08	1300-1350	GM4CXM	XP	27	29	19P	6B	C	3S	
12.08	1400-1430	OZ1EYN	HO	26	37	4P	7B	C	13S	
12.08	1600-1609	SM7GEP	HR	26	26	4P	2B	C	10S	
12.08	2100-2137	GB2XN	XN	27	26	19P	16B	C	15S	
12.08	2200-2225	GI4GVS	XO	26	27	8P	5B	C	4S	
12.08	2300-2318	GW8JLY	YL	26	26	11P	4B	C	7S	
12.08	2325-2331	GM8YJU	YO	37	37	4P	2B	C	6S	RANDOM
13.08	0055-0103	OZ1BVW		27	27	5P	3B	C	3S	RANDOM
13.08	0600-0657	Y22IC	GN	26	26	5P	9B	C	3S	
13.08	0700-0741	ON5QW	BL	26	26	11P	6B	C	3S	
13.08	0914-0916	G4DSC	ZO	26	26		2B	C	30S	
L3.08	1200-1256	G4RGK	ZL	26	26	8P	11B	C	15S	
13.08	1300-1338	DK1KO	FN	37	27	11P	9B	C	15S	
13.08	2000-2057	SM5BEI	JU	27	26	9P	9B	C	3S	
13.08	2200-2217	SM6GWA	FS	27	27	3P	3B	C	5S	

I will be QRV for any MS SSB test; pse contact me.

My rig : Home made transceiver +PA 2x 4CX250R + 16 el.

QSOs of the MS-Expedition to EYØ3h:

									Operator
3o.o3.	oooo-o2oo	OE3CEW	II	26	26	1b	5p	C	DF1CF
	o2oo-o4oo	DL3MBG	GI	26	26	1	4	NC	"
	22oo-23oo	DK6AS	FM	26	27	2	5	C	"
31.o3.	oooo-o2oo	DJ5MS	GI	27	26	3	mni	C	"
	o2oo-o4oo	DK3UZ	EN	26	27	3	mni	C	"
	22oo-24oo	PAØRDY	CM	26	26	1	11	NC	"
1.o4.	o2oo-o4oo	DL1MF	GH	26	26		28	NC	"
	o4oo-o5o5	DL6NAA	FK	26	26	2	32	C	"
	22oo-24oo	PAØRDY	CM	26	26	3	9	C	DJ1OJ
2.o4.	oooo-o2oo	DL1MAJ	GI	27	27	1	23	C	"
	o2oo-o3o5	DL3MBG	GI	26	26	3	mni	C	"
	o32o-o5oo	DL5MAE	FI	26	26	6	mni	C	"
	131o-141o	DL8DAT	DL	26	27	2	21	C	DF8IK
	143o-16o5	OE6WIG	HG	26	26	5	17	C	"
	22oo-24oo	DL5MCG	FI	26	--		8	NC	DF1ZE
3.o4.	oooo-o2oo	DL9MCC	GH	26	26	1	4	NC	"
	o2oo-o4oo	DL1MBV	FI	26	26	3	12	C	"
	o6oo-o726	DK4MM	EK	26	26	4		C	DF7ZP
	12oo-13oo	PA3GCR	DM	26	26	5	2o	C	"
4.o4.	19oo-2o4o	Y22ME	HM	27	26	9	mni	C	DF8IK
	21oo-23oo	PA3COB	DM	26	27	1	11	NC	"
	23oo-o1oo	DF7KF	DK	26	26	7	21	C	"
5.o4.	o1oo-o3oo	DL3ZAL	EK	26	--	3	13	NC	"
	o9oo-1o15	PA2GFL	DM	26	26			C	"
	22oo-2255	Y22QG	FM	26	26	1	18	C	DF1CF
	23o5-24oo	Y23FG	FM	26	26	1	6	NC	"
6.o4.	oooo-oo4o	OK1FM	GJ	27	27	1	26	C	"
	o2oo-o3oo	DK8VS	DJ	26	26	2	46	C	"
	o4oo-o535	G4IJE	AL	26	26	3	mni	C	"
	1ooo-11oo	PAØXMA	DM	26	26	3	mni	C	DF1ZE
	11oo-1155	PA3ANQ	DM	26	26	8	3o	C	"
	2ooo-22oo	PA3COB		26	26	2	14	C	"
7.o4.	o6oo-o8oo	Y22HA	GO	26	26	24		C	DJ1OJ
	o8oo-o945	OK1OA	HK	37	27	9	mni	C	"
	1ooo-1115	PAØOOM	DN	26	26	9	mni	C	"
	1115-12oo	DL5DAV	DL	26	26	6	mni	C	"
	2ooo-22oo	DF7DJ		26	26	1	25	NC	DF1ZE
8.o4.	oooo-o15o	OK1AFN	IK	26	--		8	NC	DF8IK
	o2oo-o34o	OK2VMD	IJ	26	27	7	7	C	"
	o4oo-o54o	HB9QQ	EH	27	26	8	mni	C	"
	o756-1ooo	SP6GZZ	IL	26	27	1	5	NC	DF1ZE

NIL:HB9QQ,DL6ZAU,GM3WCS,UA3LBO,SM7FJE,SM7JUQ,DL1MF,UB5BDC, SM5CBN,DL5DAV,GW4LXO,DL5MCG,G3BW,DF6HT,OZ1EKI,DL3ZAL.

Supplements/corrections to the MS-List:

G4IGO YK K.F. Osborne; 14,Glebelands;Meriott Crewkerne; Somerset TA16 5RE Phone: Ø46Ø-73Ø88 starting MS-Activity March/April '84

I2FAK EF Franco Giorgi;via Priv. Zavattarello;27o43 Broni PV

tnx fer info

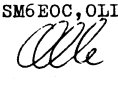
SK7HW MS-exp. to HQØ5e. Opr:SM6AFH,SM6EOC.Rig:300W out,15 el and BF981

OCT	20	23.00-00.25	IV3HWT	GF	26	26	14B	22P	C 3s
OCT	21	01.00-02.30	YU1ADN	KD	-	-	-	-	NC NIL
OCT	21	02.30-03.50	OE6WIG	HG	26	26	8	19	C 2s
OCT	21	04.00-04.50	YU7QED	KF	26	26	7	16	C 2s
OCT	21	05.30-07.00	YU2JL	HD	27	27	3	2	C 2s
OCT	21	07.00-07.45	F9HS	BD	27	26	4	10	C 3s
OCT	21	08.30-09.15	F6DRO	AD	27	26	4	6	C 2s
OCT	21	16.00-17.25	GM4CXM	XP	26	26	7	10	C 3s
OCT	21	20.00-21.30	DK2LM	EJ	26	26	5	19	C 3s
OCT	21	22.00-23.30	UA3TCF	WQ	26	26	5	14	NC 2s
OCT	21	23.30-00.30	G4IJJ	AM	26	26	5	16	C 2s Ended in Tropo 519
OCT	22	01.00-02.30	F5DE	AF	-	-	-	-	NC NIL
OCT	22	02.30-03.17	I3TJQ	GF	26	27	9	23	C 4s
OCT	22	03.17-04.00	I3LGP	GF	26	26	5	7	C 3s
OCT	22	04.00-05.30	YU7AU	KE	26	26	4	11	C 2s
OCT	22	05.30-06.20	DL3MBG	GI	26	27	13	45	C 4s
OCT	22	07.00-08.30	YU2EZA	IG	26	26	6	6	C 4s
OCT	22	08.30-10.00	EA3IH	BB	-	-	-	-	NC NIL
OCT	22	10.00-10.50	F6CJG	BF	27	27	5	30	C 20s !!
OCT	22	12.00-13.35	UA3TCF	WQ	26	26	8	15	C 3s ODX for exp.
OCT	22	14.00-15.30	G3WZT	ZK	26	26	3	13	NC NO RRR 1s
OCT	22	20.00-22.00	DL5MCG	FI	26	26	4	10	C 1s
OCT	22	22.00-23.30	LA3TQ	JD	-	-	-	2	NC
OCT	22	23.30-00.55	UB5EFS	RI	26	26	5	12	C 4s
OCT	23	01.00-02.30	I5MZY	FD	-	-	-	-	NC NIL
OCT	23	02.30-03.35	G3BW	YO	26	26	7	43	C 2s
OCT	23	04.00-04.45	YU7MAU	JF	26	28	7	16	C 2s
OCT	23	07.00-08.20	DL1MBG	GI	26	26	4	34	C 2s
OCT	23	08.30-10.00	UB5LNR	RJ	-	-	-	-	NC NIL

TNX to SM6AEK,SM7IFK and SPECIALLYto SM7EKU,Sven, who let us use some of his land for our caravan and for lending us a tower and electric power, as well as the help in putting the antenna up. Mni TNX also to the SK7HW CLUB for using their cs.Without the good support from the members it would not have been possible to make the exp.The interest from some of the members were great and we think that in the very near future there will be regular MS-activity from HQ. Since the main purpuse with the exp. was to show the club how to work MS and to make them interested we think we succeded.... Hpe to make another exp. to FS or some other needed square next spring or early summer. Cu then.

Best 73's from

SM6AFH,TOM and SM6EOC,OLLE



DF1SO EI27d wkd 1983

7.8.	0500-0700	YU7NTU	KF	26	26	8	11	C
	2000-2200	YU1POA	KE	26	27	6	10	NC
8.8.	1330-1435	YU1AWW	KE	26	26	6	4	C
	0600-0700	G8OPR	ZL	-	-	-	-	NIL SSB
	2000-2040	EA3ADW	BB	27	26	9	18	C
9.8.	0600-0800	UB5LNR	RJ	-	-	-	-	NIL
	1900-2000	UA3MBJ	SR	-	-	-	-	NIL QRM
1o.8.	0500-0700	OH6CY	MW	26	-	1	1	NC
	2000-2100	SM5BEI	JU	27	37	17	3	C
	2100-2200	GI4GVS	XO	27	-	2	-	NC SSB
	2200-2255	YU1BB/1	KE	27	26	12	14	C
11.8.	0600-0700	SM3JAW	JX	26	27	2	3	NC QRM
	1000-1100	IT9GSF	GX	26	-	1	2	NC SSB
	1200-1400	UK2RDX	MT	-	-	-	-	NIL
	2100-2153	GM8MJV	YP	26	26	9	12	C SSB
	2200-2400	YU2DI	JF	26	26	9	17	NC no rr
12.8.	0500-0600	F1JG	CD	hrd via tropo NC				
	0600-0700	YO6AFP	MF	27	-	1	3	NC
	0800-0900	YU2EZA	IC	27	-	2	3	NC
	1200-1300	GW4TTU	YL	26	-	4	6	NC
	1300-1400	GW4/PAØRL	Sp	26	27	19	12	C
	1800-1900	YO6AFP	MF	-	-	-	-	NIL
	2000-2200	YU1POA	KE	28	28	17	9	NC no rr
	2200-2400	UB5EFS	RI	-	-	-	-	NIL
13.8.	0200-0300	OZ1EKI	EP	-	-	-	-	NIL QRM
	0300-0400	EA7AJX	YX	-	-	-	-	NIL
	0500-0600	UK2RDX	MT	-	-	-	-	NIL
	0910-0920	GI4OMK	BT	26	26	1	long burst	C
	1030-1043	GI6ATZ	BT	26	27	1	long burst	C
	2000-2100	I7IWN	JZ	-	-	-	4	NC SSB
14.8.	0200-0400	YO4BZC/p6	1b:cq test YO6KNI NC					
	0530-6000	IT9GSF	GX	-	-	-	1	NC SSB
	0930-1030	YU1ICD	JE	-	-	-	-NIL	
	2200-2204	F6CRP	ZG	37	27	1	long burst	C
15.8.	0700-0800	EA1OD	XD	26	-	6	8	NC SSB
	0830-0950	LA1K	FX	27	-	3	16	NC
	2100-2200	SM5CBN	HS	28	26	25	29	C
	2200-23oo	EA1OD	XD	rotor defect sri!				
16.8.	2100-2300	G4IJJ	AM	26	26	14	8	C
22.8.	2000-2200	OZ1DJJ	GP	27	27	15	9	C
19.8.	2000-2200	SM7GEP	HR	27	26	33	50	C
25.8.	2200-2400	SMØEJY	IT	26	-	1	-	NC

_ DLØIV / 17 MS-EXP. fm JZØ1H

6.08.	17.00-18.30	HG8CE	KG	27	-	3b	3p	NC
6.08.	19.00-20.30	SM6EOC	GQ	-	-	-	1	NC
6.08.	21.00-22.30	SP6ASD	HL	-	-	-	-	Nil
6.08.	22.30-00.30	DJ5MS	GI	27	27	4	6	C
7.08.	01.00-02.30	DL1MF	GH	-	-	1	2	NC
7.08.	03.00-04.30	DL8DAT	DL	-	-	-	-	Nil
7.08.	05.00-06.30	ON7EH	CK	-	-	-	-	Nil
7.08.	10.00-10.43	ON7EH	CK	27	27	12	5	C
7.08.	10.50-12.00	DF7DJ	DL	27	-	2	-	NC
7.08.	12.00-13.00	DL8DAT	DL	27	27	12	5	C
7.08.	13.00-14.30	DL7AN	DN	27	27	17	9	C
7.08.	14.30-15.00	DK4TG	DL	27	27	19	8	C
7.08.	15.15-15.55	PAØRDY	CM	27	28	20	9	C
7.08.	19.00-20.15	Y22HA	GO	27	27	16	2	C
7.08.	20.15-21.05	Y22ME	HM	28	27	24	19	C
7.08.	23.00-00.30	DL1MF	GH	27	-	3	5	NC
8.08.	01.00-02.05	SM7FJE	GQ	27	26	10	10	C
8.08.	02.10-03.00	SM7AED	GQ	28	27	18	14	C
8.08.	05.00-06.20	OE3CEW	II	26	27	16	7	C
8.08.	07.00-08.05	F6BSJ	CG	26	26	6	9	C
8.08.	08.10-08.35	F8OP	CG	26	26	5	6	C
8.08.	08.40-09.45	SP6FUN	IL	26	26	14	2	C
8.08.	10.00-11.10	SM6EOC	GQ	26	27	8	3	C
8.08.	19.00-20.35	DK3FW		27	26	5	2	C
8.08.	22.30-23.30	G4PLZ	ZN	27	26	6	5	C
9.08.	01.00-02.40	SP6ASD	HL	27	27	6	5	C
9.08.	02.55-04.35	DF7DJ	DL	27	27	5	3	C
9.08.	07.00-08.15	Y21TC	GN	27	-	1	3	NC
9.08.	10.30-10.50	OE3XUA	HH	319-519				Tropo
9.08.	15.00-16.55	DH1LAC	FO	26	27	7	2	C
9.08.	17.00-18.35	Y38ZA	HN	26	26	5	4	C
9.08.	19.00-20.30	DF1CF	FH	26	27	5	-	C
9.08.	22.50-00.50	G4ABB	AM	26	26	12	20	C

1o.o8.	oo.5o-o2.45	Y22QG	FM	26	26	7	4	NC	no R
1o.o8.	o2.5o-o4.oo	DL4NAA	EJ	35	27	35	27	C	
1o.o8.	o5.oo-o5.25	EA3LL	AB	27	26	42	mni	C	
1o.o8.	o7.oo-o8.oo	DL5DAV	DL	-	-	-	-	Nil	
1o.o8	15.oo-16.oo	OK2VMD	IJ	27	27	12	15	C	
1o.o8	17.oo-18.2o	DJ4AX	DL	27	26	12	5	C	
1o.o8	19.oo-2o.3o	PAØBLD	CM	28	27	15	7	C	
1o.o8.	21.oo-22.3o	DK3UZ	EN	27	27	8	4	C	
1o.o8.	23.oo-23.5o	OZ5QF	EP	-	-	-	-	Nil	
11.o8.	o1.oo-o2.o5	Y22QG	FM	27	28	12b	3p	C	
11.o8.	o5.oo-o6.1o	SM7JUQ	GP	26	26	7	3	C	
11.o8.	o7.oo-o8.3o	OZ1OF	EQ	26	26	8	19	C	
11.o8.	15.oo-16.oo	DK1WB	FM	27	27	8	6	C	
11.o8.	16.oo-17.oo	ON4ACV	BK	27	27	1o	6	C	
11.o8.	18.oo-19.o5	I1ANP	FE	27	26	9	4	C	
11.o8	21.oo-21.3o	F1FIB	BD	27	27	1o	9	C	SSB
11.o8.	22.oo-22.4o	G4IJE	AL	27	26	12	7	C	
11.o8.	23.oo-23.3o	G3NSM	ZL	27	26	8	4	C	
11.o8.	23.3o-23.35	YU2RGK	HC	529	529	Tropo		C	
12.o8.	o1.oo-o1.4o	OK1KKH	HJ	27	28	27	12	C	
12.o8.	o1.4o-o2.o5	PA3BIG	CM	27	27	12	8	C	
12.o8.	o2.oo-o3.oo	GJ4ICD	YJ	27	27	8	4	C	SSB
12.o8.	o3.oo-o3.35	PAØOOM	DN	27	27	28	2	C	
12.o8.	o4.oo-o4.35	F6FHP	AE	27	37	29	6	C	
12.o8.	o8.oo-o9.oo	DF9CY	EI	27	28	8	4	C	
12.o8.	o9.1o-o9.35	OK1FM	GJ	27	26	6	2	C	
12.o8.	o9.4o-1o.oo	DL3MBG	GI	27	26	8	5	C	
12.o8.	1o.oo-1o.35	DK1PZ	EL	27	27	12	7	C	
12.o8.	11.35-12.15	OE3PUW	II	27	26	8	2	C	
12.o8.	12.55-13.45	DL7YS	GM	27	27	6	3	C	
12.o8.	16.oo-17.oo	OK2RDX	MT	27	26	5	2	C	
12.o8.	17.oo-17.3o	PAØNIE	CL	27	27	1o	6	C	
12.o8	19.oo-2o.oo	EA7AG	YW	26	26	3	2	C	SSB
12.o8.	2o.oo-2o.25	PAØXMA	DM	28	27	8	3	C	
12.o8.	21.oo-21.45	DK8VS	DJ	28	28	8	2	C	
12.o8.	23.oo-oo.oo	DF8IK	DJ	28	27	6	4	C	

13.08.	00100-01.00	PA2JOK	CL	28	27	5	3	C
13.08.	01.00-01.40	F9HS	BD	28	37	29	30	C
13.08.	09.00-09.50	GK2SGY	IJ	27	27	10	4	C
12.08	20.56-21.05	DG8NAQ		28	27	Random		SSB
13.08.	09.55-10.30	DF5DE	EK	27	-	2	1	NC
13.08.	21.00-22.25	G31MV	ZL	27	26	4	3	C
13.08.	23.00-23.25	DK8JF	DK	27	27	Random		SSB
14.08	09.39-0940	PE1HVT	CL	59	59	Spor.	ES	
14.08.	09.40-09.42	PA3CSG	CL	59	59	Spor.	ES	
14.08.	13.00-15.00	SM5CHK	HS	27	26	3	2	NC

Operater on the station was DL7YW,DC7OH,DL7ZL

Continued from page : 270

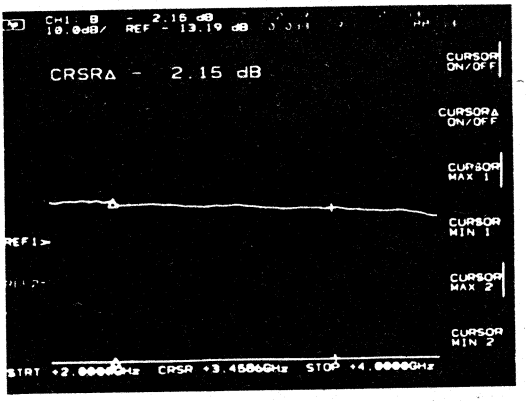


FIG. 4

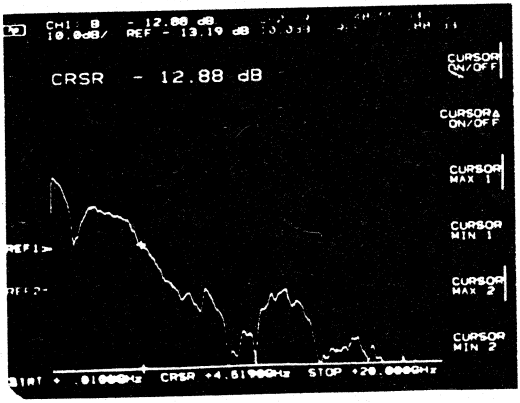


FIG. 5

DL7QY

METEOR SCATTER NEWS

by DL7QY

2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m

ALBATROSS MS — EXPEDITION TO XJ

by G4NFD

The site in XJ05h was 50m ASL on the top of a cliff with takeoffs with sea horizon from North East to West. Calls used were G4NFD, G8KWX, G4PVM and G4ULX. Operators were Jon GW4LXO, Paul G4PVM, Paul G4NFD, Peter G8KWX, Andy G4POC, Phil G8KQP, Bob GW6UTP, Jem G4NOY and Peter GM8OFV. In 6 days of operation 63 144 MHz and 1 432 MHz MS QSO's were completed plus many tropo QSO's.

Our equipment:

144 MHz Station 1: FT221R + 8877 PA, 2x 16ely F9FT rotatable (Back up PA 2x 4CX250B). Station 2: FT221R + 7213 PA, 8x 9ely F9FT fixed East. (Back up/ driver PA 4CX350A).

HF TS520SE. Generator 4kVA Diesel.

We set up our equipment on 7th August but the generator we had gave out 320V AC- we managed to last up a system using 2x4CX250B for 144 MHz to be QRV on the 7th for tropo and MS skeds weve started at 00Z on 8th August. On the afternoon of 8th August we obtained a new generator and got the 8877 and 7213 PA's going. On 9th August, 432 MHz was QRV after repairing the booms of the 21 ely which have all booken after being blown down the previous day. The weather was very good the whole time we were in Cornwall and we stayed QRV until 14th August.

QSL Cards via G4NFD, 92 Clevedon Rd., Tickenham, Clevedon, Avon, BS21 6RE, England. Please inclose IRC/SAE.

Our Group call in future contests and expeditions will be G4ULX. Next year we plan to QRV for the Perseids from Ireland in WL, VL and UL squares. We would like to thank University of Liverpool ARS (G3OUL) for loan of some of the aerial poles used.

DATE	GMT start	GMT end	CALL	QTH	REPORT tr	REPORT re	burst Nr.	pings Nr.	sec	remarks
G4NFD, G8KWX and GB4ULX wkd:										
08.08.83	0000	0130	YU3ES	GF	26	26				C
	0200	0225	OK1OA	HK	26	38				C
	0400	0430	DK0TU	GM	27	27				C
	1000	1130	SM0HAX	JT	26	28				C
	1400	1500	LA8OW	EU	26	26				C
	1500	1550	HB9CRQ	EH	26	26				C SSB
	2200	2255	OZ1EYX	GQ	26	27				C
09.08.83	0200	0304	IW4AHX	GE	26	27				C SSB
	0400	0455	SM5CBN	HS	27	26				C
	1000	1030	DL8DAT	DL	26	27				C
	1050	1130	Y22QG	FM	27	27				C
	1600	1718	I2FAK	EF	28	27				C SSB
	1900	1919	DB5ML	FI	26	26				C SSB
10.08.83	1200	1300	SM5BEI	JU	26	37				C
	2100	2200	OZ1FDJ	GP	26	27				C
11.08.83	0000	0100	YU2JL	HD	26	37				C
	0100	0140	IA4BXN	FE	26	27				C
	0200	0244	HG8CE	KG	27	27				C
	0500	0601	Y21PL	GN	59	27				C
	0800	0900	SM1BSA	JR	27	27				C

	0900	0944	SM7GWU	HS	47	27	C	
	1000	1018	SM4GVF	HT	26	27	C	
	1100	1128	SM6EOC	GQ	27	27	C	
	1200	1230	SM6CMU	FR	26	27	C	
	1300	1347	DL4NAA	EJ	26	27	C	
	1400	1500	SP6FUN	IL	37	26	C	
	1500	1556	DL6NAA	FK	26	26	C	
	1703	1734	DL3MBG	GI	26	27	C	
	1800	1832	OE5KE	HI	26	26	C	
	1900	1959	Y23FG	FM	47	49	C	
	2200	2300	I3TJQ	GF	26	27	C	
12.08.83	0720		Y21PL	GN	39	39	C	rand
	0753		Y21PL	GN	39	39	C	rand
	1216	1256	I3LGP	GF	36	36	C	SSB
	1300	1400	SK6HD	GS	26	26	C	
	1330	1334	YU7KMN	JF	26	26	C	SSB
	1400	1440	OZ1EYE	FQ	59	27	C	SSB
	1500	1600	SM6AFH	GQ	26	27	C	
	1504	1505	YU3EW	IG	27	27	C	rand
	1600	1652	OK1MAC	HJ	26	26	C	
	1700	1820	OE3OKS	IH	49	26	C	SSB
	1702	1746	OK1KKH	HJ	27	26	C	
	1800	1848	DL1MBG	GI	26	26	C	
	2000	2038	Y24QO	GM	26	27	C	
	2000	2037	OE1APS	II	26	26	C	SSB
	2037	2128	OE1RKU	II	26	26	C	SSB
	2100	2140	I4XCC	GD	47	27	C	
	2142	2212	I4MKN	GE	27	27	C	
	2219		IV3HWT	GF	38	39	C	rand
	2344		I2FAK	EF	39	27	C	rand
	2346		YU1EU	KE	39	27	C	rand
	2352		OK1MBS	HK	39	27	C	rand
13.08.83	0200	0300	YU2DA	IG	38	27	C	SSB
	0300	0400	IW4ARD	GE	38	38	C	SSB
	0447		YU3ES	GF	27	39	C	rand
	0800	0835	LA5IH	CU	26	37	C	
	1100	1145	DL3AAL	FM	27	48	C	
	1200	1228	LA9BM	EU	26	39	C	
	1228	1242	SM6AEK	GQ	37	37	C	
	1900	1930	SM4IVE	HT	27	26	C	
	2100	2200	IV3GBO	FE	38	26	C	SSB
	2200	2300	I4YNO	FE	38	26	C	SSB
	2300	2400	OK1KTL	GJ	27	37	C	

NIL hrd from:SM0EJY, YU3EW, DL1MBV, DG4NAE, YU7AJH, OY5NS, YU4WEU, YU7KMN, DF1ZE, YO2IS, OZ1CFO, OH5LK, IV3IBX, UA6YAF, HG6NQ and SM5AQJ.
NC with: HG1KSO, HG8ET, SM5MEX, SM7JUQ, OK1ACF, OZ1IUK, YU2SZZ, YU3TSB, OE5EFM, YO7AU, SM7FMD, OK3KCM and HG6KNB.
Not QRV for: DH8OAB, HG4YF, HG6KVD, OK1AFN, OK2SGY, DL1MBV, PA3AJG, F6DRO, LA1K, YU1AWW, EA3ADW, DL9MCC, SM7GEP, SM7IWG, DG9BAS, OK1VLA, F9HS, SP6ASD and DK3LL. tks fer info Paul.

DK6AS (FM44d) wkd:

13.12.82	2100	2125	4U1ITU	DG	27	26	14	22	4
14.12.82	2100	2200	YO5TP	LG	27	27	8	9	4
30.03.83	2200	2340	DF1CF/IM0	EY	27	27	8	3	
08.06.83	1900	2000	UB5BDC	MJ	27	26	6	6	
27.07.83	2000	2200	YU1ABH	JD	27	27	6	10	
06.08.83	1400	1520	OH6CH	MX	27	27	16	10	
07.08.83	0915	1005	DL7ZL/I7	JZ	38	27	12	7	6
09.08.83	2300	2325	SM4AXY/LA	HC	27	27	10	3	2

10.08.83	0300	0350	OH7UV?8	NY	26	26	5	14	5	
11.08.83	0000	0100	YU2EZA/2	IC	26	27	11	2		
	0100	0145	SM4AXY/LA	IC	27	27	6	1		
	1000	1115	OH7TN/8	PZ	27	26	9	9	14	
	2300	2355	EA1QF	YC	27	27	4		11	SSB
12.08.83	0200	0225	YU7AJH/5	LB	27	37	24	17	8	
	0600	0637	OH7PS	OX	27	26	6		4	SSB
	0700	0725	EI8EF	VO	27	37	11		8	SSB
	1900	1946	EA1OD	XD	27	27	4		4	SSB
	2100	2125	OY9JD	WV	27	26	5		6	SSB
	2130	2200	SM4AXY/LA	LD	27	27	5	3	4	
	2200	2300	UB5FDF	OF	27	26	4		6	SSB
13.08.83	0000	0020	IT9GSF	GX	37	36	7		35	SSB
	0100	0200	LZ1ZH	NC	26	26	5	7	33	
	1100	1123	OH4YA	OW	27	27	6		55	SSB
	2000	2200	UA3IDQ	QQ	27	26	11	2	8	
	2230	2300	SM4AXY/2	LA	27	26	7	3	6	
	2250	2400	UA3PFC	SO	27	27	3		5	rand.
14.08.83	0030	0057	YO7CKQ/8	NH	26	56	6		7	SSB
	0930	1000	LA8N	EV	27	26	15	11	4	

tks fer info, Andy.

F6ETI (YH24c) wkd:

23.07.83	2100	2200	F6EYM/EA	ZY10j	--	--	--	--		NIL
24.07.83	2100	2200	F6EYM/EA	ZY10j	26	--	9	17		NC
27.07.83	1800	1910	SM7GEP	HR24e	26	26	28	5		C
	1910	1955	OZ1EYX	GP	26	27	27	16		C rand
	1955	2035	SM5MIX	??	26	27	14	1		C rand
	2035	2105	SM6AEK	??	27	26	18	7		C rand
29.07.83	2000	2100	F6EYM/EA	ZY10j	26	26	14	7	8	NC
	2200	2340	SM4KVM	HT56d	26	26	22	5		C
10.08.83	0600	0635	DK1PZ	EL59g	37	27	25	26	10	C
	0800	1000	EA3IH	BB41e	26	26	13	5		C
	1400	1600	SM6CMU	FR50b	27	27	13	21		NC
11.08.83	0600	0800	LA9BM	EU32g	26	--	5	1		NC
	0800	0855	SP6FUN	IL53c	26	27	33	12	10	C
	0855	0955	SP6GZZ	IL54h	26	26	22	6	15	C
	1200	1255	OK1MDK/p	IK52c	26	27	22	3	3	C
	1255	1330	OK1KKH	HJ06c	46	--	6	--	25	NC
	1500	1600	OZ9PW	EQ27g	26	37	13	10		NC
	1600	1730	OZ1DOQ	GP34h	26	28	32	24	6	C
	1730	1855	OZ1FDJ	GP23h	26	38	19	9	15	C
	2000	2055	OK1KKH	HJ06c	26	27	14	5	15	C
	2200	2300	HG6KVB	KH02j	26	27	16	9		NC SSB
12.08.83	0800	0830	HG1YV/p	IH63b	--	--	--	--		NILSSB
	0900	0940	SM4IVE	HT68d	27	37	25	10	20	C
	1100	1245	OH5LK	NU37g	26	--	14	3		NC
	1400	1530	OZ1CFO	ER79j	--	--	--	--		NIL
	2100	2133	F1DPU/IS0	??	36	26	12	18	5	C SSB
13.08.83	0400	0540	LA1K	FX42c	--	--	--	--		NIL
	0600	0700	HG7PL	IH63b	--	--	--	--		NIL
	0800	0835	SM6AFH	GQ25c	37	36	15	19	10	C
	1000	1155	EA3ADW	BB22g	48	26	17	9	40	NC
	1200	1250	SK6HD	GS68j	26	27	15	5	5	C
	1400	1500	DL4NAA	EJ06a	--	--	--	--		NIL
	1600	1645	DL3MBG	GI53d	26	27	6	4		C
14.08.83	0800	0830	HB9RCI	EH62g	26	27	6	8	3	C SSB
	0830	0900	HB9CRQ	EH61b	--	--	--	--		NILSSB
	1000	1200	OK3CPY	JI60f	36	27	14	6	5	C
	1400	1455	SM4GVF	HT76a	26	28	29	13		C

03.09.83	0400	0535	OK3KCM	JI64g	26	26	17	3		C
22.10.83	0000	0100	OK3LQ	II46g	27	27	43	10	2	C

tks fer info Philippe.

HB9CRQ (EH61b) wkd:

27.07.83 OZ1DSK EP 26 26 6b 9p, 28.07. GM8TIC XQ 26 26 16b 9p, SM5CHK HS 27 27 7b 18p, 4.08. GW3NYY XL 27 39 16b 18p, 8.08. G4NFD XJ 27 26 8B 11p, SM5BEI JU 26 27 12b 20p, YU1EV KE 26 26 8b 23p, 9.08. GM8YJU YO 27 37 12b 24p, GM4CXM XP 26 26 12b 14p, 10.08. EA3AIR BB 26 26 13b 44p, YU1AWW KE 28 26 4b 14p, OZ1CFO ER 26 27 16b 34p, 11.08. LA5IH CU 26 26 6b 4p, 12.08. GB2XN XN 36 26 25b 25p, SM5MIX HS 26 27 4b 2p, G4GZA ZN 38 27 6b 10p, 13.08. OH2AUK/OH0 KT 27 26 9b 21p, SM6CMU FR 38 27 4b 4p, GI4OMK XO 39 29 7b 9p and 14.08. YU7MAU JF 26 39 5b 1p.

I3LGP (GF24g) wkd:

04.06.83	0300		DD0HZ	FN	--	--				NIL
11.06.83	0400		UK6LDZ	TH	--	--				NIL
	0900	1016	OZ1EYE	FQ	26	28	7	8	4	C
01.07.83	1350	1440	PA3CSG	CL	26	27	4	8	1	C
09.07.83	2100		F1FLN	BI	--	--				NIL
10.07.83	0430	0505	G4IJJ	AM	27	26	9	21	1	C
11.07.83	0400	0500	G4KTP	ZO	--	--		4		NC
12.07.83	0500	0555	G8XVJ	YN	27	27	14	33	4	C SSB
15.07.83	1415	1525	PA0OOM/SM1	JQ	26	26	10	10	2	C
19.07.83	0500		G4GMV	YN	--	--				NIL
	0700	0740	GM4COO	YS	27	26	8	12	5	C
21.07.83	0500	0540	G4KUX	ZO	27	26	15	37	2	C
	2030	2200	G4KTP	ZO	26	26	6	14		NC
22.07.83	0430	0540	PA3AVL	CM	27	37	15	40	1	C
23.07.83	0400	0505	UP2BKH	KP	26	27	18	21	7	C
01.08.83	1150	1320	PA3BBR	CL	27	26	9	9	1	C
	2200	2320	LA1JU	ES	27	26	14	26	1	C
02.08.83	0500	0555	G8KBQ	YL	27	27	26	41	2	C SSB
05.08.83	0400		DH1LAC	FO	--	--				NIL
	0450	0510	SM7AED	GQ	38	37			8	C rand
06.08.83	0400	0440	SM4KVM	HT	27	27	8	17	1	C
07.08.83	0400	0420	OZ1IVW	FQ	38	26	4	7	16	C
08.08.83	0940	1005	F1KBF/p	ZC	27	27	6	2	2	C SSB
09.08.83	0400	0500	G4MDZ	AL	27	36	8	32	7	C
	0530	0640	DL7ZL/I7	JZ	27	27	6	42	5	C
10.08.83	0400	0500	DL7AN	DN	--	--				NIL
11.08.83	0700		EA1QF	YC	--	--				NIL
	0800	0850	UQ2GCG	LR	27	27	5	6	3	C
	2300	2335	SM6GWA	FS	26	26	6	3	10	C SSB
12.08.83	0000	0030	GB2XN	XN	28	28	9	22	16	C
	2100	2130	EI8EF	VO	26	26	3	2	10	C SSB
13.08.83	0700		F1GCA	BD	--	--				NIL
	0800	0910	LA1K	FX	--	--		2		NC
	1000		LA5IH	CU	--	--				NIL
	1200		LA6CU	CU	--	--				NIL
	1400		UB5FDF	OF	--	--				NIL
	2200	2240	SK6HD	GS	27	27	11	14	12	C
14.08.83	0100	0130	OH2AUQ/0	KT	37	26	6	6	7	C
	1200	1400	YU7AJH/5	LB	27	37	2	4		NC
15.08.83	0400	0520	UB5LNR	RJ	28	27	5	3	1	C
16.08.83	0400	0430	G4OAE	ZL	26	26	10	22	7	C
17.08.83	0400	0500	DL3AAL	FM	26	26	9	11	2	C
18.08.83	0430	0550	G4KTP	ZO	26	26	4	7	1	C
19.08.83	0430	0510	PA0BLD	CM	27	26	14	57	2	C
20.08.83	0400	0510	OZ9PW	EQ	26	26	12	35	1	C

22.08.83	0400	0530	OZ1IUK	GQ	26	--	9	14	1	NC
24.08.83	0330	0530	SM2CKR	KX	27	26	2	3	1	NC

About Perseides 1983, I think that the shower was very poor in respect to the conditions of past years. Tks fer info Giuliano.

OE3CEW (II52f) wkd:

18.06.83	0600	0625	SM3LGO	IX	26	27	11		C
20.06.83	2100	2200	SM0EJY	IT	26	--	4	5	NC
24.06.83	2200	2306	UA6LJV	TH	26	27	14	6	C
26.06.83	0800	0905	LA1K	FX	26	26	11		C
02.07.83	0800	0904	F9HS	BD	26	26	10	5	C
16.07.83	1510	1610	F9FHP/p	CE	26	26	12		C
	2100	2300	SK2KW	KY	--	--			NIL
17.07.83	2100	2130	SM5CBN	HS	26	27	10	3	C
18.07.83	0600	0720	EA3IH	BB	26	26	12	2	C
21.07.83	0700	0815	ON5EX	BK	26	26	9		C
22.07.83	0300	0400	SK2KW	KY	--	--			NIL
	0600	0635	GM4COO	YS	26	27	18		C
28.07.83	0600	0625	F6HLD	CG	26	26	9		C
	2100	2300	UB5BDC	MJ	--	--			NIL
30.07.83	0600	0715	OH1ZAA	KV	26	28	19		C
31.07.83	0500	0535	TO6HWY	AH	26	27	5		C
07.08.83	0600	0620	F6CJG	BF	26	26	10		C
08.08.83	0500	0620	DL0IV/I7	JZ	26	26	11		C
	0800	1000	OH2BJM/7	PW	26	26	9		NC
09.08.83	2200	2225	GW6APZ	XM	26	26	8		C SSB
10.08.83	0900	0930	F6APE	ZH	26	26	8		C SSB
	1000	1200	UK6JAG	UG	--	--			NIL
11.08.83	0600	0640	IW9ANO	GY	37	26	7		C SSB
	0900	1100	UA3MBJ	SR	26	26	3		NC
19.08.83	1000	1200	SM1BSA	JR	26	26	17		C
28.08.83	0800	0900	F6FHP	AE	27	26	14		C
01.09.83	2200	2345	SM0EJY	IT	26	26	10		C
02.09.83	1600	1705	DK3CM/LA	DT	26	26	5		NC
03.09.83	1100	1153	DK3CM/LA	DT	26	26	11		C
06.09.83	0930	1045	DK3CM/LA	DR	26	26	12		C
17.09.83	0600	0800	LA6HL	CS	26	26	2		NC
18.09.83	0800	1000	LA1B	DU	26	--	2	7	NC
15.10.83	0800	1000	F8OP	CG	--	--			NIL

Tks fer info Erik.

OK1DIG (HK41f) wkd:

29.05.83	2000	2140	SM3JGG	HV	26	26	4	9	C
18.06.83	0500	0700	G4GZA	ZN	27	26	17	70	C
12.08.83	2200	2350	G4GZA	ZN	48	26	20	14	C
	2355		G8TIC	ZN	37	37	1		C rand
13.08.83	0107		GM8CLA/p	YP	37	37	1		C rand
	0144		GM3WCS	YQ	37	37	1		C rand
	0145		G4TCQ		37	37	1		NC ran
	0156		GI4OPH		37	--	2		NC ran

I am looking for partners for MS tests on 432 MHz in major showers. Proposals and information please write to following adress: Daniel Glanc, Purkynova 13, 41117 Libochovice/ CSSR. Tks fer info Daniel.

UA4NM (YS29a) wkd:

08.08.83	2000	2110	UA6LJV	TH	27	27	30		C
09.08.83	1900	1930	UA1CEL	BC	27	27	20		C
	2000	2050	UA6YAF	TE	27	26	10		C
12.08.83	1900	2000	UD6DFD		27	27	10		C

Tks fer info Vlad.

UG6AD (WA64c) wkd:

07.08.83	0700	0810	UA9SEN	BL17c	37	27				C
09.08.83	0700	0900	UA6LJV	TH65a	27	27				C
12.08.83	1200	1400	UA6YBM	UG73a	27	37				C
13.08.83	2200	2400	UA6LGM	TH65a	38	27				C
14.08.83	1300	1500	UB5LNR	RJ20f	26	27				C

Tks fer info Eugene.

UG6GBD (WA64c) wkd:

07.08.83	1930	2030	UA4CDT	YL	27	28				C
12.08.83	1930	2000	UA9SEN	BL17c	39	27				C

Tks fer info Sergej.

RG6GBT (WA64c) wkd:

07.08.83	2030	2120	UA4CDT	YL	38	27				C
10.08.83	2000	2200	UA3TCF	WQ	27	27				C
12.08.83	1300	1400	UA6YAF	UG73a	38	38				C
	1900	1930	UA9SEN	BL17a	38	27				C

Tks fer info Alex.

UA3TCF (WQ14a) wkd:

30.01.83	0600	0800	YU1AU	KE	--	--				NIL
20.03.83	0400	0600	LA6QBA/p	GV	--	--				NIL
23.04.83	0200	0335	UB5BAE	MJ	27	27	14	26		C

Tks fer info Alex

Y22ME (HM53a) wkd:

24.07.83	0800	0830	GM4COO	YS	27	26	8	17	70	C
27.07.83	0200	0340	LA6HL/TF	SY	26	26	4	7	2	C
06.08.83	1200	1330	OH6CH	MX	36	26	13	15	7	C
07.08.83	1800	1925	UY5OE	RL	26	37	31	49	15	C
	2015	2105	DL0IV/I7	JZ	27	28	5	19	13	C
08.08.83	0000	0100	UA6YBH	UG	26	26	6	12	2	C
10.08.83	1600	1710	OH7TN/8	PZ	26	26	5	10	2	C
12.08.83	1900	2010	UA4CDT	YL	26	27	7	12	3	C
13.08.83	1300	1325	EI8EF	VO	27	26	7	4	1	C SSB
	1800	1845	LA8N	EV	37	26	5	8	16	C
	2000	2038	YU7AJH/5	LB	26	26	8	15	2	C SSB
14.08.83	0900	0916	OH7PS	OX	26	26	6	3	1	C SSB
01.09.83	1900	1950	YU7AU/5	KA	26	27	13		2	C rand

Tks fer info Jürgen.

YU2EZA/2 (IC04j) wkd:

10.08.83	0800	0845	G4PLZ	ZN	27	26	32	21	20	C
	2000	2110	SM7GEP	HR	27	26	24	26	6	C
	2200	2245	SM0HAX	JT	28	26	6	12	4	C
	2300	2400	PA3AIZ	CM	37	--	5	24	5	NC
11.08.83	0000	0100	DK6AS	FM	27	26	7	19	1	C
	0100	0135	PA0RDY	CM	28	27	20	31	8	C
	0140	0215	PA2VST	CM	27	36	mni	mni	8	C
	0400	0500	SM6EOC	GQ	28	26	30	10	2	C
	0500	0600	SM6AFH	GQ	38	26	19	20	7	C
	0600	0700	G4NQC	ZL	27	--	4	2		NC
	2000	2100	DL8DAT	DL	27	27	10	8	15	C
	2200	2240	Y22QG	FM	36	27	15	9	6	C
	2300	2400	G4ERG	ZN	37	26	36	19	5	C
12.08.83	0000	0025	ON6UG	BL	28	27	28	28	27	C
	0100	0200	DL3MBG	GI	27	26	11	7	4	C*
	0200	0225	DL9DS	DL	27	37	28	40	12	C

	0300	0340	PE1EVX	CM	27	26	21	17	11	C
	0400	0420	PA0NIE	CM	28	27	19	22	8	C
	0500	0545	OZ1EYX	GQ	48	27	13	26	31	C
	0600	0615	G3IMV	ZL	38	26	25	11	17	C
	0700	0730	PA0CIS	CM	37	36	25	mni	7	C
	0800	0900	DF1SO	EI	27	27	2	17		NC
	0900	0940	EA3AIR	BB	28	26	32	33	15	C
	1000	1100	SM6CMU	FR	27	26	11	17	4	C
	1100	1210	F6FHP	AE	28	26	mni	mni	45	C
	2100	2200	ON7EH	CK	39	27	30	16	24	NC**
	2200	2300	SK6HW	GS	28	--	13	2	13	NC
	2300	2400	G4DHF	ZM	27	26	37	19	30	NC
13.08.83	0000	0100	PA3BBI	CM	28	--	mni	mni		NC
	0100	0200	DL1MF	GH	--	--	YU2EZA/2 qrt			
	0200	0225	PA0HIP	CL	59	27	mni	mni	70	C
	0300	0400	DL6NAA	FK	37	26	19	17	20	C
	0400	0500	OZ1EKI	EP	47	26	17	17	17	NC
	0500	0545	G3NSM	ZL	28	26	28	32	26	C
	0600	0700	RB5JAX	QE	57	26	mni	mni	59	NC SSB
	0700	0725	F6CJG	BF	59	27	4	3	70	C
	0800	0915	PA2REH	CM	26	26	10	13	15	C
	2000	2100	DK0TU	GM	28	--	16	9	5	NC
	2100	2130	Y23FG	FM	27	26	12	7	1	C
	2200	2300	SM6AEK	GQ	27	26	28	16	14	NC***
	2300	2400	SM5BEI	JU	26	26	13	9	1	C
14.08.83	0000	0050	G3LTF	AL	38	26	mni	mni	12	C
	0055	0125	G8VR	AL	49	26	16	5	50	C
	0400	0600	RB5LGX	RA	38	26	9	6	15	C

* = Hrd all the time by tropo 519-549

** = We didn't notice that the voltage coming from generator Hond E300 is low and that transmitting frequency is warring. After 0200 GMT on 13th Aug. 83 all contacts were made with 25 Watts output (TR91 30).

*** = SRI, the contact was not completed because QRM.

Apologies to OZ1EYE, OZ1EKI, DL7YS, we were not qrv on 10th. Aug. 83 in the morning because of troubles with recorder.

Rig: TR9130, PA 40W preamp 3SK97, Ant. 16 ely G2BCX abt 10 high, feetline 20m RG213/U. Tks fer info Ner.

YU2JL (HD30a) wkd:

10.07.83	2200	2255	OZ1EYX	GQ	26	27	14	35	1	C
	2255	2340	OZ1CLL	GP	26	27	13	19	1	C
12.07.83	2000	2100	G4PLZ	ZN	36	26	17	26	9	NC
	2200	2300	OZ1VHF	FQ	26	26	5	9	2	C ?SSB
23.07.83	2100	2145	DK8VS	DJ	27	27	12	13	10	C
	2300	2335	DK3FW	EM	26	27	7	11	3	C
24.07.83	2000	2125	SK6HD	GS	26	27	13	13	2	C
	2200	2310	SM6AFH	GQ	27	26	32	78	2	C
25.07.83	2000	2200	RB5LGX	RK	26	--	1	3	1	NC
	2200	2300	TO6HWY	AH	27	27	9	13	1	C
26.07.83	0400	0500	SK7JD	IR	26	--	2	4	1	NC
27.07.83	2000	2025	G4IJJ	AM	36	26	9	17	3	C
	2100	2158	G8OPR	ZL	27	26	3	17	5	C SSB
	2200	2250	G4KUX	ZO	26	26	12	25	1	C
28.07.83	2000	2115	SM7GEP	HR	37	36	12	12	4	C
29.07.83	2300	2325	SM5AQJ	JT	37	26	3	3	6	C
31.07.83	2000	2125	GW4AWI	YL	26	26	10	9	1	C
	2200	2305	G4GZA	ZN	26	26	12	13	5	C
02.08.83	2200	2245	F6CER	BI	26	26	8	15	5	C
03.08.83	0050	0110	G4DHF	ZM	27	27	35	31	2	C rand

04.08.83	2200	2305	SM0EJY	IT	26	26	8	9	5	C
05.08.83	0005	0040	F6EWG	BJ	37	27	22	19	12	C rand
	0110	0135	G4GUF	AM	27	27	20	17	2	C rand
	2200	2345	SM5CBN	HS	26	26	20	28	9	C
06.08.83	0020	0050	PE1EVX		37	37	8	6	11	C rand
	0125	0140	PA3BBI		37	27	11	12	7	C rand
08.08.83	2200	2300	PE1JUP	CL	26	26	4	7	3	C SSB
	2300	2340	PA3COB	DM	27	--	13	17	3	NC
09.08.83	1400	1445	DL7YS	GM	27	--	3	2	1	NC
	2000	2120	DF9CY	EL	26	26	8	7	2	C
	2200	2305	DL7YS	GM	37	26	5	12	5	C
10.08.83	0000	0100	PA3CGR	CN	26	--	5	9	1	NC
	0100	0200	PA3COB	DM	26	--	4	8	1	NC
	0400	0515	UB5LNR	RJ	26	26	10	10	2	C
	2100	2300	GM4CXM	XP	27	26	12	9	1	NC?
11.08.83	0020	0100	G4NFD	XJ	37	26	13	10	31	C
	0100	0125	G8TZT	ZN	26	26	5	2	9	C SSB
	0200	0240	GW6APZ/p	XM	27	27	10	10	16	C SSB
	0355		DL7YS	GM	37	27	1	0	15	C SSB
	0400	0600	LA9BM	EU	26	--	6	8	1	NC
	0600	0700	SM7KNK	HP	27	--	2	5	2	NC SSB
	0900	1000	F1FIB	BD	26	--	2	7	1	NC SSB
	2202		PA2CHR		37	27	1	0		C SSB
12.08.83	0000	0100	LA1K	FX	26	--	2	0	3	NC
	0100	0205	UQ2GCG	LR	26	26	8	5	22	C
	0205	0300	SM3JGG	HV	36	26	3	12	9	C
	0600	0620	G4MUT	ZL	26	26	3	2	15	C SSB
	0700	0721	SM7KNK	HP	37	27	5	1	12	C SSB
	0800	1000	LA6HL	CS	26	--	1	2	1	NC
	1000	1200	OH7PI	NW	37	--	1	1	5	NC
	1215	1225	G4DCV	A1	26	28	3	0	10	C SSB
	2000	2100	G3ZXZ	ZN	26	26	5	5	3	C?SSB
	2100	2119	G4LOH	ZM	26	26	3	1	10	C SSB
	2239	2250	G4TSI		37	27	5		4	C SSB
	2300	2340	G4NQC	ZL	37	26	12	5	31	C
	2343		PA3AGJ		37	27	1	0	8	C SSB
13.08.83	0000	0025	G8VR	AL	36	26	14	7	14	C
	0048		PA3APH		37	27	1	0	8	C SSB
	0100	0115	G4HUP	YM	27	27	10	6	4	C SSB
	0129		G8KBQ	YL	27	37	1	0	9	C SSB
	0130	0134	GM4CAL/p		37	27	5	0	6	C SSB
	0152	0158	OZ1ELF		37	27	4	0	5	C SSB
	0200	0225	GB2XN	XN	38	27	8	9	8	C
	0400	0500	LA6HL	CS	26	26	9	4	3	NC
	0500	0600	RB5JAX	QE	47	27	5	8	40	C SSB
	0800	1000	RB5LGX	RK	36	--	3	1	5	NC
	2200	2300	PA0JMV	CL	37	26	9	11	19	NC
	2300	2400	Y21TC	GN	26	--	3	5	1	NC
14.08.83	0100	0122	OZ1EYE	FQ	26	37	2	2	15	C SSB
	0122	0158	OZ1IVW	FQ	37	27	4	0	15	C SSB
	0200	0400	UK6YAG	UG	26	--	2	0	1	NC
	0400	0600	Y38ZA	HN	26	--	2	2	1	NC
	0800	0834	ON5UM	CK	26	27	6	5	4	C SSB
16.08.83	2200	2400	SM0HAX	JT	27	27	5	9	1	NC

NIL in skeds: LA1JU, PA3AIZ, DH1LAC, PE1BTX, PA0COR, RQ2GGS, C30AAR, G4KTP (-3kc?). F6CRP, LA7KK. QRT with G8KBQ, SK7JD (big storm).
Hrd random: PA2VST, G4DHF, DK1PZ, PA3AJG, PA0HIP, PA0BLD, PA3BBI, DK3LL, PE1EVX, F6DWG, G4GUF, PA3COB, PA3BRS, YO7TP, PA0RDY, GM4CXM, F6BSJ, G4PLZ, SM5MIX, GM3OM?, PA3CGR, DF6HR, UQ2GLO, LA9BM, PE1BVQ, PA3AQN, DF6NA, DL7AN, SM7GDO, SM6GFX, PA3APH, PA0OOM, OZ1ELF, OZ1IJL

Continued on page 291

AURORA NEWS

BY DL 7 QY

2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m-2m

GMT	CALL	QTH	RST	QTF	GMT	CALL	QTH	RST	QTF
1983 Jan. 9th									
DF5BL (DM37d)	wkd:								
1741	LA0CX	FT78h	53A 52A		2241	LA9BM	EU32g	53A 55A	
1983 Jan. 16th									
1759	LA5LBA	FT78a	42A 52A						
1983 Jan. 29th									
1706	GM4IAO	YR47a	52A 52A		1734	SM5CFS	JT24j	51A 53A	
1713	SM6FUD	GS74j	55A 55A						
UA3TCF (WQ14a)	wkd:								
1618	UA9GL	CR02h	59A 59A	0	1648	UA9FAD	CR02j	58A 57A	0
1621	UA9FFQ	CT46e	58A 59A	10					
1983 Feb. 2nd									
DF5BL (DM37d)	wkd:				1440	OH1ZP	LU42h	53A 53A	
1983 Feb. 4th									
G3LQR (AM67b)	wkd:					UQ2GMD	LR73c	54A 54A	
1983 Feb. 5th									
DF5BL (DM37d)	wkd:								
1428	GM3WTZ	YR68b	57A 57A		1522	SM6AOQ	GR41a	51A 51A	
1517	LA6ZV	ET68b	55A 55A						
1983 Feb. 12th									
UA3TCF (WQ14a)	wkd:								
1233	UA3MBJ	SS78e	59A 59A	10	1318	UA9FAD	CR02j	59A 59A	30
1236	UA4NDX	??	54A 59A	30	1335	UA1WDX	OR12b	54A 57A	330
1251	UK4NBY	??	55A ---	20	1340	UA9CKW	EQ14c	59A 59A	35
1252	OH5LK	NU37g	59A 59A	0	1346	UA9FCB	BS39e	57A 59A	20
1302	UR2GZ	MS04b	57A 56A	350	1417	OH7AZL	NX37d	53A 42A	350
1314	UK9CAM	EQ17h	57A 58A	30	1424	SM4IVE	HT68d	58A 54A	330
1315	UA9FFQ	CT46e	59A 59A	30	1428	RA3DPB	??	54A 55A	330
1317	UA9FBJ	CS73d	59A 59A	0	1500	OH6PA	KW47a	41A 43A	350
1983 Feb. 13th									
1214	UA9FBJ	CS73d	53A 55A	0					
1983 Feb. 20th									
1436	RA9FBZ	??	57A 58A	0	1438	UA9FCB	BS39e	56A 59A	0
1983 Mar. 11th									
UK3MAV (TS75f)	wkd:								
2132	UA3MBJ	SS78e	59A 59A	0	2225	UR2GZ	MS07b	57A 57A	330
2133	SK2KW	KY65c	57A 57A	340	2227	RR2RBD	MS53a	59A 58A	330
2138	SM5MIX	HS66g	55A 45A	0	2229	SM5FNU	IT23d	57A 57A	0
2139	OH2GB	MU55f	57A 56A	0	2233	OH6PA	KW47a	59A 59A	0
2144	OH3XA	MU12g	55A 57A	0	2237	RQ2GAG	MQ01g	56A 55A	310
2146	OH1DP	LU42i	57A 57A	0	2240	OH1XF	LU52j	57A 57A	0

2154	SM4GVF	HT76a	57A	55A	330	2244	UA9XAN	AX39e	59A	59A	20
2209	OH1ZAA	KV38h	59A	58A	330	2248	SM2CKR	KX12g	59A	59A	0
2212	SM3JAW	JX56f	58A	57A	330	2301	LA7KK	FU62j	55A	59A	300
2215	OH6BY	NV21a	58A	59A	330	2306	OH7UE	OW40h	59A	59A	340
2221	SM5BOQ	IT49b	59A	57A	330	2311	SM0HAX	JT51b	57A	55A	340
2222	SM2CPF	KX11a	58A	57A	330	2351	SM2JAE	KZ58c	57A	55A	320

1983 Mar. 12th

0002	SM3IZB	JX54e	56A	56A	320	2215	SM5CNF	HS09f	59A	59A	340
0009	SM2ILF	KY26e	59A	59A	320	2218	UB5PAZ	ML64a	55A	57A	300
0028	SK2KW	KY65e	56A	52A	320	2221	OZ1ASL	FO18c	59A	53a	300
1545	OH1ZAA	KV38h	59A	58A	340	2223	SM6EOZ	??	55A	57A	300
1548	OH6KJ	MW01e	57A	57A	340	2226	OZ4VV	EQ17a	57A	57A	300
1554	UA9FFQ	CT46e	57A	59A	30	2229	SM7LAD	GP48a	55A	55A	300
1556	UA9FAD	CR02j	57A	57A	30	2233	OZ1CLL	GR23c	57A	59A	300
1557	UA9FIG	CT25f	57A	59A	30	2235	SM7JUQ	??	55A	55A	300
1605	OH6CH	NV01d	59A	59A	340	2238	LA8SJ	GU26d	56A	56A	300
1605	OH2AUK	LT08a	56A	55A	340	2242	OH5BB	OV71c	55A	57A	340
1610	UK2RDM	MT43a	57A	57A	340	2245	SM5BKA	IT70a	57A	55A	340
1640	SM0LAN	JT71a	57A	58A	340	2255	RC2WCG	OP61a	56A	59A	300
1645	UQ2AO	MQ01a	58A	58A	320	2259	RP2PED	MP61f	57A	55A	320
2140	UQ2GEK	NR20d	59A	57A	320	2305	OH6CH	NV01b	59A	59A	340
2145	SM5MIX	HT66g	55A	52A	340	2314	UK2RDM	MT43a	57A	57A	340
2149	SM6AFVB	??	57A	57A	300	2331	OH7KA	NT03a	55A	57A	340
2150	SM6AEK	GQ25b	57A	55A	300	2344	SM3KAF	IV33f	55A	55A	330
2154	UA9FBJ	CT73d	58A	59A	20	2348	SM4CNQ	HS	55A	55A	330
2157	SM2ILF	KY26e	59A	59A	340	2354	SM3AKW	IW31h	57A	55A	330
2213	UQ2GMG	LR73c	57A	56A	320	2359	OH6CY	MW70h	59A	59A	330

1983 Mar. 13th

0006	OH1ZAA	KV38h	57A	58A	340	0013	SM2DXH	KX11a	57A	57A	340

1983 Mar. 19th

UA3TCF (WQ14a) wkd:

1313	UA1ASA	PU73	57A	55A	0	1347	UA9FCB	BS39e	55A	57A	20
1325	UK4NAG	YS29f	53A	57A	0	1349	UA9FBJ	CS73d	55A	59A	20
1343	UA9FFQ	CT46e	57A	59A	20	1350	UA9GL	CR02h	57A	58A	0
1346	UA9FAD	CR02j	57A	58A	20	1352	UA9CKW	EQ14c	55A	55A	20

1983 Mar. 25th

UA3LBO (QO21h) wkd:

1450	UR2RQT	MS80e	57A	59A	27	1500	UA3MBJ	SS78e	59A	59A	330
1455	OH6CY	MW70h	53A	59A	0	1543	SM5CFS	JT24c	55A	59A	10

1983 Mar. 28th

DF5BL (DM37d) wkd:

1658	SM0LRN	JT71h	55A	55A		1718	SM5KWU	IT34h	55A	51A	
1712	LA8UK	FT05a	55A	52A		1726	SM5EFP	HT50e	57A	55A	

1983 Mar. 29th

UA3LBO (QO21h) wkd:

1540	OH2PO	LU60d	55A	57A	0	1609	OH2GB	MU54f	55A	57A	0
1555	SM4IVE	HT68d	55A	57A	0	1618	UK3AAC	SP19e	55A	57A	340
1558	OH7PI	NW60g	59A	59A	0						

1983 Apr. 6th

1500	SM5CFS	JT24c	54A	56A	350						

1983 Apr. 24th

UA3TCF (WQ14a) wkd:

1344	UA4UK	VO	58A	59A	330	1353	RA3YCR	RN52f	59A	59A	310
1347	UA3DHC	TQ71c	57A	58A	330	1358	SM4IVE	HT68d	56A	54A	330
1348	UQ2GEK	MR20d	58A	59A	320	1401	UA1ASA	PU73	55A	59A	0
1349	UW3GU	TP31a	57A	59A	320	1402	UA9FFQ	CT46e	57A	59A	30
1350	UA9GL	CR02h	59A	59A	0	1404	UA9FAN	??	57A	58A	0
1352	UR2RQT	MS80e	57A	57A	320						

1983 Apr. 29th

1512	RA3AGS	SP19j	57A	58A	320	1530	UK3AAC	SP19e	59A	59A	320
1523	UP2BJB	LP06d	55A	55A	330						

UA3LBO (QO21h) wkd:

1628	UC2AAB	NN18c	55A	56A	310	1649	UK3AAC	SP19e	53A	59A	330
1637	UA3LAW	PO26g	53A	55A	310	1656	UP2BJB	MP06d	53A	53A	320
1642	UR2JL	MS80e	55A	53A	330	1659	UR2RQT	MS80e	57A	59A	310

1983 May 11th

DF5BL (DM37d) wkd:

1704	GM4ILS	YR24e	55A	55A		1714	LA6VBA	ES26g	53A	55A	
1706	LA3UL	FT78h	53A	53A		1818	GM4CXM	XP09g	53A	53A	
1710	SM7GEP	HR24e	55A	55A							

1983 May 17th

UA3LBO (QO21h) wkd:

1426	SM4IVE	HT68d	59A	59A	10	1456	UA3MBJ	SS78e	54A	57A	10
1446	SM0LRN	??	56A	59A	10						

1983 May 22nd

UA1ZCL (RC08c) wkd:

2049	OZ1CLL		53A	56A		2052	OZ1OF		55A	559/A	
2050	OZ1AZZ		53A	53A		2053	OZ4VV		55A	559/A	
2051	OZ6O?	hrd	53A			hrd	SK4MPI				260

1983 July 12th

DK5AI/LA (GY42j) wkd:

1455	SK2KW	KY65c	57A	59A		1825	SM5BEI	JU72c	56A	55A	
1510	OH0BT	KU45d	56A	57A		1833	SM0NEZ	JT51a	54A	53A	
1517	OH6AYS	LX16b	56A	57A							

1983 July 13th

DK5AI/LA (GZ47b) wkd:

1212	SM5BEI	JU72c	58A	57A		1507	SM2ILF	KY26e	54A	57A	
1218	SM2DXH	KX11a	58A	58A		1518	OH1AYA	KV49e	53A	53A	
1220	OH6JJ	KX79g	57A	59A		1525	OH1KA	KV50h	56A	56A	
1224	OH6MY	KX57a	57A	57A		1527	OH6CY	MW70h	57A	57A	
1229	OH1EQ	LV12c	53A	53A		1532	SM2JAE	KZ58c	59A	57A	
1428	SK2KW	KY65c	56A	54A		1547	OH6AYS	LX16b	53A	53A	

1983 July 14th

DK5AI/LA (GA60j) wkd:

1447	SK2KW	KY65c	55A	53A		1515	SM2ILF	KY26e	57A	55A	

1983 July 15th

DK5AI/LA (IB01h) wkd:

1454	SM2ILF	KY26e	55A	44A		1515	SK2KW	KY65c	43A	42A	
1458	SM2JAE	KZ58c	57A	57A							

1983 Aug. 2nd

UA4NM (YS29a)	wkd:								
1308 UA9FFQ	CT46e	58A	59A	20	1408	UA3OG	UR15f	59A	59A	330
1324 UA9XAN	AX39e	58A	59A	10	1413	OH4OB	NW70g	58A	58A	330
1339 UA9CDL	ER28c	58A	59A	30	1435	OH5LK	NU37g	55A	55A	340
1354 OH3ZS	MU09a	58A	55A	340						

1983 Aug. 7th

DH1LAC (FO42f)	wkd:								
2205 RR2RBD	MS53a	51A	58A	30	2217	LA8SJ	FT05j	55A	55A	10
2214 UQ2GMD	LR73c	55A	55A	10						

1983 Aug. 8th

UA4NM (YS29a)	wkd:								
0244 OH9VE/7	OW39b	59A	59A	330	0253	UR2DW	KS60e	57A	56A	310
0248 OH7PI	NW60d	59A	59A	330	0255	UR2RQN	KS60e	57A	57A	310
0251 UR2RQV	KS60e	55A	55A	300	0305	OH6CH	MX56h	55A	53A	310

1983 Aug. 13th

1140 UA9XAN	AX39e	49A	49A	10	1200	UA3TEF	WQ14a	59A	59A	330
1155 UA9FFQ	CT46e	59A	59A	10						

1983 Aug. 25th

1353 UA9XAN	AX39e	59A	59A	20	1358	UA9FFQ	CT46e	59A	59A	20

1983 Oct. 4th

OZ1EYX (GP13b)	wkd:								
1503 UC2AA	NN18d	55A	55A	20	1531	UA1XN	NR19g	55A	59A	20
1525 UA3IDQ	QQ64d	55A	55A	20	1626	LA3EDA	FU51d	53A	43A	0
1528 UK2CCB	NO55f	57A	58A	20						
DH1LAC (FO42f)	wkd:								
1527 LA3UL	FT78h	55A	55A	0	1609	LA3JA	ET08d	58A	57A	0
1530 SM4HJ	HT51c	59A	59A	0	1614	OH1KH	KV29g	51A	53A	0
1535 OH1TW	KU39g	51A	55A	0	1619	LA2CDA	FT36c	55A	55A	0
1538 OH3OZ	MU24b	55A	55A	0	1624	OH7PI	NW70e	59A	57A	0
1541 OH3ZS	MU09a	55A	57A	0	1625	UR2RIW	LS02e	59A	57A	20
1545 LA2OJ	FT43e	55A	59A	0	1628	SM5BK	IT	55A	56A	20
1550 OH2BW	MU56e	56A	56A	0	1632	OH3XA	MU13g	53A	56A	20
1554 SM1MKY	JR44g	55A	55A	0	1637	UR2RQT	MS80e	55A	59A	20
1557 LA3EDA	FU51d	55A	54A	0	1643	SM6MRZ	GS50f	59A	59A	20
1602 SM5FJ	IS21b	55A	55A	0	1657	SM5EFP	HT50e	55A	54A	20

1983 Oct. 6th

1743 SM0FMT	IT50f	55A	54A	10	1750	OH1DP	LU42j	55A	54A	10
1748 LA9BM	EU32g	51A	52A	10	1756	SM4LMV	HT67h	51A	54A	10

1983 Oct. 17th

1523 LA7KK	FU73j	55A	55A	40	1625	LA1TI	FU14g	55A	55A	10
1546 GM3XOQ	ZT04j	55A	52A	0	1644	SM5KWU	IT	53A	54A	10
1604 LA2DH	ET18g	55A	53A	0						

70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-70cm-

1983 Feb. 4th

G3LQR (AM67b) wkd: DF5LQ EO 58A 57A, OZ7IS GP 56A 52A and OZ7LX FP 56A 55A.

1983 Mar. 12th

LA8AK in DS 55A 55A

E_S INFORMATIONS

by DL7QY

SUMMARY Es REPORT SEASON 1983

Part II

Nachdem wir dachten, im Heft 3/83 einen "Summary Es Report" zusammenstellen zu können, weil die Es Zeit lange genug vorüber war, haben sich nun nachträglich eine Menge Berichte angesammelt, welche nur stark verzögert, durch welche Umstände auch immer, bei mir eintrafen. Deshalb nochmals der Aufruf für das nächste Jahr: Schicken Sie bitte Ihre Berichte bis spätestens 1. September 1984 an DL7QY! Da wir in dieser Ausgabe die Infos aus der letzten nicht integrieren können, bitten wir Sie eventuelle Vergleiche mit den Berichten in Heft 3/83 selber vorzunehmen. Auch hier werden die Berichte nach Datum sortiert, mit den erforderlichen Karten, in welche die Verbindungen eingetragen sind, gebracht. Auf die statistische Verteilung wird verzichtet, weil sie ähnlich wie in Heft 3/83 ausfallen würde.

First we thought, we could compile a "Summary Es Report" in Dubus 3/83, because time for Es was already over. But afterwards a lot of reports gathered, which reached me very late. Therefore once again note for the next year: send your reports until 1st Sept. 1984, at the latest, to DL7QY! As we couldn't integrate the infos of the last issue in this one, please compare the reports from 3/83 and this issue , yourself. Also, in this Es-column the reports are sorted in respect of date and are drawn in the QTH-maps. One has renounced of statistics, because they would have been almost equal as in the Es-column in Dubus 3/83.

May 17th

UA1ZCL (RC08c) wkd in CW at 2040 LA7KK 599 599, 2041 LA9BM 599 599, 2042 SM3AKW 599 539, 2043 OZ4VV 599 579, 2047 OZ1AZZ 599 559, 2050 OZ4VV 599 599, hrd SK4MPI, LA1VHF and SM4IVE.

May 22nd

UA1ZCL (RC08c) wkd at 2020 SM4IVE 549 559, 2021 OH1DP 559 559, 2024 SM4GVF 559 559, 2032 SM6CMU 339 539 and 2300 SM4IVE 579 579.

June 2nd

DF8AE (EM73e) wkd at 1658 RB5LGX RK50g 559 559 and at 1706 UK5EDT RI 599 599.
DK2PR (EM07j) wkd with 500 W and 16el. ly at 1656 UK5IEC TI32f 599 599 2082km, 1659 RB5LGX RK50g 559 579 1977km, 1700 RB5IOJ SH10a 599 599 2085km, 1701 UB5ICR SH39h 599 599 2090km, 1711 UB5IOB TH23b 599 589 2137km and 1720 RB5LAA SJ01d 579 579 1875km.
DL5MAE (FI60f) schreibt: Die erste öffnung war bereits am 2.6.83 ca. 1645 - 1700 in die UdSSR. Von Südbayern aus konnten die Großfelder TM und VO gearbeitet bzw. gehört werden.

June 5th

EA3LL (AB) wkd at 1354 YO7DL LE 599 599, 1355 YU1ICD ?? 599 599, hrd 1355 YO7BLD, wkd 1552 SV1LY LX09e 59 59, 1557 SV1DS LX 59 55, 1559

SV1JZ LY79a 59 59 and 1611 SV1DH/A MX01g 59 59.

June 6th

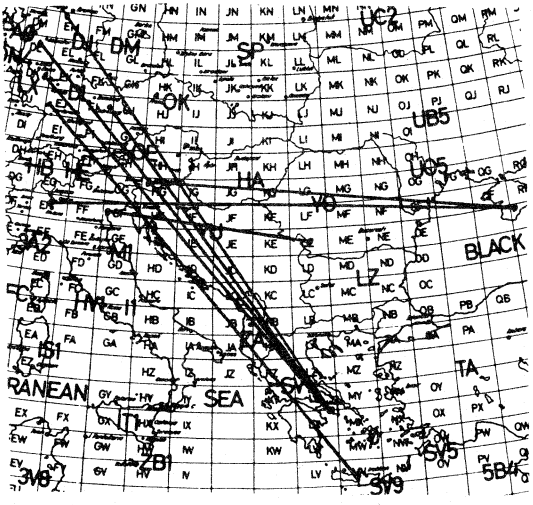
DF8AE (EM73e) wkd at 0935 OK3KCM JI64g 59 58 (?Es).

June 7th

EA3LL (AB) wkd at 1344 YU1OO KC10b 51 58, 1348 YU5QG/m LB13j 59 59, 1356 YU5QG/m LB13j 599 599, 1357 YU1HFG KC10b 599 599, 1419 YU1EU KE02j 59 59, 1420 YU4EDO JD70 59 59, 1421 YU7AJH JF70a 599 599, 1422 YU7NTU KF42d 599 599, 1423 YU7MCG KF01e 599 599, 1424 YU7MAO JF50j 599 599, 1427 YU7EW KF24f 59 59, 1428 YU7BCX KF24f 599 599, 1430 YO2IS KF17e 599 599, 1431 YU2DI JF34j 599 599, 1445 YU2CCB IF 59 59, 1446 YU7BDG JF60f 59 59, 1446 YU2OM JF34j 59 59, 1447 YU7MDX JF60f 59 59, 1447 YU7WA ?? 59 59, 1448 HG8CE KG32c 59 59, 1449 YU7QDM KF42d 59 59, 1449 YU2RGU JF61f 59 59, 1450 YU2KDE JF23g 59 59, 1450 YU4WEU IE17f 59 59, 1450 YU7QDX JF70g 59 59, 1453 YU1ADN KD35g 59 59, 1454 YU2CRJ JF33c 59 59, 1455 HG3NX JG44d 59 59, 1456 YU7AA JF16e 59 59, 1456 YU2RGK HF64a 59 59, 1458 IW4ASX GE63h 59 59, 1458 LZ2KBI LD 59 59, 1459 YU2SWI HG53a 59 59, 1459 YU3TRF HF66c 59 59, 1503 YU2SOP IF37d 599 599, 1505 YU3CAB HG64f 599 599, 1505 HG5KJC JH46f 599 599, 1506 HG6KVB KH02j 599 599, 1508 YU2CHI JF55f 599 599, 1509 HG5HB ?? 599 599, 1511 YU1PSL KE 599 599, 1511 YU1AGL KE13e 599 599, 1517 YU3HI ?? 599 599, 1518 YU2LEA ?? 599 599, 1520 HG5HDX JH36d 599 599, 1520 HG5AIR JH47g 599 599, 1522 HG2KRZ IH78c 599 599, 1524 YU3OV ?? 599 599 and 1530 YU2CBE ID33f 59 59.

June 10th

DC1UR (EJ51b) hrd at 1615 SV1DH/m MX01g 41-51.....im allgemeinen mangelt es an guter Betriebstechnik. Etliche OM rufen eine DX Station viele Male vergeblich, anstatt den Eigenheiten der Es entsprechend, auf den günstigsten Augenblick zu warten. Unnötiges QRM ist die Folge.
DK1VI (EJ54f) wkd at 1618 SV1DH/m MX01g 54 59 and 1636 SV1DS LY59 59 59+.



DK2PR (EM07j) wkd at 1650 EA7CBQ XX78e 59 59 2064km.
I3TJQ (GF41q) wkd at 1624 EA1BLA VD 59 59.
UA1ZCL (RC08c) wkd at 1432 SM4IVE 439 439 and at 1630 SM5CNQ 219 459.

June 11th

UA1ZCL (RC08c) wkd at 0515 SM3AKW IW 329 549, 0520 SM3AZV 429 549 and 0530 SM3LGO 329 539.

June 12th

DC1UR (EJ51b) wkd at 1232 SV2JL LA35c 59 and 1243 SV2JT LA25d 58.
DF5BL (DM37d) wkd at 1244 SV1EX LX09a 2051km.
DF8AE (EM73e) wkd at 1358 SV1EX LX09a 55 53.

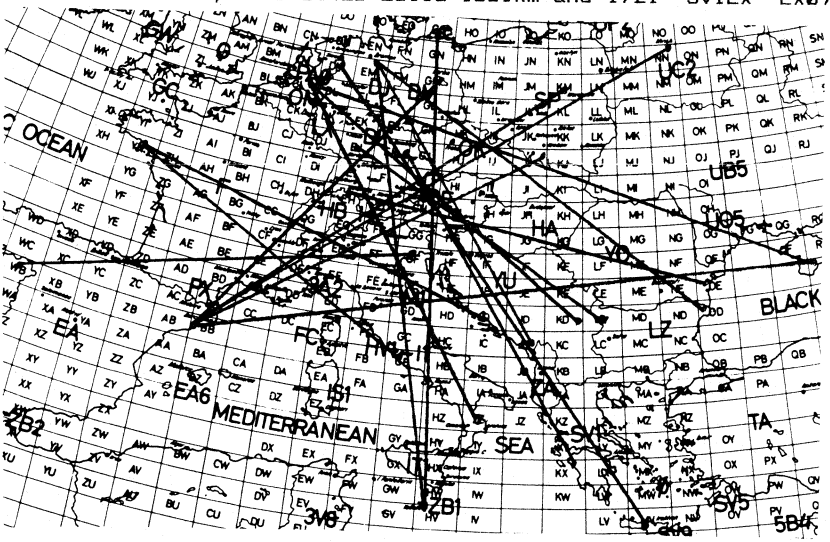
DJ6XV (DL25c) wkd at 1233 SV1EX LX09a 59 and 1245 SV1DO LX19c 59.
DK1VI (EJ54f) wkd at 1233 SV2JJL LA35c 59 59, 1237 SV2JT LA25d 59 58 and 1246 SV2JL LA35c 59.
DL2OM (DK49j) wkd at 1304 SV1DO LX09c 55 and 1316 SV1OE LX10a 59+.
DL4RBK (FJ50g) wkd at 1150 SV1DH/A MX01g 59, 1155 SV1JZ LY79a 53, 1230 SV1DO LX19c 59 and 1230 SV1EX LX09a 56.
I3TJQ (GF41g) wkd at 1238 YO7DL LE 599 599.
UA1ZCL (RC08c) hrd at 0155 SK4MPI 439, wkd at 0204 OH2TI 449 569 and hrd at 0250 SK4MPI 219 and wkd at 0928 UA3TCF WQ 119 319.
UB5JIN (RE01f) wkd at 0839 IW2BNA EF 59 55 and 0844 OE8TPK HG 59 59.

June 13th

UA1ZCL (RC08c) wkd at 1324 OH5LK 439 579, 1326 OH1AJ 439 559, 1328 UQ2GMD 439 529, 1338 OH2BBH 449 569, 1340 UR2GZ 329 549, 1347 SMØHAX 329 539, 1402 UR2RQT 439 579, 1409 RQ2GAG 559 529 and 1423 SM5MIX 319 539.

June 15th

DC1UR (EJ51b) wkd at 1331 SV1LY LX09e 57 ,1333 SV1DH LX09a 59, 1340 SV1EX LX09a 59, 1343 SV1DO LX19c 59, 1346 SV1JZ LY79a 52 qsb, hrd 1353 SV9LM MV36d 59 qsb and 1410 SV3QD LY.
DF5BL (DM37d) wkd at 1649 YU5NR KB08g 1579km, 1650 YU1PRV KD16d 1408km, 1701 SV9LM MV46d 2364km, 1712 SV4LD LZ11a 1801km and 1721 SV1EX LX09a 2051km.



DH2NAF (FI17g) schreibt:..gleich der erste Anruf wurde, wegen der geringen Aktivität um diese Zeit, gehört. 1138 9H1ED HV03e 55 55, 1140 9H1CQ HV13b 55 55, 1142 9H1FL HV13a 56 56, 9H4HP HW72f 53 52 und 1146 9H1BT HV12b 56 59. Dann folgte eine längere Pause. Es wurden keine Signale von irgendwelchen Stationen gehört. Gegen 1410 wurden viele deutsche Stationen laut, die in Richtung SV arbeiteten. Nach drehen der Antenne wurde eine SV9 Station aus MV mit starkem qsb bis 58 gehört. Außerdem eine SV3 Station (genaues Call leider verloren) mit lautem Signal über S9. 1419 SV8CS KX15a 59 59 und 1555 9H1FBS HV03e 59 59. Es war eine recht lange öffnung mit jedoch vielen Unterbrechungen. Wegen

des großen Andrangs konnten aber nicht alle gehörten Stationen gearbeitet werden. Begleitet wurde die Es öffnung durch kurze Tropo überreichweiten (?), in denen Stationen in FE, GE, GD gearbeitet wurden.
DJ3TF (FJ50g) wkd at 1713 SV1EX LX09a 59.
DK1VI (EJ54f) wkd at 1538 SV3QD LY43f 56 55, hrd 1542 IW8PCW ?? 56, wkd 1554 YU5NR KC56 53 53, 1633 LZ2KBI LD45a 55 57 and hrd 1637 YU1PRU KD16d 52. My QTH was just on the southern boundary of the Es region. So stations listed above could be heard only about 60 seconds max.
DK2PR (EM07j) wkd at 1542 9H1CG HV13b 59 59 1947km, 1543 9H1FL HV13a 59 59 1947km, 1544 9H1ES HV13a 59 59 1947km, 1640 SV4LD LX09a 53 53 2002km, 1656 YU100 KC 59 59, 1711 YU6AA JC47a 59 59 1384km, 1739 LZ20A OD42c 599 599 1751km and 1759 LZ1AG MC64e 599 599 1655km.
DL4RBK (FJ50g) wkd at 1345 SV8CS KX15a 59, hrd 1550 SV4LD 10dB, 1550 SV1EX LX09a 10dB and 1550 IW9AWZ 10dB.
EA3LL (AB) wkd at 1339 LZ20A OD42c 599 599, 1352 LZ1AG MC64c 599 599, 1403 YO7DL LE60g 599 599, 1409 LZ2XU MD44e 599 599, hrd 1421 YO4YT, wkd 1444 LZ1QD NC48g 599 599, 1455 YO4AUL OE64g 59 59, 1525 UB5JIN RE01f 599 599, 1526 UB5JIW RF71g 599 599, 1533 UB5JIW RF71g 559 569, 1542 HG8KAX KG16g 599 599, 1549 YO7CJI LF77f 59 59, 1602 YU1TIW KE36b 59 59, 1603 YU1PTH KE47j 59 59, 1612 DL3MBG GI53d 59 59, 1615 OK1MBS HK48a 59 59, 1623 UC2AA NN18e 599 599, 1624 OK1MAC HJ 59 59, 1626 UC2ABN NN18e 599 599, 1627 UC2AAB NN18c 599 599, 1631 UQ2AU?? 599 599 qrm, 1646 DL7YS GM46b 599 599, 1646 OK2EH? 599 599, 1659 UB5PAZ ML73a 599 599, 1704 SP9ED JK55c 599 599, 1705 SP5AD KM66g 599 599, 1707 SP9DH JK69f 529 599, 1708 OK2STK JJ12d 599 599 and 1719 OK2BWH IJ37b 59 59.
F6ETI (YH24c) wkd at 1557 I0AKP GB13a 55 59, 1558 IW0AKA GB13a 59 59, 1607 I0UZF GD72b 57 57, 1608 I6WZC ?? 53 ??, 1614 I8MSY HA22d 57 57, 1704 YU2RKY ID33f 57 59, 1707 YU2CBM ID33f 57 59, 1708 YU2RIT ID33f 56 58, 1712 YU2JL HD30a 59 59 and 1712 YU2IQ HE77h 56 59.
HB9MFW (EH24h) wkd at 1322 SV1DH LX09a 59 59, 1324 SV1EX LX09a 59 52, 1325 SV1LY LX09e 55 55, 1329 SV1JZ LY79a 59 59, 1343 SV8CS KX15a 55 55 and 1634 YO4AUL OE64g 59 59.
I3TJQ (GF41g) wkd at 1219 EA7MT/m ?? 59 59 and 1510 CT1WW WB 59 59.
OK1DIG (HK41f) wkd at 1148 9H1BT HV03e 59 59, 1150 9H1CD HV03e 59 59, 1706 SV3QD LY43f 55 55, 1618 EA5DFY AY11j 59 59 and 1718 EA6AU BZ55d 599 579.
PA0JMV (CL37e) wkd at 1627 IS0SCB EZ66a 59 59, 1634 IS0RHF EZ75h 59 59, 1709 YU1OH KC10b 57 59, 1713 YU1PKH KD60g 58 59, 1745 RO50AA OH74c 599 599 and hrd 1600-1700 EA7/IT9/SV/LZ/YO/ and UB5.
PA2CHR (CL09b) hrd at 1613 I8TUS IZ 55, 1630 IS0SCB EZ 57, 1635 IS0RHF EZ 52, wkd 1639 YU100 KC 59 59, hrd 1644 LZ2VR LD 54, 1646 YU1OBQ 57, 1647 LZ2KBI 57, wkd 1649 YU1PPF KD 59 59, hrd 1650 YU1EN ?? 57, wkd 1653 SV1EX LX 59 59, hrd 1701 SV4D LZ 54, 1710 YU1OHV KD 55, 1714 YU100 KC 59, 1721 LZ2VR LD 59 and 1732 RO50AA OH 51.
UB5JIN (RE01f) wkd at 1524 EA3LL AB 569 569, 1622 EA3BKI AB 59 59, 1636 EA3AIR BB 59 59 qsb, 1648 IS0PDQ EZ 55 55 QSO?, 1744 PE1BNK CL 59 59, 1745 PE1EVI CM 58 59, 1746 PE1BNK CL 59 59 and 1747 PE1BKV CL 55 59.
Y22HA (GO) wkd 9H1BT, 9H1CD, 9H1CG and 9H4W (HW).

June 16th

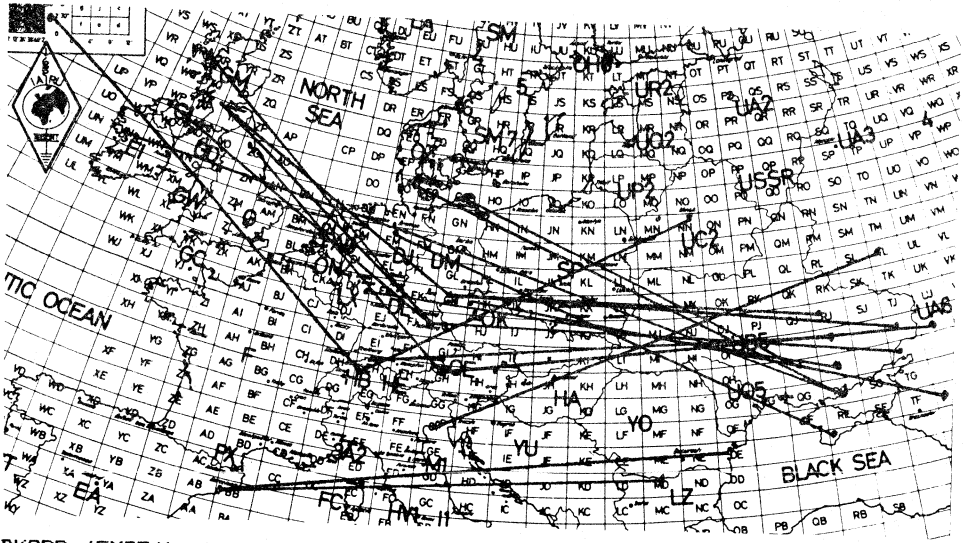
EA3LL (AB) wkd at 1307 EA8XS SO73d 59 59.
UG6AD (WA63j) wkd at 0638 YU7BDG JF60f 599 599.

June 17th

DF8AE (EM73e) wkd at 1644 UA6ACG TE 599 599, 1646 UB5GFS RG 59 59, 1648 UY5HF QG 59 59, 1650 UA6YAF TE 599 559, 1658 UB5JMZ RE01f 59 59, 1700 RB5GEY QG24c 59 58, 1707 UB5GAN QG 559 599 and 1720 UB5JIZ QF18j 59 59.

DJ3TF (FJ50g) wkd at 1630 UA6LJV TH 59, 1636 GI8YDZ WP67b 59, 1641 UB5IOB TH23b 599, hrd 1643 GM8NFC XP48e 59, wkd 1645 UK5ICX TI 599, hrd 1653 UB5ICR ?? 59, wkd 1707 UB5EFS RI33j 59, hrd 1711 GM8SAU WR45h 59, wkd 1713 UW6MA TH69c 59, 1717 RB5ITP SI80d 59, hrd 1723 UK5EAI RI45f 59, wkd 1729 UB5QCD RH07e 599 and 1730 UB5QDM RH04h 599.

DJ8QP (GH14j) wkd at 1624 GM8SAU WR 59 59 1707km, 1627 GM4PSV/m XP 55 57, 1630 GM4KGS XP 54 59 1500km, 1631 G4KUX/m ZO 54 59 1265km, 1637 GM4SGB YQ 53 55 1446km, 1639 GM4OCJ YP 55 59 1410km, 1641 GM6OPQ XP 58 59 1466km, 1653 RB5MWQ TI 59 591904km, 1713 UA6LQZ UI 55 59 2041km, 1717 UB5LCP SJ 59 59 1730km, 1718 UB5LAK SJ 59 59 1780km and 1722 UB5LNR RJ 59 59.



DK2PR (EM07j) wkd at 1629 UB5JMZ RE01f 59 59 2004km, 1632 EJ0WCY VN62d 59 59 1266km, 1640 UB5BGM ?? 59 59, 1641 UY5HF QG24f 59 59 1806km, 1653 UB5JIN RE01f 59 59 2004km, 1554 UB5GFS RG51c 59 59 1920km, 1655 RB5JAX QE38j 59 59 1990km, 1657 UB5JIZ QF18j 59 59 1910km, 1659 UB5RMZ RE01j 59 59 2004km, 1708 UY5HF QG24f 59 59 1806km, 1711 UB5JMZ RE01f 59 59 2004km and 1714 RB5GRP RG73f 55 59 1960km (AM). QSO to EJ0 neither backscatter nor FAI! Signal maximum direction VN square.

DL2OM (DK49j) wkd at 1704 UA6ALT UF43c 539 2488km, hrd 1706 UB5IMM SH 539, wkd 1710 UB5EFQ QH08d 599 1891km, 1713 RB5QGL SG15f 599 2118km, 1716 UB5QDM RH44h 599 1982km and 1719 UA6LJV TH?? 599 ca 2400km. UA6LJV gave only report - no QTH locator.

DL4RBK (FJ50g) wkd at 1620 GI8JDZ WP67b 60dB, hrd 1625 GM4NFC XP48e 50dB, wkd 1648 UB5IOB TH23b 60dB, 1655 UB5IMM SH37b 60dB, 1700 UK5ICX TI62g 60dB, 1704 UW6MA TH69c 60dB, 1706 UB5EFQ QH08d 60dB, hrd 1710 UB5IPJ ?? 60dB, wkd 1713 UB5QCD RH07c 60dB, 1716 UA6LGH TH65a 60dB, 1719 UB5ICR SH39h 60dB, 1720 UK6LDZ TH65c 60dB, hrd 1725 RB5ITP SI80d 60dB and wkd 1727 UB5QDM RH44h 60dB.

DL5MAE (FI60f) schreibt:..um 1634 konnte ich GM6UNJ aus WR44h erreichen. Zur gleichen Zeit war das 2m Band auch noch nach UB5 und UA6 offen. Neben einer weiteren GM Station von den Hebriden konnte ich noch 6x UB5 (aus SJ, TI, TH, SH) und 2x UA6 arbeiten. Die weiteste Verbindung lief mit RA6LRR aus UT03g über 2091 km. Alle QSO's in die UdSSR wurden in CW abgewickelt.

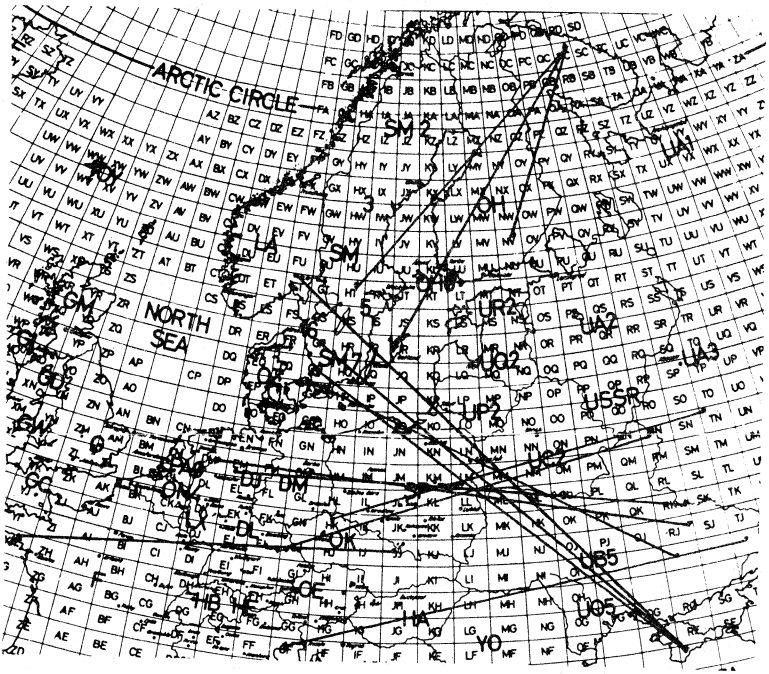
EA3LL (AB) wkd at 1545 YU6AA JC47g 59 59, 1552 YU1OO KC10b 59 59, 1623

YO4AUL OE64g 599 599, 1627 YO7DL LE 59 59, 1632 LZ2VR LD05a 599 599, 1635 LZ2XU MD44e 599 599 and hrd 1641 LZ2?F.
HB9CRQ (EH61b) wkd at 1920 PA3BWY/mm QQ 59 59 2200km.
HB9MFW (EH24h) wkd at 1713 UK5EFC RI46g 59 59, 1715 UK5IEC TI32f 59 59, hrd 1723 RA3THW and 1724 UK5ICX.
I3TJQ (GF41g) wkd at 1706 UB5AAM RK 599 599, 1709 UA3QIN TL 599 599, 1712 UA3QHS TL 599 599 and 1714 UT5BN PK 599 599.
OK1DIG (HK41f) wkd at 1622 UA6LJV TH 59 59, 1623 UK6INE TH65c 569 559, 1630 UB5GAN QG24j 59 59, 1634 GI4SIP XO31g 59 59, 1636 GI3TLT XO33f 59 59, 1636 GI4LKA XO31j 59 59, 1638 GI6ATZ XO31j 59 59, 1642 GI6BNI XO32e 55 57, 1644 GI8YDZ WP 59 59, 1654 RB5QGL SG15f 59 59, 1658 UA6YAF TE 579 579, 1700 UA6ALT UF43f 599 599, 1709 UB5EFQ QH06d 599 599, 1710 RB5GIY ?? 59 59, 1712 UA6ACG TE11a 599 599, 1715 UB5EFN RH22j 599 599, 1717 RB5ZFN in Nikolajevsk 59 59, 1721 UY5HF QG24j 59 59 and 1934 EI8EF ?? 59 59.
UB5JIN (RE01f) wkd in 70 minutes 138 Stations!! At 1625 DJ6KW FM 59 59, 1625 DK1WB FM 59 59, 1626 Y22ME HM 59 59, 1626 DF1YQ GM 59 59, 1626 Y21RE/p HM 59 59, 1627 DK1KO FN 59 59, 1627 Y23BD GM 59 59, 1627 DF8BL EN 59 59, 1628 DL8BAB EN 59 59, 1628 SP6ASD HL 59 59, 1628 PA3AOT DM 59 59, 1629 DF3AR FM 59 59, 1629 SP6AZT IL 59 59, 1630 DG9OJ ?? 59 59 qrm, 1632 DK0IZ/p EN 57 57, 1636 DK3LL FO 59 59, 1636 DK1KO FN 59 59, 1636 DF6HT FN 59 59, 1637 Y21RE/p HM 59 59, 1638 Y22ME HM 59 59, 1638 DD0HZ FN 59 59, 1639 OZ3ZW FO 59 59, 1639 Y22ME HM 59++ 59++ ufb +40dB, 1639 DF5LQ EO 59 59, 1640 OZ9SL FP 59 59, 1640 DF2HC FN 59 59, 1640 DF1AR ?? 55 55 qsb, 1641 Y23bD GM 59 59, 1641 DF6OB FM 59 59, 1641 Y23OO GM 59 59, 1642 DJ6KW FM 59 56, 1642 DB6LJ EN 59 59, 1643 DK1KR FN 59 59, 1643 Y23OO GM 59 59, 1644 Y23SB FN 59 59, 1644 DL7AA FN 59 59, 1644 DC6HJ FN 59 59, 1645 DL7AA FN 59 59, 1645 Y22IC GN 59 59, 1646 DF6LO FO 59 59, 1647 DL7AKE GM 59 59, 1647 Y22QG FM 59 59, 1648 DL3UZ FN 59 59, 1648 Y23FG FM 59 59, 1649 Y26KH FL 59 59, 1649 DC7OH GM 59 59, 1650 DL7ADY GM 59 59, 1650 Y30CQD GM 59 59, 1651 DJ9BV EN 59 56, 1651 DG8BBF ?? 59 59 qrm, 1652 DK2PR EM 59 59, 1652 DL6BBC EM 59 59, 1652 DF1OY/p EL 59 59, 1653 DK2JX EL 59 59, 1653 DL3YB/p EM 59 59, 1654 DF3AR FM 59 59, 1654 DL6BBC EM 59 59, 1654 DB7LY EO 59 58, 1655 DG7SW GM 59 59, 1655 DL6LA ?? 59 59 qsb, 1656 Y25ME HM 59 59, 1657 DC7SR GM 59 59, 1657 DC7AS GM 59 59, 1657 DF5AI FM 59 59, 1658 DG8BBF ?? 59 59 qrm, 1658 DL3AAL FM 59 59, 1659 PA3CGR DM 59 59, 1659 PA3ANV DN 55 55, 1659 DF5BO DN 59 59, 1700 DL3YB/p EM 59 59, 1701 DK1QH EM 59 59, 1701 DF7VX EL 59 59, 1701 DG1YBQ ?? 59 59 qrm, 1701 DL2BAY EN 59 59, 1702 DL6LAD ?? 59 59 qrm, 1702 PA0PKD DN 59 59, 1702 DD2QV/p EM 59 59, 1702 PA0OOM DN 59 57, 1703 Y25HO GM 59 59, 1703 Y25JE HN 59 59, 1703 DL7ADE GM 59 59, 1704 DL7AIY GM 59 59, 1704 Y24BO GM 59 59, 1704 DK0IK EN 59 59, 1705 DC7KH GM 59 59, 1705 DL7AIY GM 59 59, 1706 DL5BAC ?? 59 59, 1706 DL4BBL EN 59 59, 1707 DG8FP EM 59 59, 1707 DB7OB FM 59 59, 1708 DK3OJ FM 59 59, 1708 DL2BAS EN 59 59, 1708 PA3CEE DN 55 58, 1709 Y21RE/p HM 59 59, 1710 DG5OJ EM 59 59, 1710 DF7OG EM 59 59, 1710 Y21TC HN 59 59, 1711 DL4BV DN 59 59, 1712 DL3UZ FN 59+20 59+20, 1713 SP6ASD HL 59++ 59++, 1714 DB6LJ EN 59 59, 1715 Y23RD GM 59 56, 1715 SP6FUN IL 59 59, 1716 DL7AIY GM 59 59, 1716 DC7SN GM 59 59, 1717 DD6KC GM 59 59, 1717 DK3UG EN 59 59, 1718 Y21RE/p HM 59 59, 1718 DB1BP DN 59 59, 1719 SP6AZT IL 59 59, 1719 Y23TD GM 59 59, 1720 Y23QO GM 59 58, 1720 DK7BY EM 55 59, 1720 DG9YCI EM 58 58, 1721 DG3AB EM 59 59, 1721 DL8DAT DL 59 59, 1722 DL9GS DL 59 59, 1722 PE1EXY ?? 55 55 qsb, 1725 DC7YX/p FM 59 59, 1725 DF7OQ FM 59 59, 1725 DF6OV EM 59 59, 1725 DF0VW FM 59 59, 1726 DF5BO DN 59 59, 1726 DJ1HU EM 59 59, 1726 DL2BAW DM 55 55, 1727 DL3AAL FM 59 59, 1728 DL0VW FM 59+ 59+, 1729 DG6BBA EM 59 59, 1730 DL4AO EM 59 59, 1731 DK1BM DL 59 59, 1732 DG7DX ?? 59 59 qrm, 1733 DB7XO DM 59 59, 1733 PA0OOS DN 59 59, 1733 DJ1HU EM 59 59, 1734 PA3AOE DM 59 59, 1734 PA0OOS DN 59+30 59+30, 1734 DJ6BN DM? 59 59 qrm and at 1735 DB6BU DM 59 59.
UG6AD (WA63j) wkd at 1540 UA3PBY SN08a 599 599, 1541 UA3QHS TL27b 599

599, 1543 UV3GJ SP67b 579 579, 1557 UA3PFC SO69g 569 569 and 1558 UB5AAM ?? 569 569.
UG6GBD (WA64a) wkd at 1546 UA3PBY SN08a 599 599.
RG6GBT (WA63h) wkd at 1547 UA3PBY SN08a 599 599 and 1548 UA3QHS TL27b 599 599.
Y22HA (GO) wkd RB5JAX in QE38j.

June 18th

DF5BL (DM37d) wkd at 1831 UB5LNR RJ20f 1995km.
DF8AE (EM73e) wkd at 1801 RB5LGX RK50g 559 579.
DL4RBK (FJ50b) wkd at 1810 RA3YCR RN52f 60dB.



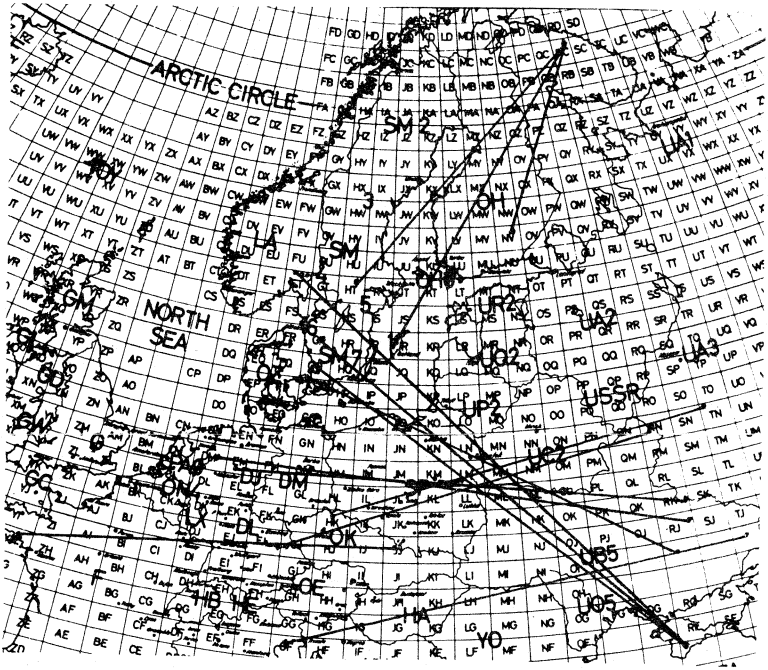
F6ETI (YH24c) wkd at 0856 OK2KZR ?? 55, 0856 OK2WCK II16c 52 55. 0857 OK2VMD IJ54g 59 59, 0857 OK2KZR IJ32j 59 57, 0858 OK2SBL JJ24j 59 55, 0859 OK2BTI JJ13a 55 59, 0900 OK2VWX ?? 52, 0901 OK2VIL I?13f 54 55 and 0901 SP9AI JJ 52.
I3TJQ (GF41g) wkd at 0845 UK5IEC TI 599 599.
OK1DIG (HK41f) wkd at 1820 RA3PCY TN01b 59 59.
RG6GBT (WA63h) wkd at 0619 LZ2KAD MC17b 599 599, 0620 YU100 KC10b 599 599 and 0701 LZ1AG MC64e 599 599.
UA1ZCL (RC08c) wkd at 0612 SM1BSA 319 529, 0615 SM0EJY 539 549, 0617 SM3JAW 429 549, 0618 SM5CNQ 539 559, 0620 UA9XAN 219 559, 0635 SM3JAW 549 559, 0645 SM5AKU 549 559, 0648 OZ1CLL 319 549, 0656 OH1VR 319 579, 0729 UA9XAN 219 559, 0733 SM3JAW 549 429, 0921 SM5CFS 549 539, 0925 SM0LRN 439 559, 0938 OH4UC 559 569 (NV17a), 0940 SM5AQJ 449 559, 0949 OH3CU 339 539, 0950 OH5IY 449 569, 1012 OH5LK 439 559, 1109 SM4GVF 429 429, 1203 SM4GVF 439 439, hrd 1210 UA9XAN 119, wkd at 1224 UA9XAN 319 559, 1309 SM5CNQ 319 529, 1611 SM4GVF 449 449, 1615 SM5MIX 439 459,

YO4AUL OE64g 599 599, 1627 YO7DL LE 59 59, 1632 LZ2VR LD05a 599 599, 1635 LZ2XU MD44e 599 599 and hrd 1641 LZ2?F.
HB9CRQ (EH61b) wkd at 1920 PA3BWY/mm QQ 59 59 2200km.
HB9MFW (EH24h) wkd at 1713 UK5EFC RI46g 59 59, 1715 UK5IEC TI32f 59 59, hrd 1723 RA3THW and 1724 UK5ICX.
I3TJQ (GF41g) wkd at 1706 UB5AAM RK 599 599, 1709 UA3QIN TL 599 599, 1712 UA3QHS TL 599 599 and 1714 UT5BN PK 599 599.
OK1DIG (HK41f) wkd at 1622 UA6LJV TH 59 59, 1623 UK6INE TH65c 569 559, 1630 UB5GAN QG24j 59 59, 1634 GI4SIP XO31g 59 59, 1636 GI3TLT XO33f 59 59, 1636 GI4LKA XO31j 59 59, 1638 GI6ATZ XO31j 59 59, 1642 GI6BNI XO32e 55 57, 1644 GI8YDZ WP 59 59, 1654 RB5QGL SG15f 59 59, 1658 UA6YAF TE 579 579, 1700 UA6ALT UF43f 599 599, 1709 UB5EFQ QH06d 599 599, 1710 RB5GIY ?? 59 59, 1712 UA6ACG TE11a 599 599, 1715 UB5EFN RH22j 599 599, 1717 RB5ZFN in Nikolajevsk 59 59, 1721 UY5HF QG24j 59 59 and 1934 EI8EF ?? 59 59.
UB5JIN (RE01f) wkd in 70 minutes 138 Stations!! At 1625 DJ6KW FM 59 59, 1625 DK1WB FM 59 59, 1626 Y22ME HM 59 59, 1626 DF1YQ GM 59 59, 1626 Y21RE/p HM 59 59, 1627 DK1KO FN 59 59, 1627 Y23BD GM 59 59, 1627 DF8BL EN 59 59, 1628 DL8BAB EN 59 59, 1628 SP6ASD HL 59 59, 1628 PA3AOT DM 59 59, 1629 DF3AR FM 59 59, 1629 SP6AZT IL 59 59, 1630 DG9OJ ?? 59 59 qrm, 1632 DK0IZ/p EN 57 57, 1636 DK3LL FO 59 59, 1636 DK1KO FN 59 59, 1636 DF6HT FN 59 59, 1637 Y21RE/p HM 59 59, 1638 Y22ME HM 59 59, 1638 DD0HZ FN 59 59, 1639 OZ3ZW FO 59 59, 1639 Y22ME HM 59++ 59++ ufb +40dB, 1639 DF5LQ EO 59 59, 1640 OZ9SL FP 59 59, 1640 DF2HC FN 59 59, 1640 DF1AR ?? 55 55 qsb, 1641 Y23bD GM 59 59, 1641 DF6OB FM 59 59, 1641 Y23OO GM 59 59, 1642 DJ6KW FM 59 56, 1642 DB6LJ EN 59 59, 1643 DK1KR FN 59 59, 1643 Y23OO GM 59 59, 1644 Y23SB FN 59 59, 1644 DL7AA FN 59 59, 1644 DC6HJ FN 59 59, 1645 DL7AA FN 59 59, 1645 Y22IC GN 59 59, 1646 DF6LO FO 59 59, 1647 DL7AKE GM 59 59, 1647 Y22QG FM 59 59, 1648 DL3UZ FN 59 59, 1648 Y23FG FM 59 59, 1649 Y26KH FL 59 59, 1649 DC7OH GM 59 59, 1650 DL7ADY GM 59 59, 1650 Y30CQD GM 59 59, 1651 DJ9BV EN 59 56, 1651 DG8BBF ?? 59 59 qrm, 1652 DK2PR EM 59 59, 1652 DL6BBC EM 59 59, 1652 DF1OY/p EL 59 59, 1653 DK2JX EL 59 59, 1653 DL3YB/p EM 59 59, 1654 DF3AR FM 59 59, 1654 DL6BBC EM 59 59, 1654 DB7LY EO 59 58, 1655 DG7SW GM 59 59, 1655 DL6LA ?? 59 59 qsb, 1656 Y25ME HM 59 59, 1657 DC7SR GM 59 59, 1657 DC7AS GM 59 59, 1657 DF5AI FM 59 59, 1658 DG8BBF ?? 59 59 qrm, 1658 DL3AAL FM 59 59, 1659 PA3CGR DM 59 59, 1659 PA3ANV DN 55 55, 1659 DF5BO DN 59 59, 1700 DL3YB/p EM 59 59, 1701 DK1QH EM 59 59, 1701 DF7VX EL 59 59, 1701 DG1YBQ ?? 59 59 qrm, 1701 DL2BAY EN 59 59, 1702 DL6LAD ?? 59 59 qrm, 1702 PA0PKD DN 59 59, 1702 DD2QV/p EM 59 59, 1702 PA0OOM DN 59 57, 1703 Y25HO GM 59 59, 1703 Y25JE HN 59 59, 1703 DL7ADE GM 59 59, 1704 DL7AIY GM 59 59, 1704 Y24BO GM 59 59, 1704 DK0IK EN 59 59, 1705 DC7KH GM 59 59, 1705 DL7AIY GM 59 59, 1706 DL5BAC ?? 59 59, 1706 DL4BBL EN 59 59, 1707 DG8FP EM 59 59, 1707 DB7OB FM 59 59, 1708 DK3OJ FM 59 59, 1708 DL2BAS EN 59 59, 1708 PA3CEE DN 55 58, 1709 Y21RE/p HM 59 59, 1710 DG5OJ EM 59 59, 1710 DF7OG EM 59 59, 1710 Y21TC HN 59 59, 1711 DL4BV DN 59 59, 1712 DL3UZ FN 59+20 59+20, 1713 SP6ASD HL 59++ 59++, 1714 DB6LJ EN 59 59, 1715 Y23RD GM 59 56, 1715 SP6FUN IL 59 59, 1716 DL7AIY GM 59 59, 1716 DC7SN GM 59 59, 1717 DD6KC GM 59 59, 1717 DK3UG EN 59 59, 1718 Y21RE/p HM 59 59, 1718 DB1BP DN 59 59, 1719 SP6AZT IL 59 59, 1719 Y23TD GM 59 59, 1720 Y23QO GM 59 58, 1720 DK7BY EM 55 59, 1720 DG9YCI EM 58 58, 1721 DG3AB EM 59 59, 1721 DL8DAT DL 59 59, 1722 DL9GS DL 59 59, 1722 PE1EXY ?? 55 55 qsb, 1725 DC7YX/p FM 59 59, 1725 DF7OQ FM 59 59, 1725 DF6OV EM 59 59, 1725 DF0VW FM 59 59, 1726 DF5BO DN 59 59, 1726 DJ1HU EM 59 59, 1726 DL2BAW DM 55 55, 1727 DL3AAL FM 59 59, 1728 DL0VW FM 59+ 59+, 1729 DG6BBA EM 59 59, 1730 DL4AO EM 59 59, 1731 DK1BM DL 59 59, 1732 DG7DX ?? 59 59 qrm, 1733 DB7XO DM 59 59, 1733 PA0OOS DN 59 59, 1733 DJ1HU EM 59 59, 1734 PA3AOE DM 59 59, 1734 PA0OOS DN 59+30 59+30, 1734 DJ6BN DM? 59 59 qrm and at 1735 DB6BU DM 59 59.
UG6AD (WA63j) wkd at 1540 UA3PBY SN08a 599 599, 1541 UA3QHS TL27b 599

599, 1543 UV3GJ SP67b 579 579, 1557 UA3PFC SO69g 569 569 and 1558 UB5AAM ?? 569 569.
UG6GBD (WA64a) wkd at 1546 UA3PBY SN08a 599 599.
RG6GBT (WA63h) wkd at 1547 UA3PBY SN08a 599 599 and 1548 UA3QHS TL27b 599 599.
Y22HA (GO) wkd RB5JAX in QE38j.

June 18th

DF5BL (DM37d) wkd at 1831 UB5LNR RJ20f 1995km.
DF8AE (EM73e) wkd at 1801 RB5LGX RK50g 559 579.
DL4RBK (FJ50b) wkd at 1810 RA3YCR RN52f 60dB.



F6ETI (YH24c) wkd at 0856 OK2KZR ?? 55, 0856 OK2WCK II16c 52 55. 0857 OK2VMD IJ54g 59 59, 0857 OK2KZR IJ32j 59 57, 0858 OK2SBL JJ24j 59 55, 0859 OK2BTI JJ13a 55 59, 0900 OK2VWX ?? 52, 0901 OK2VIL I?13f 54 55 and 0901 SP9AI JJ 52.
I3TJQ (GF41g) wkd at 0845 UK5IEC TI 599 599.
OK1DIG (HK41f) wkd at 1820 RA3PCY TN01b 59 59.
RG6GBT (WA63h) wkd at 0619 LZ2KAD MC17b 599 599, 0620 YU100 KC10b 599 599 and 0701 LZ1AG MC64e 599 599.
UA1ZCL (RC08c) wkd at 0612 SM1BSA 319 529, 0615 SM0EJY 539 549, 0617 SM3JAW 429 549, 0618 SM5CNQ 539 559, 0620 UA9XAN 219 559, 0635 SM3JAW 549 559, 0645 SM5AKU 549 559, 0648 OZ1CLL 319 549, 0656 OH1VR 319 579, 0729 UA9XAN 219 559, 0733 SM3JAW 549 429, 0921 SM5CFS 549 539, 0925 SM0LRN 439 559, 0938 OH4UC 559 569 (NV17a), 0940 SM5AQJ 449 559, 0949 OH3CU 339 539, 0950 OH5IY 449 569, 1012 OH5LK 439 559, 1109 SM4GVF 429 429, 1203 SM4GVF 439 439, hrd 1210 UA9XAN 119, wkd at 1224 UA9XAN 319 559, 1309 SM5CNQ 319 529, 1611 SM4GVF 449 449, 1615 SM5MIX 439 459,

1706 UA9XAN 219 339 and 1720 SM4GVF 439 449.
UB5JIN (RE01f) wkd at 1824 SM6YW? ?? 57 57, 1825 SM6AEK GQ 59 57, 1826 OZ1OF EQ 59 59, 1826 OZ6XR FP 59 59, 1827 SM6JSD GQ 59 59, 1827 OZ6XR FP 59+30 59+20, 1828 SM6CMU FR 59 59, 1828 OZ3NH EQ 59 59, 1829 SM7FMX GP 59 59, 1829 OZ1EYX GQ 59 59, 1829 OZ1FDH GP 59 59, 1830 SM6AFH GQ 59 59, 1830 SM6JDO GR 59 59 qrm, 1831 SM6KNK HP 59 59, 1831 SM6EOC GQ 59 59, 1831 OZ3GW FQ 59 59, 1832 LA9DI FT 59 59, 1836 OZ6OL FP 59 59, 1837 SM7LXV GP 59 59, 1838 LA6VBA ES 55 55, 1839 OZ6OL FP 59+20 59+20, 1840 OZ9QV GP 59 59, 1841 OZ9PW EQ 56 56, 1842 OZ1BCY FP 55 55, 1842 OZ1FGP EQ 59 59, 1843 SM7DTT GP 59 59, 1843 SM6AFH GQ 59 59, 1844 OZ1IUK GQ 59 59, 1845 SM7JLT GQ 59 59, 1846 LA8AK DS 59 59, 1847 SM6MNS GR 59 59 and 1847 SM6NZI? FR 59 59 qsb.
UG6AD (WA63j) wkd at 0612 LZ2KAD MC17b 599 599, 0613 YU1OO KC10b 599 599, 0616 LZ2QG MC07e 569 599, 0642 YU5RA KB08j 569 559, 0645 YU1OO KC10b 59 59, 0652 YU5CY KB08a 579 579, 0654 YU1OHV KD60c 589 589, 0655 LZ1AG MC64e 599 599 and 0705 YU5NR KB08a 559 559.
UG6GBD (WA64a) wkd at 0618 LZ2KAD MC17e 599 599, 0623 YU1OO KC10b 599 599 and 0659 LZ1AG MC64e 599 599.
Y22HA (GO) wkd RB5EHT in RI33j.

June 19th

UA1ZCL (RC08c) wkd at 0605 SM4GVF 319 319, hrd 0705 SM4GVF 319, wkd 0805 SM4GVF 219 219, 0904 UA9XAN 119 339, hrd 0909 SM4GVF 219, wkd 1004 UA9XAN 219 449, hrd until 1307 UA9XAN and SM4GVF.

June 20th

DK1VI (EJ54f) wkd at 1836 9H1GB HV13a 59 59, 1837 9H1BT HV12b 59 59, 1838 9H1BW HV03e 56 59, 1840 9H1FL HV13j 59 59, 1841 9H1CG HV13b 59 59 and 1842 9H1FN ?? 53 59.
EA3LL (AB) wkd at 1726 I7OGB IB65d 59 59, 1730 I7ECT HB27c 59 59, 1734 I7ZPB IB75a 59 59, 1740 I7IWN JA62g 59 59, 1742 IK7BFD HB27c 59 59, 1745 SV1DH MX01g 59 59, 1749 SV4LD LZ11a 59 59, 1752 YU5TU KB08h 59 59, 1754 LZ2XU MD44e 599 599, 1754 LZ1AG MC64c 599 599, hrd 1800 I8TUS IZ 58 and wkd 1835 SV4SO LZ05a 59 59.
HB9MFW (EH24h) wkd at 1821 9H1CD HV03e 59 59, 1822 9H1BW HV03e 59 59, 1823 9H1FN HV03e 59 58, 1823 9H1BT HV12b 59 59 and 1833 9H1GB HV13a 59 59.
UA1ZCL (RC08c) wkd at 0415 OH2HK 319 559 and 0437 OH2BXE 219 529.

June 21st

HB9MFW (EH24h) wkd at 1706 LA2PT FT13b 57 59.
I3TJQ (GF41g) wkd at 1705 LA8OJ CS 599 599.

June 22nd

EA3LL (AB) hrd at 1842 SV1DH/A MX 529.
DK2PR (EM07j) at abt 1700 hrd parts of callsigns from YU stations. Then antenna into YU wkd at 1714 I6WJB HC42g 59 59 1238km.

June 23rd

UA1ZCL (RC08c) wkd at 1536 UA3MBJ SS 549 539 and hrd UA9SEN in BL.

June 25th

UA1ZCL (RC08c) wkd at 1205 SM4GVF 549 449, 1210 SM4IVE 549 559, hrd 1225 SM4GVF 549 and wkd 1227 SM5MIX 429 459.

June 28th

DJ8QP (GH14j) wkd at 1903 SV1DH/A MX 519 419 1921km. SV1DH/A war nur aus Antennenrichtung 90 Grad zu hören.

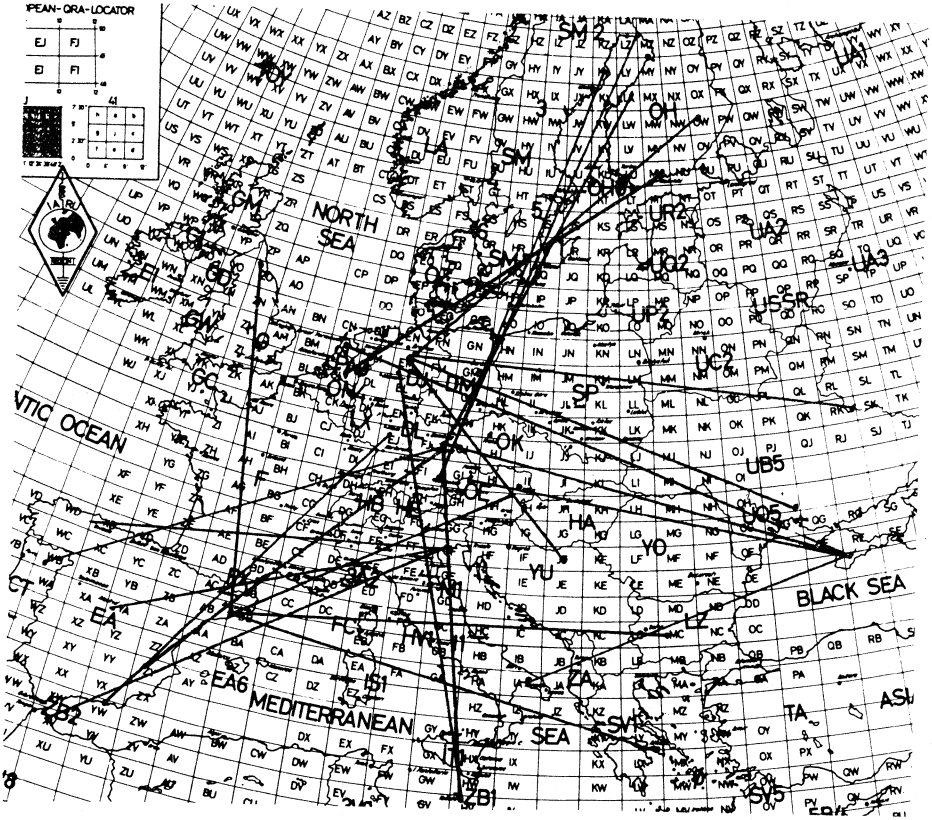
June 30th

I3TJQ (GF41g) wkd at 1108 F1GTR ZG 59 59.
UG6AD (WA63j) wkd at 1753 UA3TBM WQ51j 579 599 and 1801 UA3LAW PO 599 599.

July 1st

UB5JIN (RE01f) wkd at 1815 I4ERN GE 59 59.

July 2nd



DF1ZE (EJ13e) wkd EA7AG YW18b, EA4AAW WZ49g.
DF8AE (EM73e) wkd at 1040 9H1BT HV13a 59 55 and 2117 YU1POA KE24c 59 59.

DJ3TF (FJ50g) wkd at 1126 F6EYM/EA ZY10j 59, 1131 EA5HM ZZ 59, hrd 1140 EA4CCI YA 59, wkd 1138 ED7YDG YX74g 59, 1229 CT1WW WB 59 and 1851 UB5JIN RE01f 59.
DK2PR (EM07j) wkd at 1041 9H1BT HV12b 59 59 1944km, 1049 IT9SAS HY63 56 56 1688km, 1641 LZ1KDZ NC23a 599 599 1709km, 1707 UC2ABN NN18c 599 599 1207km, hrd also UC2AAB, AAC, AAK, ABT, UK3LAW, RA3YCR but terrific qrm by VHF contest. Wkd at 1731 RB5LGX RK50g 599 599 1848km, 1746 UB5GBY QG22f 59 59 1780km, 1800 RO50AA OH74c 559 559 1526km, 1803 OH4YA OW43e 599 599 1544km and 1820 UB5ZEE PH80a 59 58 1733km---QRT, because chaotic condx on the band, wkd at 2025 LZ2FA/m ?? 599 599 and at 2032 LZ1KDZ NC23a 599 599 1709km.
DL4RBK (FJ50g) hrd at 1045 9H1CG HV13b 50dB, wkd 1128 F6EYM/EA5 ZY10j 60dB, hrd 1130 EA5ZE ZY28j 60dB, wkd 1137 ED7YDG YX74g 60dB, hrd 1140 EA4QV YA 60dB, wkd 1229 CT1WW WB63b 60dB, hrd 1235 CT1AEX ?? 60dB, wkd 1723 RB5JAX QE 60dB, hrd 1750 SM2GHI MZ01h 40dB, 1755 OH6AI LX06g 60dB, 1805 SK2KW KY65c 40dB and 1850 UB5JIN RE 60dB.
DL5MAE (FI60f) schreibt:.bereits Mittag ca. 1100 Uhr ging das Band nach EA und CT auf. Ich konnte zwar 5 x EA (aus WZ, YA, VC) loggen, aber bei CT war erst das "pile up" zu groß und später ging der skip nach Ost-Bayern und OK. Gegen 1245 verschwanden die letzten Es Signale. Aber nur wenige Stunden später öffnete sich das Band erneut. Um 1730 gelang mir ein CW QSO mit RC2WBR aus NP75g. Etwa 25 Minuten später gab es eine seltene öffnung nach Nord Schweden. Ich konnte folgende Stationen erreichen: 1754 SM2GHI MZ01h 59 59 2092km, 1756 SM2CKR KX22e 59 59, 1756 SK2KW KY65c 59 59 und 1803 SM2JAE in KZ58c 599 599. SM2JAE rief noch weitere 2 Minuten CQ auf 144.080, ohne daß er "bemerkt" wurde, obwohl zur gleichen Zeit der IARU Region I Contest lief.
EA3LL (AB) wkd at 0936 SV1OE LX10a 59 59, 0938 LZ1AG MC64e 599 559, 0955 YU1OHK KE35e 59 59, 0959 YU7OQC KF42d 59 599, 1000 YU7BCX KF24f 597 599, 1000 LZ2KBI LD05a 599 599, 1001 hrd YO7DL LG, 1003 YU1OAM ????a 559 599, 1004 YO7VS/p LF53a 599 599, 1007 YO7AOZ ?? 529 , 1009 YO7BJE LF53a 599 599, 1010 YO7ALZ LF53a 599 599, 1011 YU5FAA KB05a 59 59, 1014 YU1ABH JD29f 599 599, 1020 YU1ZZ JD29f 599 599, 1023 YU1EMN KE79a 59 59, 1024 YU1PRV KD16d 59 59. 1025 YU1ADN KD35g 59 59, 1025 YU1POA KE24j 59 59, 1026 YU1NDL JE37f 59 59, 1027 YU1ICD JE37f 59 59, 1027 YU1EV KE32g 59 59, 1028 YU4AVW/4 ?? 57 59, 1032 YU1CX JE19e 59 59, 1032 YU4VGK IE40a 57 59, 1033 YU1QPD KE23e 59 59, 1034 YU4AVW IE35e 59 59, 1036 YU1UI KE35c 529 579, 1042 YU1AWW KE13j 59 59, 1043 YU1OXU KE13j 59 59, 1044 YO2BUG KG66f 59 59, 1047 YU7EW KF24f 59 59, 1048 YU3TBA HG64f 59 59, 1050 HG7PL ?? 59 59, 1056 YU4ALM JD22h 59 55, 1058 YO2FP ?? 59 59, 1059 YU2RIT ID33f 59 59, hrd 1109 OE3OKS, 1111DF3RU, wkd 1114 DF4CS FI03e 59 59, 1135 OE6WEG HH78d 59 59, 1136 OE6UDG HH68d 59 59, 1136 HG6KNB JI59c 59 59, 1137 HG6ZV/p JH10d 59 59, 1138 HG6VJ/p JH10d 59 59, 1138 OE6OWG HH78j 59 59, 1140 OK3KXC KI24a 599 599, 1144 HG7HH/p JH15j 599 599, 1145 OK3CPY JI29e 599 599, 1147 OK2KYZ JI06b 599 599, 1153 OE1PUW ?? 59 59, 1156 OE3LSE II52g 59 59, 1202 OE3LFA II52g 59 59 and 1332 hrd G4SZD in ZO.
I3TJQ (GF41g) wkd at 1102 EA4CCI YA 59 59, 1105 EB4IM YA 59 59, 1106 EA4QV YA 59 59, 1130 EA4QR YA 59 59, 1148 EA1AUU WA 55 59, 1152 EA1OD XD 59 59 and 1215 EB1WV XD 59 59.
PA0JMV (CL37e) wkd at 1745 OH2WTQ MU66h 58 57, 1758 OH2BYA MU46f 599 599, 1810 OH2MQ MU25f 599 599, hrd 1722 UC2ABN, 1727 UC2AA, 1750 UB5GBY QG24a, 1801 LZ2AR/p LD and 1832 - 1836 RB5LGX RK50g, vy short openings with deep QSB.
UB5JIN (RE01f) wkd at 1739 I3LDP/4 59 59, 1747 PA2GFL DM 59 59, 1747 PA3CNN CN 59 59, 1748 PE1FZK ?? 59 59 qrm, hrd 1748 I3LDP/4 ?? 55, wkd 1751 DL3YB/p EM 59 59, 1751 PE1GHW DM 59 59, 1752 PA3CDD DM 59 59, 1759 PA0OOS/p CN 59 59, 1808 DL3AAL FM 55 59, 1808 PA0OOS/p CN 59+30 59+30, 1809 PA0GUS/p CN 59 59, 1815 PA0COR CN 59 59, 1815 PA0FTF CK 55 55 qrm, 1816 PE1DTU CN 59 59, 1821 PE1FMU CM 59 59, 1821 PA0XMA DM 59 59, 1822

PAØSIR DM 59 59, 1831 OE5YBL GJ 57 57, 1832 UO5OBE/p ca. 550km (Es?) 59 59, 1833 OE5YBL GI 59 59, 1836 DL5MAM FI 55 55, 1837 OE8ECM HI 59 59, 1838 OE5OLL GI 59+20 59+30, 1839 OE8ECM HI 59 59, 1839 DF9RJ GJ 59 54, 1840 OE5XBL GI 59 59, 1840 OE5GDL GI 59 59, 1841 DF9MV/p GI 59 59, 1841 DF9RJ GJ 59 59, 1842 OE1RKU II 59 59, 1843 OE5ML GI 59 59, 1844 OE5XVL GH 59 59, 1845 DG5RO GJ 59 59, 1845 OE5ACL GI 59 59, 1846 OE5UL/5 GI 55 59, 1847 DL1MF GH 59+20 59+20, 1848 OE5MZL HI 59 59, 1848 OK3KVJ JI 59 59, 1848 OK3KII/p II 59 59, 1849 DJ3TF FJ 59 59, 1849 DB3RT GI 59 59, 1850 HG4YF JH 59 59, 1851 OE3WXU II 59 59, 1851 DG2SU ?? 59 59, 1852 DDØMF FI 55 59, 1853 DL5MAM FI 59 59, 1854 OE3WGB II 55
55 qsb, 1855 OE3LFA II 59 59, 1855 OE3THC II 59 59, 1856 DC6AH GI 59 59, 1856 OE5LJM HI 59 59, 1857 DJ9IW/p FH 55 57, 1900 OE5OLL GI 59 59, 1901 OE5UAL GI 59 59, 1901 OE5FPL GI 59 59, 1902 OE3XWC HH 59 59, 1903 HG1W/p IH 59 59, 1903 OE2CAL GH 59 59, 1904 DF6MF FH 59 58, 1905 HG1YU/p IH 55 59, 1923 Y32BL/p ?? 55 55 qsb, 1925 DH6NAQ/p ?? 55 55 qsb, 1928 I3LDP/4 ?? 59 59, 1935 Y52ZI/p FL 55 59, 1936 DG9BAS EN 59 59, 1936 DLØVW FM 58 55 qrm, 1937 DK9PL/p ?? 59 59, 1941 PA3AOT DM 59 59, 1942 Y350 GM 59 59, 1943 DLØBI/p EM 55 59, 1943 DG9BAS EN 59 59, 1944 DL3AAL FM 59 59, 1944 DL5BAC ?? 59 59 qrm, 1945 I7CD IA? 55 55, 1945 DLØBI/p EM 59 59, 1946 DF5AI FM 59+30 59, 1946 DL8BAY EN 57 59, 1947 DLØNX EN 59 59, 1948 DF7OG FM 59 59, 1948 Y22QG FM 59 59, 1948 DL5BAC ?? 55 55, 1948 PA3AJG DM 59 59, 1949 DLØVW FM 59 59, 1949 DB8WK DN 59 59, 1949 DL8BAV EN 59 59, 1950 DL7YS GM 59 59, 1950 DB6BU DM 59 59, 1950 DF200 EM 59 59, 1951 DA4MM EM 59 59, 1951 DL7AGH GM 59 59, 1952 DG5OW ?? 59 59 qrm, 1952 Y22ME HM 59 59, 1953 DC7QY GM 59 59, 1954 DB7OB EM 59 59, 1955 DD6KG GM 59 59, 1955 DG3AB EM 59 59, 1956 DF8BL EN 59 59 and 1957 DF7OH FM 59 59.
UG6AD (WA63j) wkd at 1744 YO2IS KF17e 599 599, 1754 YU2OB/2 ?? 599 599, 1825 YO2IS KF17e 599 599, 1827 YU7KWF JF80j 599 599 and 1828 YU7QCA JF80j 599 599.

July 3rd

UB5JIN (RE01f) wkd at 0717 IW1PDP ?? 59 59 qsb, 0721 SV1OE LX 59 59, 0722 SV1LY LX 59 59, 0723 SV1EN LY 59 59, 0724 SV1OE LX 59+20 59+20, 0724 SV1AE LX 59 59, 0725 SV1DO LX 59 59, 0726 SV3QD LY 55 59, 0727 SV1DO LX 599 599, 0728 SV1OE LX 59+30 59+30, 0729 SV3QD LY 59+20 59+20, 0734 SV1JZ LY 59 59, 0807 IT9LZ ?? hrd qsb, 0828 9H1CG HV 55 55, 0829 9H1GK HV 59 59, 0832 9H1GK HV 59+30 59+30 and hrd at 0837 EA3LL AB 52.

July 5th

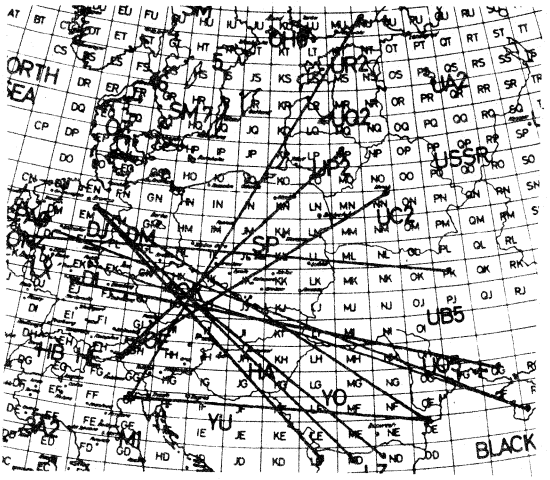
I3TJQ (GF41g) wkd at 0940 IØSNY/EA9 XV 59 59 and 0943 EB7BMK XX 59 55.

July 7th

EA3LL (AB) wkd at 1807 G4LOH ZM26h 59 59, 1807 G3ZLM ZO34d 59 55, 1808 G4AWU ZN45c 59 59, 1808 G8RBY ZM16e 59 59, 1809 G8VFI ZN24j 59 59 and 1810 G4ECY ZM05b 59 59.
PA2CHR (CL09b) hrd at 1808 EA1ED VD 54.

July 8th

DF1ZE (EJ13e) wkd UB5JIZ QF, UB5GBY QG, UB5CGF QG and UB5ZEE in PHØa.
DH2NAF (FI17g) schreibt:...gegen 1350 wurden einige Stationen aus dem süddeutschen Raum gehört, die in Richtung LZ und UB5 arbeiteten- gehört wurde von mir aus dieser Richtung gar nichts. Allerdings war für etwa 4 Minuten eine YO Station mit 59+20 zu hören und wurde auch erreicht. Die öffnung dauerte dann noch etwa 20 Minuten, wie ich aus der Aktivität der DL's entnehmen konnte. 1405 YO4AUL OE54g 59 59.



DK2PR (EM07j) wkd at 1456 LZ1AG MC64e 559 559 1655km, 1508 LZ2AR LD68c 599 599 1507km, 1521 YO4AUL OE54g 59 59 1709km, 1527 UB5FDF OF55d 59 59 1651km, 1530 LZ1CH NC34a 599 599 1730km, 1532 LZ2XU MD44c 599 599 1549km and 1544 LZ2FA ND40g 599 599 1718km. Didn't find any signs of FAI.

To our friends in DX: You can make a lot of additional QSO's when you move away from 144.300 MHz if band is open. Heard often calling several DX's on same frequency; only the strongest could work. Made also in 82 two QSO's in the same moment, because of that chaotic situation.

To our friends in the middle of Europe: Heard even experienced and well known OP's calling CQ during an open Es on 144.300 MHz and 144.050 MHz. Do you think, this way of operation will increase your QSO number? (I don't believe). Or do you want to show to the newcomers how (not) to work DX and how to make the chaos complete??!!

DL4RBK (FJ50g) wkd at 1450 LZ2XU MD44e 60dB and 1507 LZ2FA ND40c 60dB.

HB9CRQ (EH61b) wkd at 1455 UB5JIN RE 59 59 2000km, 1513 UB5GBY QG 59 59, 1546 UC2ABT NN 59 57 and hrd 1506 UP2WN MP 59.

I3TJQ (GF41g) wkd at 1157 YO4AUL OE 59 59 and 1608 OH5IY NU 59.

PA0JMV (CL37e) wkd at 1633 UT5DN PK43e 599 599 and 1646 UB5PAZ ML73a 559 599.

UB5JIN (RE01f) wkd at 1455 HB9CRQ EH 59 59, 1456 HB9MDO DH 59 59, 1457 DF1CF FH 59 59, 1500 F6HLD CG 55 52, 1518 DG5FBL EJ 59 59, 1519 DF8IK EJ 59 59, 1519 DG4NAE EJ 59 59, 1520 DF1FZ EK 59 59, 1520 DG1ZN EK 59 59, 1520 DG5FAF EK 59 59, 1521 DG5FO EK 59 59, 1521 DJ1NY DJ? 59 59, 1522 DL6FAW DJ 59 59, 1523 DD3KF ?? 55 55 qrm, 1527 PA0FTF CK 59 59, 1528 PE1ISU CL 55 59, 1530 DG8DU DL 55 59, 1531 DJ9CZ DL 59 59, 1540 DC1FN ?? 59 59 qsb, 1541 DB0KH EK? 59 59 qrm, 1542 DL0HG EK 59 59, 1543 DK4PA DK 59 59 and 1544 PA0HWM CK 59 59. Equipment de UB5JIN: Home made transceiver 1.2 nF /25W output + linear PA 2x 4CX350A- home made preamp 3SK97 and a single 16 el longyagi F9FT.

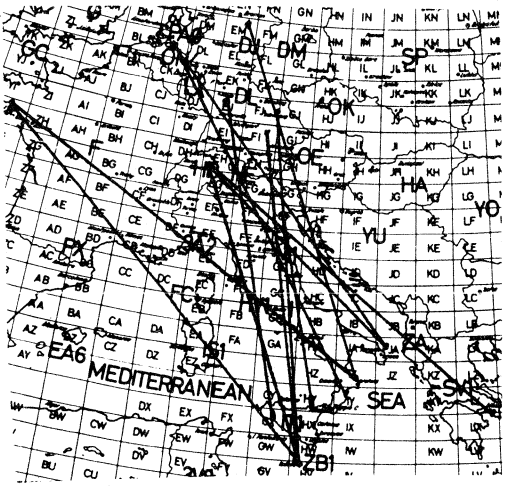
July 14th

EA3LL (AB) wkd at 1500 IT9MRY HY68b 59 59, 1501 IT9AJH HY68c 59 59, 1507 IT9DTU/9 HY68h 59 59, 1508 IW9AMX HY67b 59 59, 1512 I7IWN JA62a 59 59, 1514 IT9SAS/9 HY68h 59 59, 5122 SV2JL LA35b 59 59, 1523 I2KSX/8 HY40h 59 59, 1524 I8QFK HY50b 59 59, 1531 I8TUS IZ51f 59 59, 1535 I8UPK HZ40d 59 59, 1535 IK8BIO HZ40d 59 59, 1538 SV1EN LY40a 59 59, 1540 I8PMH HZ40d 59 59, 1541 YU7BDO KF66j 59 59, 1542 YU1EV KE13d 59 59, 1542 YU1AFS KE13e 59 59, 1542 YU1AWW KE13j 59 59, 1543 YU7MDA KE01a 59 59, 1543 JU4WEU IE15h 59 59, 1543 YU1OHO KE25e 59 59, 1543 YU7MAU ?? 59 59, 1548 LZ1AG MC64e 599 599, 1549 LZ1RK MC63b 599 599, 1549 YU7MCG KF01e 599 599, 1550 YU2SOP JF 599 599, 1551 YU1EY ?? 599 599, 1552 YU7QFH KF43e 599 599, 1552 YU4WEU IE15h 599 599, 1556 YU7KMN KF 59 59, 1557 YU1IW KF67 599 599, 1600 YO2IS KF17a 599 599, 1602 LZ1LX MC62c 599 599, 1607 YU1PRV KE?d 59 59, 1608 YU7QCN JF16e 59 59, 1609 YU2BOP JF 59 59, 1609 YU7MDZ JF01f 59 59, 1609 YU7AJH ?? 59 59, 1610 YU1EN JE34f 59

59, 1610 YU1ICD JE17f 59 59, 1610 YU1NDL JE17f 59 59, 1610 YU1OAM KE13j 59 59 1611 YU4WOC JE34j 55 55, 1612 YU2RIT ID33f 59 59, 1613 YU4BMN JE34j 59 59, 1613 YO2IS KF 59 59, 1614 YU7AU KE14h 59 59, 1616 YU7NXA KF77a 59 59, 1615 YU7PEK KF77a 59 59, 1615 YO7VS ?? 59 59, 1617 LZ2QA OD42c 599 599, 1626 LZ2VR LD05a 599 599, 1629 LZ2FA ND40d 599 599, 1633 YO4AUL OE64g 59 59, 1638 LZ1DV MC49g 549 599, 1643 LZ2BP LD05a 599 599, 1645 YU1OHV KD60c 599 599, 1646 YO4BDH OF64c 599 599, 1647 YU1HFG KC10b 599 599, 1650 LZ2OY MC07d 599 599, 1655 YO3BTN NE41c 599 599, 1700 LZ2SK OD42c 599 599, 1702 LZ1D0 MC49g 599 599, 1705 LZ2NV MC07d 599 599, 1706 YO3BTC NE41h 599 599, 1711 YU1PTH KE75e 599 599, 1714 YO3CTW NE41g 599 599, 1716 YO3BAL NE41h 599 599, 1721 UB5JLG? ?? 519 519 QRM LZ, 1725 LZ2XU MD44e 599 599, 1725 LZ1ZH NC34g 599 599, 1726 LZ1QV NC48a 599 599, 1726 LZ2CW MD43c 599 599 and 1727 LZ1QD NC48g 599 599.

July 15th

DF1ZE (EJ13e) wkd IT9WPO HX36e, IW9AJZ/IH9 GW11g, IT9UBA GX59a, IT9AJH HY68c and I8QAF IY11c.



DH2NAF (FI17g) schreibt:...für mich die längste öffnung in diesem Jahr fand an diesem Tag statt.
Gegen 1510 wurden erneut Signale aus 9H1 laut. Ich arbeitete nur neue Stationen, denn es waren wieder fast alle anderen zu hören, die genau einen Monat vorher schon gearbeitet wurden. Etwa eine halbe Stunde später machte sich eine DX-pedition aus Pantelleria bemerkbar. Zirka eine Stunde nach Beginn verlagerte sich der Schlauch mehr nach Norden in Richtung Sizilien und Süd- Italien. Wegen dem starken Andrang konnte jedoch hier nichts mehr erreicht werden, außerdem mußte ich um 1700 die Station schließen. 1513 9H1BW HV03e 59 59, 1515 9H5I HV13a 56 55, 1518 9H1GB HV13a 55 54, 1544 9H1GP HV03f 59 59 und 1606 IW9AJZ/IH9 GW11g 59 59. An diesem Tag wurden folgende QTH Felder gehört: HV, GW, HW, GX, HX, GY, HY, IY, IZ, HA und IA. Insgesamt 11 Felder und somit einen Großteil des süditalienischen Raumes mit Inseln.
DJ3TF (FJ50g) wkd at 1632 I8TUS IZ52f 59, 1636 I8NKA IY21g 59, 1643 IT9XIX HX36j 59, 1645 IT9WPO HX36e 59, 1647 9H1CG HV13b 59, 1654 I2KSX/p HY40h 59, 1658 I8QAF IY11c 59, 1700 IT9JLU/9 HY68? 59, 1707 IT9SAS/9 HY68h 59, 1713 IT9MRJ HY68b 59, 1720 IT9YSW HY75f 59, 1721 IT9SAS/9 HY68h 59 and 1722 I0XPS/8 HY50j 59.
DK2PR (EM07j) wkd at 1701 I8TUS IZ52f 59 59 1606km, 1703 I2KSX/8 HY40h 59 59 1676km and 1719 IT9JLU/9 HY68h 59 59 1708km.
DL1SBF (GH04j) berichtet:...um 1703 hatte ich von Waging am See ein Es QSO mit 9H1CG in HV13b. Dies (Entfernung 1351 km) ist sicher nichts besonderes an diesem Tage, doch hatte ich nur ein Lambda 5/8 Stäbchen (unter 30 Grad zu senkrecht geneigt) am Fenstersims und ca 8 W zur Verfügung. Rapport 59!.
DL4RBK (FJ50g) wkd at 1539 9H1GB HV13a 59, 1542 9H1BT HV12b 59, 1547 9H1GK HV13h 59, 1548 9H1FL HV13j 59, 1549 9H1GP HV03f 59, 1553 9H1ED HV03e 59, 1606 IT9XIX HX36j 59, 1620 IW9AJZ/IH9 GW11g 59, 1626 I2KSX/8

HY40h 59, 1650 I8TUS IZ52f 59, 1652 I8QAF IY11c 59, 1701 IT9JLU/9 HY68h 59, 1707 IT9SAS/9 HY68h 59, 1710 IT9MRJ HY68b 59 and 1719 9H1CG HV13b 59.

DL5MAE (FI60f) schreibt: Die wohl schönste und ausgeprägteste öffnung war am 15.7.83 mit Süditalien, Sizilien und Malta. Ab 1530 kam zunächst 9H1 durch. Um 1600 konnte ich als erste Station aus Sizilien IT9XIX aus HX36j arbeiten. Kurze Zeit später wurde der Skip noch kürzer und es kamen auch noch I8 Stationen lautstark durch. Meine Ausbeute bei dieser öffnung: 4 x 9H1 in HV, 6 x IT9 in HY und HX, 1 x I8 in HY und als besonderer Leckerbissen IW9AJZ/IH9 aus GW11g (QSL- Info: Box 300 Palermo, Sizilien).

F6ETI (YH24c) wkd at 1551 IT9SAS/9 HY68h 59 59, 1553 I8QFK HY50h 58 58, 1557 I2KSX/8 HY40h 59 59, 1603 I8NKA IY21g 59 59, 1610 I8TUS IZ52f 57 59, 1619 I8PMH HZ40d 57 59, 1810 9H1CB HV13a 58 59, 1812 9H1BW HV03e 53 59, 1812 9H1BT HV12b 59 59 and 1813 9H1CB HV13b 57 59.

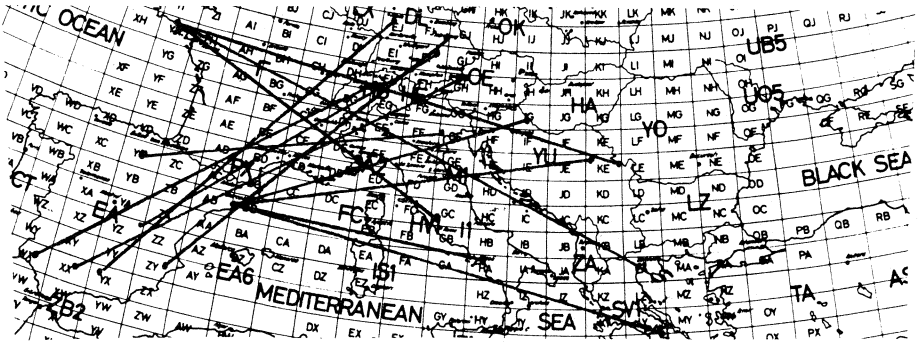
HB9CRQ (EH61b) wkd at 1523 IT9AWC HY 57 59, 1530 9H1BT HV 59 59, 1537 9H1ED HV 59 59, 1543 IW9AMX HY 59 59, 1548 IT9AJH HY 55 59, 1605 I8TUS IZ 59 59, 1607 9H1GB HV 59 59, 1609 9H1I HV 59 59, 1610 9H1FL HV 59 59, 1612 9H5I HV 59 59, 1613 9H1GP HV 59 59, 1616 9H1GK HV 59 59, 1644 I7IWN JA 59 59, 1646 SV8QH KY 59 59, 1647 I7OGB IB 59 59, 1650 SV1EX LX 59 59, 1703 I7KOE JA 59 59, 1712 SV1OE LX 54 55 and 1717 SV1RC LY 59 59.

I3TJQ (GF41g) wkd at 1643 IT9AJH HY 59 59.

PA0JMV (CL37e) hrd 1708 - 1730: SV.... in KY53e, I8QAF in IY11c, I7KOE in JA62e and I8AZQ in IY03c.

PA2CHR (CL09b) hrd at 1727 I8AZQ IY 52.

July 16th



DF1ZE (EJ13e) wkd EA7BIH in YX12f.

DH2NAF (FI17g) berichtet:...eine sehr kurze öffnung fand am 16.7. statt. 1720 EB5AZT in ZY10h 59 59. Es wurden noch andere Stationen aus EA gehört, jedoch sind die QTH Kenner nicht bekannt. Bei dieser öffnung soll, d.h. sind von GH Verbindungen nach EA8 getätigt worden.

DJ3TF (GH14j) wkd at 1513 EA8XS in SO 59 59 3274km! 1518 EA5HM ZZ 59 59 1526km and 1832 EA7BVD XX 59 59 1794km.

DL1MF (GH12a) schreibt:...bei der Es öffnung konnte ich mit der Station EA8XS QTH: SO73e mein ODX erheblich vergrößern. Auch 2 Stationen aus Spanien konnten gearbeitet werden (ZZ und XX). Die öffnung war an diesem Tag zwischen 2020 und 2030 MESZ.

DL4RBK (FJ50g) wkd at 1714 EB5BOD ZY57e 59, 1715 EA5DFY AY11j 59 and hrd: 1716 EA5CSN, 1717 EA9LB and 1718 EA5IO.

DL5MAE (FI60f) berichtet: ..am 16.7. kam es für mich zum Höhepunkt der diesjährigen Es-Saison! Zunächst konnte ich um 1620 eine EA7 Station

aus WX erreichen. Die Signale waren aber sehr leise und die Reflektionen an der E Schicht sehr kurz. Als ich die Hoffnung auf weitere Es QSO's schon fast aufgegeben hatte, hörte ich gegen 1730 eine spanisch sprechende Station, die Pile Up aus Italien abfertigte. Ich versuchte es dann auch mit einem Anruf und wurde sofort gehört. Als sich dann meine Gegenstation mit EA8XS aus SO73d ausgab, traute ich meinen Ohren nicht,hi. Die ausgetauschten Rapporte waren 59 und die Entfernung beträgt mehr als 3240 km. Nach ca. 1 Minute verschwand das Signal von EA8XS wieder im Rauschen. Diese Verbindung war auch mein letztes Es QSO in diesem Jahr.
Man darf jetzt wohl gespannt sein auf die kommenden Jahre, wenn wir uns im Sonnenfleckenminimum befinden. Zum Schluß noch meine Stationsausrüstung: TS700S und PA 150W outp., 14ely.
EA3LL (AB) wkd at 0542 OE6WIG HG29b 59 59, 0546 HG0HO KH18a 59 59, 0549 HG8CE KG32c 59 59, 0557 HG5CI JH43a 59 59, 0558 HG0HF KH39f 59 59, 0639 HG5HD JH36d 599 599, 0643 YU3TZJ HF02c 59 59, 0643 YU7KMN JF16a 59 59, 0644 HG4YF JH63g 59 59, 0644 YU7AR KF01c 59 59, 0645 YU2SZZ IG54f 59 59, 0645 YU2SNP ????a 59 59, 0646 HG3KAX KG16g 59 59, 0647 YU7PEV KE01b 55 59, 0649 YU7MAU JF50j 59 59, 0653 YU7MGU JG79a 59 59, 0656 YU2RUV JF53g 55 55, 0657 YU7MAO JF39g 59 59, 0657 YU2KDE JF23g 59 59, 0658 YO2IS KF17e 59 59, 0702 YO7DL LE60g 599 599, 0703 HG0HO KH18a 599 599, 0705 HG8ET KG22j 599 599, 0708 YU7AU KE14h 599 599, 0709 YU1POA KE04j 599 599, 0716 YU7KMN JF16e 599 599, 0744 SV1OE LX10a 59 59, 0748 I7IWN JA62a 59 59, 0754 SV1EX LX09a 59 59, 0756 I8PMH HZ40d 59 59, 0758 I8TUS IZ52f 59 59, 0808 I2SRM/8 HA55j 59 59, 1715 DC0MJ/p FI30j 59 59 and 1716 DC6AH 59 59.
F6ETI (YH24c) wkd at 0540 YU1OHK KE29e 58 59, 0548 SV2JL LA35b 58 55 2223km, 0705 I0QM GC62b 53 59 and 0710 I7IWN JA62a 55 59.
HB9CRQ (EH61b) wkd at 1610 EB7KU WX 59 57 and 1613 EA7CR WX 57 59.
I3TJQ (GF41g) wkd at 1715 EA2JG/p YC 59 59.

July 17th

EA3LL (AB) wkd at 0649 SM5CNQ HS46c 59 59!.

July 19th

DL2OM/EA5 (AY21f) wkd 1448 YU7QCA JF16 59, 1451 YO2BUG KG66f 59, 1455 YU7JUV JF19f 55, 1456 YU7AA JF16e 59, 1458 YU2SB JF16d 59, 1459 YO2FP KF17g 59, 1500 YU7OQC KF42d 59 and 1501 YU7MCG KF01e 59.

July 20th

DF1ZE (EJ13e) wkd 9H1GP HV03f and 9H1GB HV13a.
EA3LL (AB) wkd at 0843 LZ2FA ND40g 59 59.
PA2CHR (CL09b) hrd at 1829 9H1GBP HV 54 and 1846 9H1GB HV 52.
UG6AD (WA63j) wkd at 1609 LZ1LX 579 579.

July 23rd

F6ETI (YH24c) wkd at 1753 EA8AJU RO48c 55 59 2427km ODX Es.

July 29th

DH2NAF (FI17g) schreibt:...zu dieser öffnung kann ich nicht viel berichten, da ich an diesem Tag nur wenige Minuten auf dem Band sein konnte, in denen Es Bedingungen vorhanden waren. 1139 LZ2FA ND40g 55 56 und 1145 YO4YT ME64g 599 599, bei diesem QTH Kenner ist aber nicht ganz sicher, ob es nun ME oder OE war, denn ein anderer OM hatte OE aufgenommen. Mit diesem Tag war für mich die Es Zeit gelaufen.
UG6AD (WA63j) wkd at 1707 UB5PAZ ML73a 579 579 and 1709 UB5PM MK24a 599

599.

Aug. 4th

DF8AE (EM73e) wkd at 1646 EA1BLA in VD39e 59 59.
DK2PR (EM07j) wkd at 1626 EA1BLA VD39e 59 59 1661km, 1631 EA1ACD VD58b 59 59 1692km, 1642 EA1ED VD59h 59 59 1680km and 1723 EA1AST VC67a 55 59 1794km.

Von OM Uwe Gercke, DF1XU in FN22e, ging ein sehr detallierter Es Empfangsbericht über TV- Beobachtungen, im Band 1, Kanal 2-4, über den Zeitraum vom 12. Mai bis zum 26. Juni, ein. Aus Platzgründen können wir leider in dieser DUBUS Ausgabe nicht darauf eingehen; ein ausführlicher Bericht erscheint in der DUBUS Ausgabe 1/84.

For the 1984 Es season, please send YOUR Es report in time. The dead-line for summary Es report in DUBUS will be the 1st September 1984!

EUROPEAN VHF UHF SHF TOP LIST

ONLY A SINGLE CALL SIGN AND A SINGLE QTH COUNT FOR THE LIST (MAY BE /P BUT MUST ALWAYS BE THE SAME). SQUARES IN EUROPE PLUS 10 IN EACH DIRECTION ROUND THE EUROPEAN QTH- LOCATOR MAP ARE VALID PLUS SQUARES IN EA8, CT2 AND CT3. QSO'S VIA PASSIVE REFLECTORS COUNT BUT NOT THOSE VIA REPEATERS OR SATELLITES. THE LIST IS PUBLISHED FOUR TIMES PERYEAR - DEADLINES ARE GIVEN AT THE FOOT OF THE LIST. SEND YOUR SCORE ON THE FORM BELOW, OR ENCLOSE IT WITH YOUR ACTIVITY REPORTS TO DL7QY.

FÜR DIE TOP LISTE ZÄHLT NUR EIN RUFZEICHEN UND EIN QTH (KANN /P SEIN, MUSS ABER IMMER DASSELBE SEIN). GÜLTIG SIND ALLE FELDER IN EUROPA PLUS 10 RUNDUM DIE EUROPÄISCHE QTH LOCATOR KARTE, SOWIE DIE FELDER VON EA8, CT2 UND CT3. NUR QSO'S ÜBER PASSIVE REFLEKTOREN SIND GÜLTIG, SOLCHE ÜRELAIS ODER SATELLITEN ZÄHLEN NICHT. DIE LISTE WIRD 4 MAL PRO JAHR VERÖFFENTLICHT - DER JEWEILIGE REDAKTIONSSCHLUSS BEFINDET SICH IN DER FUSSLEISTE JEDER TOP LISTE. SENDEN SIE IHREN QTH-KENNERSTAND AUF UNTERHALB BEFINDLICHEM FORMBLATT, ODER MIT IHREM AKTIVITÄTSBERICHT, AN DL7QY.

---------- RETURN TO DL7QY ----------

CALLSIGN:			QTH LOC:		
BAND	N.O.S.W.	TROPO ODX	AURORA ODX	METEOR SCATTER ODX	SPORADIC E ODX
2M		KM	KM	KM	KM
70CM		KM	KM	KM	KM
23CM		KM	KM	KM	KM
13CM		KM	KM	KM	KM
9CM		KM	KM	KM	KM
6CM		KM	KM	KM	KM
3CM		KM	KM	KM	KM
1.3CM		KM	KM	KM	KM

RETURN TO DL7QY, CLAUS NEIE, D-7181 RUDOLFSBERG 24.---------- ODX = BEST DX----------N.O.S.W. = NUMBER OF SQUARES WORKED.

MOON BOUNCE

by DF 7 VX

EME-Net: 14.345MHz Sat./Sun. starting at 16.00 utc ; also OSCAR 10 ; Netfreq. is 145.950 (Sat./Sun.22.00 utc)

Activity and Conditions: Many new stations are reaching EME-capability at the last month. But how about operating procedures? Procedures differ considerably between 144 and 432 MHz (and up). If you want more Info about that , look into DUBUS 2/81 page 140 or ARRL-Handbook 83, Chapter 14-11 and RSGB VHF-UHF Manual.
For all the Echotest-Fans : MOONRISE- your Receiver must be nearly 0.8 KHz higher than your transmitting frequencies.
MOONSET- your Receiver must be approx. 0.8 KHz lower than your transmitting frequency ! This was the case on 432 MHz. But what is about 144- and 1296 MHz ? Please send me your comments.
Operating Frequencies : On VHF: 144.0 to 144.o10 MHz for random contacts. I think there are no extra Sked-Freq.
On UHF: 432.010 MHz for random CW. 432.015 MHz for random SSB.
Sked-Freq.: 432.000 , 432.025 , 432.040 MHz ! Please Gentlemen keep this Frequencies clear. (No CQ-call)
On SHF: 1296.000 and 1296.025 MHz are Sked QRGs. Random work is on 1296.010 MHz.
For the VHF (144MHz) EME-Operator : PLEASE USE A VERY GOOD LOW-PASSFILTER BEHIND YOUR HIGH-POWER-AMP. ! I found often the THIRD Harmonic from 2m EME-Stations in the 432 MHz EME-Range with very strong products.
Activity was better than during the summer weekends. The skeds-weekend in Oct. and Nov. was totally dominated by the EME-Contest wich produced superb activity levels and troublesome QRM.
Conditions were generally good although not spectacular.
Faraday rotation was unfavorable for some of the fixed polarisation Stations.

CONTEST SCORES: There are some expected results! (only 432 and up)
DL9KR 65-QSOs with 28 Mult. OE5JFL 54+? and on 1296 7+? ; G4EZN 52+24; G3LTF 34+22 and on 1296 10+9; YU1AW 34+? ,on 1296 7+? ; OE9XXI 31+19 on 1296 14+12 !
Sorry but I did not got any Info about 2-m Results!

Supplements of available Moontracking-Programs:

DJ6MB	Commodore CBM 64	5,25"Disk, Listing
OZ1EKI	Commodore VC 20	Tape
OZ1DGN	New BRAIN	no Info

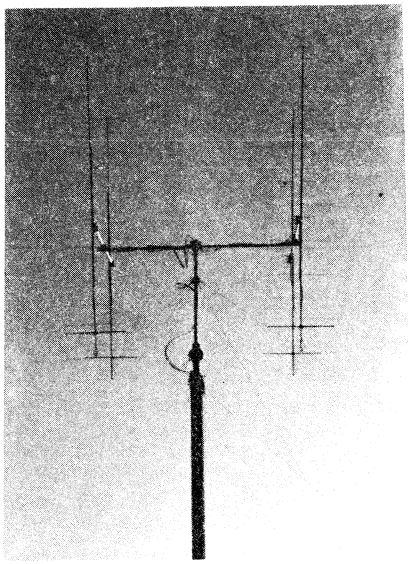
You can get the last two Programs by: Tom Ekelund / OZ1EKI
SDR.Stenderupvej 155 ; 6092 Varmark

Computer-Program: Change LAT. and LONG. into Worldwide Loc-System You can found that: mc 9/1983 written by Lothar Sack.(Microsoft-B) Charlie,G3WDG calculates the Signal to Noise ratio for an EME-Link by a Basic program.(Microwave Newsletter)RSGB;

LUNAR-LETTER: will be coming regularly again; New Editor,KAØHTK Printing and publishing will remain in Idaho!

At first the newest 144 MHz-EME-News (and also some older one)

PA-3249 : The first Letter we received is written by a SWL!
Henri writes about his activity on 29.+ 30.Oct.1983 (EME-Contest)
Heard: WA2GSX , K9HMB , K1FO , W4DFK , WA1JXN/7 , I2ODI (I4BXN) SM2GGF , OH7PI , OZ1EME , W5LIN , K1WHS , YU3USB , YU3ZV , HB9SV , LA1TN , SM4CFN , SM7BAE , LX1DB , W7IUV , KB8RQ , and the best DX: YV5ZZ and JA6DR !
My Rx-system: 4 times 11el. yagi, (DL6WU-design) 20m in the air; Preamp(SV144G); Cable is H-100; Receiver is a Braun SE-402+BF981 No Audio Filter!!!
I will hope with you about the QSL-Problem.
Many thanks and good success for the future dr Henri.



P A - 3249 Antenna

HB9QQ: Pierre worked at 29.+30. of Oct.1983 : SM5FRH o/o random SM2GGF O/O random; K1WHS O/O ran. OZ1EME O/O sked; WA1JXN O/O rand. 30.Oct.: WA4NJP O/O sked; W5UN O/O random; OH7PI O/O sked; K9HMB O/O random; YU3ZV O/O rand. WA8ZHE O/O sked; W5LUU O/O sked;
Tnx for info Pierre

OZ1EXX: During the first Part of EME-Contest I am listening during Moonset,Both Saturday and Sunday with TS 700SP+BF981 (Homemade LF-Filter) and abt. 18m RG219(RG17) Cable. During those two Moonsets I heard the following Stations via Moon: K9HMB , I2ODI (peaking 10-12db!!) , W5UN , K1FO , SM7BAE SM2GGF , LA1TN , W7IUV , and of cause,hi-K1WHS !
All Signals "O" or better. Im very impressed beeing able to copy so much with my small "Tropo-Station"! Sometimes I have trouble with noise from 100-kv air Cables abt. 500m away. A new PA will be QRV soon.

UA3TCF: (WQ14A) worked 22.Jan.1983 SM4IVE O/O; 29.01. :W7FU O/O 30.01.: OK2TU O/O; PE1AGJ O/O; 25.02.: SM5FRH 529/529; 26.02.: W5UN 529/319; W8WN O/O; WØRT O/O; 19.03.: DL8DAT O/O; 25.03.: SM5CFS O/O; WA4NJP 439/O; 26.03.: K7KOT O/O; DF9RJ O/O; 27.03.: SM2JAE O/O; 22.04.: K1GVM O/O; 23.04.: UA3MBJ O/O; mni tnx for ufb report!

DJ4DQ: Franz,also a Newcomer on 2m-EME ,spent again some time on his private Starobservatory. He has an arry of four 16elem.Yagis now. On Sunday,30.Oct. ,Franz heard good signals from: I2ODI , SM2GGF , OZ1EME , W5VR , WD8ISK , WB5ERD , WA4NJP ;via the Moon. "Moontrack only by Signalmaximum!!!" They also had a possible QSO with WA4NJP but were not sure of the final Rs.

His Rig consists of : GaAsfet, FT225RD ,activ LF-Filter +200W-RF; In the near future he will build up 8 times 16elem and a new Poweramp. with 600 watts RF.He also tries to listen and to transmit with a 3m -Dish+150 watts on 1296 MHz!

DF9CY: Chris heard on 144 MHz with a "single 10elem. Longyagi Bf961 and IC202 : 14.08.:K1WHS &W5UN both good "0" copy. 1.10.:13.23 K1WHS with ufb 549! 2.10. :K1WHS & K9HMB both "0"; 23.10.: VE7BQH "Ø"; 28.10.: very good echos from DK1BM and later I4BXN "0"; 29.10. : VE7BQH "0"; 13.08 I2ODI super strong!! 27.11. : W5UN "0"; and the last: WA1JXN/7 "0" ;

432-432-432-432-432-432-432-432-432-432-432-432-432-432-432-432

UA3LBO: Walerij sent a short letter : Worked on 22.04.83 : DL9KR 559/449 No.48; 23.04. : I5MSH 559/438 No.49 ; K5JL 0/0 QSo No.50 and Stn.No.35 ; 15.05. ; K8HUH 579/559 Stn.No.36 ; K9HMB 0/0 Stn,No.37; 22.05. DF3RU M/M (QRN) Stn.No. 38; DF9CY M/M Stn.No. 39; and at 20.49 I5MSH 539/438 ;
In the meantime Walerij improved his System with a new Siemes-GaAS-Fet and coverted his arry over to open wire feedline. He said that he can copy echos with a little as "50 watts" now!!

F1FHI: There is a report from May to July 83: 14.05. K8HUH - 519/549; 15.05. : K8HUH 41/55 "SSB" !! ; 12.06.83: W7FU 0/0; 16.07.83: DL9KR 519/449; K2UYH 0/0 (random!!); 17.07.83;DK1PZ M/M Heard: JA6CZD ; HB9G ; SP5CIC/SMØ ; YU1AW ; DF3EE ???

DJ6MB: Uwe sent two very long letters. In May 83 he worked most random: 20.05.83: DK5AI 339/559(new); OE9XXI 349/449; HB9G 449/449 (new); YU1AW 459/559; 18.06.83: DF3RU M/M (neu); I5MSH - 539/539; K5JL 459/449; 03.09.83: I5MSH 459/449; After that he had to go QRT because of very high wind. But there was much more success in October. 01.10.83 : HB9SV 559/429; UA3LBO 0/0; OE5JFL 539/449 (new); SP5CIC/SMØ 0/0(new); OE9XXI 439/449; K2UYH 549/459; I5MSH 459/449; K5JL 459/0 ; YU1AW 559/559 !! W4WD 0/0;
Heard: ZL3AAD 449!!! ; G3SEK 439; JA1OF "0" ; OH6NU "0" ; N9AB-449 ; and SMØDJW 449; Its a very good result with my 8-Yagi-System.
On the Sked-Weekend 29./30.October Uwe had exceptionally good results. At first I complet my "WAC-432MHz" , because I wkd YV5ZZ he wrote. Condx. are fine , but many ,many QRM around 432.015!! from the U.S. (the EME-Ops. are all the time ±3KHz up and down 432.015)
29.10.83 WKd: OE5JFL 559/559; DL9KR 549/559; G3SEK 349/449; JA6CZD 569/569 !!!; YU1AW 559/559; OH6NU 439/449; K2UYH 449/439; KL7WE 439/349; G3ltf 449/449; YV5ZZ 0/M; (new) WØRRY/5 559/0 (new); HB9G 449/539; DK1PZ 449/449 !!!!! 4yagis to 8Yagis with so strong Signals!!
JA4BLC 349/439 ;
30.10.83 : JA9BOH 449/439; UA3LBO 0/0; DK8MA/p 0/0 ;(new)

G4EZN 0/0 ; (new)! N9AB 0/0; LXØWCY 549/559 (new); I5MSH 549/549; W6ABN 0/0 ;
Heard: OE9XXI, HB9SV, F9FT, W1JR, DL6WU, N4GJV, VE4MA, DJ9DL, DF7VX, F1FEN, W4WD, W5FF, K5AZU;

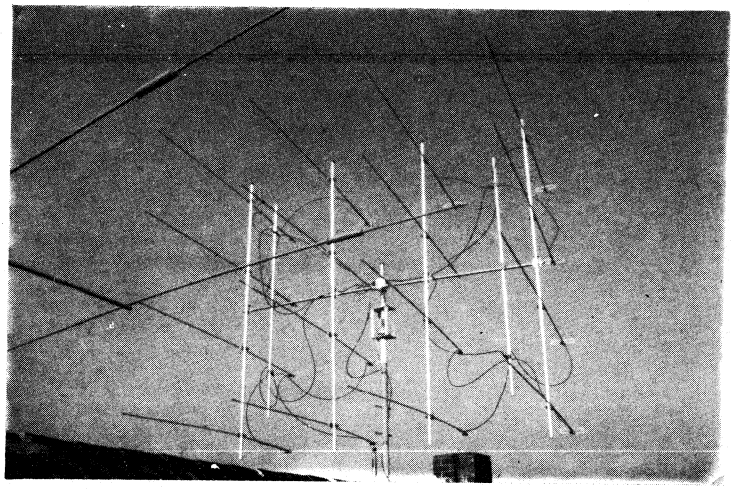
DF3RU: This are some coments from Karl. I am very sad about my success in the first part of the EME-Contest.
On 29.10.83 Wkd: DL9KR 449/449; JA6CZD 549/339; G4ezn 0/0; OE5JFL 559/439; On 30.10.83: I5MSH 0/439;
Heard very much!! 29.10.83: OE9XXI, JA4BLC, YU1AW, N9AB, DK8MA, K2UYH, VE4MA, N2CB, DL2CJ, DF6NA, W5ITI??, KL7WE, DJ6MB, YV5ZZ!!!, W4WD; 30.10.83: DL9KR, DJ6MB, G3LTF, G4EZN, N9AB, WØSD, I5MSH, DF6NA;
What is going on with N9AB ? Called him more than 2 hours , but received only QRZs from him!!!!!
(dr Karl: Ihave had the same success with him!!! On both weekends)

DF9CY: Now the report from Chris. On 17.06.83 heard Z25JJ "0"; HB9G "0"; DL9KR 449; and Moon-Radar! 18.06.83 I5MSH 449; K5JL-549; K3NSS 559; OK1KIR "0"; YV5ZZ"0"; DL1WCY 449; WB5LUA"0"; also own weak echos..some times..
On 15.07.83 hrd I5MSH ,YU1AW; 16.07.83 JA6CZD 449; OH6NU"0"; DL9KR 559; DK1PZ "0"; 03.09.83 I hrd K3NSS "0" at Moonset with a single Yagi!!!
Now I changed from S3030 to MGF-1400 at the feedpoint of my 4-Yagi Arry. 28.10.83 hrd: DJ9DL 449; DL7AFB ??"M"; YU1AW 559; UA3LBO "0"; DL9KR 559;
In the meantime Iworked every afternoon to four more feedlines to the Antenna,fixed the second powersplitter,new Relay +Pre-amp. in Plasticbags.It became dark and I only could test the Ant. with "Aquila-Nebula" that showed apt. 1.7 db -didn't hear it before.
Hrd. on 29.10.83 with four Yagis: N4GJV 449; N9AB 559; OE5JFL-"0"; K5AZU 439; N2CB "0"; and the big guns.
Hrd. with 8-Yagis: DF7VX "0"; DL9KR 559; 30.10.83 hrd: DJ6MB-549; HB9SV 549; OE5JFL 559; JA9BOH 439; G3LTF "0"; JA6CZD 559; N9AB 449; WØRAP "0"; G4EZN 449; N4GJV "0"; LXØWCY 459; KL7WE - 439; WØRRY/5 439;
Wkd: OE5JFL 449/0 ; DL9KR 559/449; I5MSH 449/439 ; G4EZN 0/0; N9AB 0/M; (heard my own echoes often very nice!!)
25.11.83 hrd "0" echoes,but noone else..... so went to bed!
26.11.83 strong wind turning the Ant. off the Moon, but hrd: YU1AW 439-(through trees); SMØDJW 449; JA4BLC 439; OE5JFL-559; DJ6MB "0"; F1REN 449; I5MSH 559; F2TU "Ø";
Wkd: YU1AW 549/449; JA4BLC 0/0; then I had to go QRT, because of very strong Wind.

DF6NA: The October - Report from Rainer.

On 29.10.83 I wkd. DL9KR 419/0 !! Hrd : DL6WU , K2UYH, N9AB; 30.10.83 Wkd: N9AB 0/0 ; then partial with KL7WE "0"/ ? rec. some QRZ'S; Heard: DL9KR 549; KAØY "M"; OE5JFL 239; JA9BOH-"M"; DK8MA/p 429; OK1KIR 539; HB9SV; G4ezn 339; DJ9DL; VE4MA; DK1PZ and many other callsign-parts.
I am also QRV in the second Part of the ARRL'EME-Contest.

On 26.11.83 I hrd: K2UYH 339; K3QCQ; Wkd: I5MSH 0/0 27.11.83: YU1AW 559/449; HB9SV 0/0; Hrd: WØRRY/5, EA2BK, K5JL ! My Rig now : FT101zd , Microwave-Transverter, 500watt-Amp.(a single 4CX250B) GaAs-Fet MGF-1412, and 16 times 19elem (DL6WU) Ant. Cable is H-100; In the near future I'll build up a new Tower. Latest News: I lost my Ant. on Sunday-morning "27.11.83" Windspeed 120 km/h!!!



DF6NA - EME - Arry

DF7VX: Conditions in Oct. "not so bad" . So I wkd: Ø1.10.83-LXØWCY 0/0 for init.50; 29.Øct.83 Wkd: WØRRY/5 M/0; KL7WE-M/0 but not sure about final R's; I got terrible QRM from PE1CKK on 432.000 who he was calling stations 6 to 7 kHz higher!! But wkd. later: VE4MA 0/0; DL9KR 0/0; 30.10.83 DK1PZ 0/M !!!! 4-Yagi to 4-Yagi!!! K9HMB 0/0; Hrd: K5AZU,0E5JFL,YU1AW,G3SEK,UA3LBO,N9AB,DJ6MB,W5FF,JA9BOH;

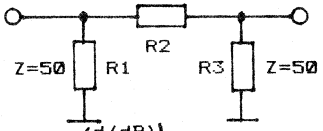
26.Nov.83 Wkd: YU1AW 449/449; I5MSH 439/449; 0E5JFL 449/449 init.53; UA3LBO M/0 init.54; JA6CZD 0/449 ; K2UYH 339/449; Hrd+calling very often: N9AB !! but I got only QRZ's!! Hrd also :VK5MC "0" FB copy -calling DF6NA.

Some short Net-News! YU1AW wkd ZL3AAD on 1296 in the contest! In the Contest EA2BK heard several stations and worked DL9KR! HB9SV has about 200 watts on 1296 EME and is using linear polarisation. F6EZA is now operational on 1296 with a 6m Dish,200 watts and circular pol.

MICROCOMPUTER NEWS BY DL 7 QY

Pi Attanuator calculation for HP41C

Pi attanuator. Pi Dämpfungsglied.
This program calculates coaxial attanuators with 50 Ohm input and output impedance. You enter the attanuation value in dB you want to calculate, and the input power. The result will be the resistance values of R1 (is always similar to R3 in resistance, but not in power dissipation) and R2 as well as the needed dissipation power of the resistors.
Dies Programm berechnet ein coaxiales Dämpfungsglied mit einem Ein- und Ausgangswiderstand von 50 Ohm. Nach Eingabe des gewünschten Dämpfungswertes und der Eingangsleistung berechnet das Programm R1 (R3 ist immer gleich R1, nur die Verlustleistung ist eine andere) und R2, sowie die Leistung, mit welcher die Widerstände dimensioniert werden müssen.



$$n=10^{\left(\frac{d(dB)}{20}\right)}$$

$$Ue=\sqrt{Pe*Z}$$

$$Ua=\frac{Ue}{n}$$

$$\Delta U=Ue-Ua$$

$$R1=R3=Z*\frac{n+1}{n-1}$$

$$R2=Za*\frac{n^2-1}{2n}$$

$$PR1=\frac{Ue^2}{R1}$$

$$PR2=\frac{\Delta U^2}{R2}$$

$$PR3=\frac{Ua^2}{R3}$$

Calculationexample:
You have 10W rf power and you like to reduce this power to 100mW. Now, the power difference is 20dB.
Berechnungsbeispiel:
Sie haben 10W HF Leistung und möchten diese auf 100mW reduzieren. Die Leistungsdifferenz beträgt 20dB.

R1=61.1 Ohm/ 8.18W
R2=247.5Ohm/ 1.63W
R3=61.1 Ohm/ 0.08W

```
      PRP "ATT PI"
01▸LBL "ATT PI"
      02 "POWER?"
      03 PROMPT
      04 STO 01
05 "ATTENUATION?"
      06 PROMPT
      07 STO 02
      08 "IMP?"
      09 PROMPT
      10 STO 03
      11 RCL 01
      12 RCL 03
      13 *
      14 SQRT
      15 STO 04
      16 RCL 02
      17 20
      18 /
      19 10↑X
      20 STO 06
      21 RCL 04
      22 RCL 06
      23 /
      24 STO 07
      25 RCL 04
      26 RCL 07
      27 -
      28 STO 08
      29 RCL 06
      30 1
      31 +
      32 STO 09
      33 RCL 06
      34 1
      35 -
      36 1/X
      37 RCL 09
      38 *
      39 RCL 03
      40 *
      41 STO 09
      42 RCL 06
      43 X↑2
      44 1
      45 -
      46 STO 10
      47 RCL 06
      48 2
      49 *
      50 1/X
      51 RCL 10
      52 *
      53 RCL 03
      54 *
      55 STO 10
      56 RCL 04
      57 X↑2
      58 RCL 09
      59 /
      60 STO 11
      61 RCL 08
      62 X↑2
      63 RCL 10
      64 /
      65 STO 12
      66 RCL 07
      67 X↑2
      68 RCL 09
      69 /
      70 STO 13
      71 FIX 3
      72 "RI RO="
      73 RCL 09
      74 ARCL X
      75 AVIEW
      76 STOP
      77 "RM="
      78 RCL 10
      79 ARCL X
      80 AVIEW
      81 STOP
   82 "PWR RI="
      83 RCL 11
      84 ARCL X
      85 AVIEW
      86 STOP
      87 "PWR M="
      88 RCL 12
      89 ARCL X
      90 AVIEW
      91 STOP
      92 "PWR O="
      93 RCL 13
      94 ARCL X
      95 AVIEW
      96 STOP
      97 END
```

```
                    XEQ "ATT PI"
POWER?
                10,00      RUN
ATTENUATION?
                20,00      RUN
IMP?
                50,00      RUN
RI RO=61,111
                           RUN
RM=247,500
                           RUN
PWR RI=8,182
                           RUN
PWR M=1,636
                           RUN
PWR O=0,082
```

CORRECTION DUBUS 3/83 p. 237: change log to ln in the formula!

+VHF+NEWS+SKEDS+COMMENTS+SUPPLEMENTS+

by DL7QY

DUBUS affairs

G3SEK, Ian writes:...anyway, I agree with the general feeling that the activity reports are valuable and interesting, and also that the minimum distances on tropo should be increased.
One general thing that worries me, however, is that the quality of the Top Lists is being downgraded - at both ends. At the bottom end, if anyone can get onto the list with only 11 Locators on 432 MHz, then surely the list is too long? At the top end, I do not agree with the restrictions on Locators worked via EME. The Top Lists are a big incentive to development of advanced DX techniques like EME. So far someone like me who does not have the advantages of living on a hill, or in a rare Locator, and is running out of new Locators to work, then the natural progression is to get going on EME. I thought that the DUBUS Gruppe and the Top Lists were created to encourage this kind of technical development! Also, the DUBUS lists were the only international, unrestricted Locator ladders in the world, and restricting them to European Locators is a step backwards.
Another point about the Top Lists is that scores which have not been updated for a long time should be taken out (unless the operator has died). Let's make the "*" into a positive encouragement for other people to become QRV on EME!

OZ9PW writes: I would like to say a few words to the debat about reports in DUBUS: I am always looking forward to get the next issue of DUBUS, because I am using it to see which stations are qrv in the squares, I want to work. If they work in SSB? or if they work in CW? all this I can read in DUBUS. Therefore keep the number of reports, maybe even extend it a bit, and maybe now and then an article about the different propagations.
I don't think that it is a good idea to extend the amount of technical articles in DUBUS (already now, I think, there are too much, and they are too special). I believe that just a few stations are really interested in them, compared to the big number of stations, which read DUBUS because the activity reports and, of course, the infos of expeditions into rare squares.

VHF-UHF-NEWS

OE3CEW, Erik schreibt:...ein anderes Problem ist, über das "European VHF Net" auf 14.345 war im letzten Monat von Wien aus sehr schwer zu arbeiten. Schlechte Condx für Europa, andere Netze Mobil, MM und die Araber nicht zu vergessen. Meine letzte Verabredung für MS/CW liegt schon sehr lange zurück. Der Vorschlag, eine Ausweichfrequenz auf 80m zu schaffen ist gut, aber durch den OSCAR 10 überholt. Ich glaube ein neues "EU-VHF-NET" auf 145.960 wäre gut, zumal sich ein EME-NET bereits auf 145.950 zusammen findet. 73 de OE3CEW.

HB9CRQ schreibt:..als begeisterter Leser "DUBUS" möchte ich auch einmal etwas zu den Infos beitragen. In der Zeit vom Mai bis September (Tropo-News nachzulesen) habe ich auf 2m 30 Länder und 126 QTH Kenner gearbeitet. Ich bin übrigens auch auf EME qrv (2m + 70cm).

OK1VAM sent the latest OK ODX record table:
144 MHz: OK2KZR/p-UA9FAD MS 2741km 11.8.1981, OK3TEG/p-GM4ILS A 1806km 6.9.1982, OK1AHI-UA6AKT T 2094km 28.3.1982, OK2BFH-EA7PZ Es 2393km 28.6.1979, OK1MBS-VK5MC EME 15490km 15.5.1981.
432 MHz: OK2STK/p-G3AUS T 1577km 30.10.1982, OK1KIR/p-ZL3AAD EME 18220km 10.9.1982, OK1BMW-SM6FHZ A 743km 25.7.1981.
1296 MHz: OK2BFH/p-G3AUS T 1577km 30.10.1982, OK1KIR/p-VK5MC EME 15560km 12.9.1982.
2320 MHz OK1AIY/p-G4BYV T 1028 km 30.10.1982.
5.7 GHz: OK1VAM/p-OK1WFE/p T 303km 25.9.1982.
10 GHz : OK1KDO/p-DL8RHA/p T 358km 31.10.1982.
24 GHz : OK1KDO/p-DJ4YJ/p T 73km 24.10.1982.

Skeds

I3LGP writes: I have one information for OM's interested in 2.3 GHz: IW3ESW wishes to try some skeds on 13cm during week-ends from /p QTH in FF. He has a receiver with 1.5dB NF, TX with 700 mW, parabolic antenna of 1m diameter. Who is interested can write to: Fiorenzo Ferrandino, Via Prosdocimo 11, I-36015 SCHIO or telephone after 2000 local time 0445 672347.

LA8AE, Ole has planned to be qrv on 432 MHz EME. He writes...as for the future I will be qrv EME 70cm later this year with K2RIW PA and 8x21 F9FT. 6cm is also in the works! For skeds call me any time, priv. 3458809, qrl 3461000.

Supplements

Two more reports for the Tropo column following from PE1AAP and PE1ALA: PE1AAP (CM67d) wkd on 144 MHz over 700 km on June 18th SM6NZV FR 724km, SM6LPW FR 734km, SM6DLY GR 726km, SM6HDY FS 775km. On July 12th LA1HCA CU 885km, LA5IH CU 992km, LA4LR CT 792km, SM6FUD/6 GS 805km, LA1YCA/p DS 729km, LA1JU/p ES 766. On July 31st SM6NHP GR 787km. On Aug. 7th GM3OUR/p YQ 744km. On Aug. 9th GM9BZEQ YR 776km, GM4ILS YR 824km, GM3WTA YR 754km, GM8LHP YR 737km, GM4SDG/A YR 771km, GM3OUR/p YQ 744km with 300 mW output! On Aug. 10th LA9ZV FT 876km, LA1ZE CS 723km, LA6VBA ES 749km, SM4KXA GT 910km, LA8SJ FT 931km, SM4HEJ GT 935km, SM4NME GT 910km. On Aug. 11th LA9UX FU 943km, SK6HB GS 846km, SM4KVV HT 1004km, SM4LLP HT 993km, SM5MIX HS 908km, SM6NQE GR 841km and SM5AKU HT 1006km. On 70cm wkd during this period SM6CMU FR 728km, SM6MLY FR 747km, LA8AK DS 683km, GM8FTI/p YP 635km, GM3YGF/p YQ 744km, GB2XN XN 664km, LA6LCA FT 832km and LA3VW ES 749km.

PE1ALA (CM44e) wkd on 432 MHz over 500km: On July 10th F1JL AH, G8XVJ YN, G8HRI YN and GD4GNH XO. On July 12th PE1GHG/mm BM, OZ1AXX FQ, F6BLA AG and F1FHI ZH. On July 13th Y23BD GM, DL7AFB GM and LA7BI ES. On July 14th PA2JOK/SM1 JQ and SM7BHM HQ. On Aug. 6th GM8TFI/p YP and F6CTT ZH. On Aug. 7th GM3YGF/p YQ and GB2XN XN. On Aug. 8th GM5DTB ZR, GM6LNM XP and GM8VBX. On Aug. 9th G6FK YM, G8NWR YM and G4IOQ YM. On Aug. 10th G3WOH YN, GW8FKB YM and EI2DJ WN. On Aug. 14th HB9AEN/p DG and OE5UKL/5 GI.

EUROPEAN VHF UHF SHF BEACON LIST 25.11.1983

CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
DL0UB	144.850	GM47B	5W	4*DIPOLE	OMNI	80	F1
DL0PR	144.910	EO54C	150	6EL. YAGI	N/S	100	A1
DK0OE	144.915	DK12F	1	10EL. YAGI	NNE	165	F1
DL0UH	144.940	EL68F	1 ERP	V-DIPOLE	OMNI	385	A1
DF0ANN	144.966	FJ47E	0.02	DIPOLE	OMNI	630	F1
DL0SG	144.975	GJ77J	15	4*4EL. YAGI	OMNI	1310	A1
DL0RW/A	431.996	GJ12D	1	2*DIPOLE QUAD	NW/SW	825	A1
DB0AC	432.015	DJ55J	15	4*11EL. YAGI	OMNI	380	F2
DL0BQ	432.050	EJ23D	0.2	DISCONE	OMNI	???	A1
DK0OE	432.087	DK12F	1.5	19EL. YAGI	NNE	165	F1
DJ4WG	432.455	FJ21G	0.005	11EL. YAGI	NE	265	A1
DB0QO	432.540	EM71E	2	SLOTRADIAT	OMNI	???	A1
DB0KI	432.841	FK68B	2	4*4EL. YAGI	OMNI	690	F1
DL0UB	432.850	GM47B	5	4*DOUBLE QUAD	OMNI	80	F1
DB0TW	432.860	EM73E	0.02	????	OMNI	433	F1
DB0AE	432.890	EN33C	??	????	??	??	F1
DB0YI	432.900	EM80B	1	BIG WHEEL	OMNI	480	A1
DB0AD	432.913	DK20D	1	11EL. YAGI	W	290	F1
DL0UH	432.940	EL68F	0.3 ERP	V-DIPOLE	OMNI	385	A1
DB0LB	432.945	EI06D	0.2	CORNERDIPOLE	N/S	367	F1
DB0AH	432.950	FN65F	3.5	DIPOLE	OMNI	118	A1
DF0ANN	432.966	FJ47E	1	CLOVER LEAF	OMNI	630	F1
DL0SG	432.974	GJ77J	7	4*11EL. YAGI	OMNI	1310	A1
DF0AAD	432.990	FO64A	10 ERP	BIG WHEEL	OMNI	250	F1
DL1XV	433.143	GH25C	10	11EL. YAGI	NW	1500	A1
DB0FB	1296.000	EH11H	4	DIPOLE	N/S	1200	F1
DJ2LF/A	1296.024	DL38J	??	????	??	??	??
DF5EO/A	1296.025	DL02E	0.8	DBL.HELICAL	OMNI	170	F1
DB0AJ	1296.180	FH09B	10	6EL. GROUP	N/W	720	A1
DB0GP	1296.805	EI30G	4	4*5EL. YAGI	OMNI	760	F1
DB0JO	1296.854	DL48A	350 ERP	4*15+15EL. YAGI	W	218	F1
DB0JC	1296.895	EK08F	1.5	4EL.SLOT WAVEG	OMNI	620	F1A
DB0AN	1296.900	DL08B	1	BIG WHEEL	OMNI	100	F2
DB0JR	1296.900	GH22H	0.2	CORNERREFLECTOR	NNW	1560	F2
DB0AD	1296.905	DK20D	1	DIPOLE	W/E	290	F1
DB0JB	1296.910	EI03A	1	BIG WHEEL	OMNI	??	??
DB0VC	1296.920	FO64A	10	2*BIG WHEEL	OMNI	250	F1
DF0ANN	1296.956	FJ47E	2	4*DOUBLE QUAD	OMNI	630	F1
DB0LB	1297.040	EI06D	0.2	DIPOLE	OMNI	367	F1
DB0KI	1298.000	FK68B	0.15	4*DOUBLE QUAD	OMNI	690	F1
DC6MR	2320.900	DL48A	0.5	DIPOLE	N	315	F1
DB0VC	2320.920	FO64A	5	BIG WHEEL	OMNI	230	F1
DF0ANN	2320.965	FJ47E	0.5	DOUBLE QUAD	OMNI	630	F1
DB0AS	2320.967	GH22H	0.5	28EL. YAGI	NW	1560	A1
DC8EC/A	2321.050	FI79G	4	6EL. GROUP	NW	580	F3
DL7QY/A	3456.000	EJ80B	0.05	HORN	E	450	A1
DB0AS	3456.115	GH22H	0.08	12EL. GROUP	NW	1560	A1
DC0DA	3456.360	DL38E	120 ERP	0.7M DISH	N	220	F1
DL7QY/A	5760.000	EJ80B	0.01	HORN	E	450	A1
DB0AS	5760.192	GH22H	0.05	6 DB HORN	NW	1560	A1
DC0DA	5760.600	DL38E	8.5 ERP	0.7M DISH	N	220	F1
DB0JX	10350.000	DL63A	0.01	10 DB GAIN	OMNI	115	F2
DL7QY/A	10368.000	EJ80B	0.01	HORN	E	450	A1
DB0AS	10368.345	GH22H	0.02	10 DB HORN	NW	1560	A1
DB0AS	24192.805	GH22H	0.0005W	15 DB HORN	NW	1560	A1
EA3XS	144.152	BB22E	20/250	16EL. YAGI	NE	??	??
EA1VHF	144.867	VD59E	25	5EL. YAGI	N	??	A1
EA6VHF	144.917	BZ???	25	5EL. YAGI	NE	150	A1
EI4RF	70.130	WN38C	25 ERP	2*5EL. YAGI	NE/SE	120	A1A
FX0THF	144.895	AI46H	30	2*TURNSTILE	OMNI	246	F1
FX3THF	144.905	YI13D	30	2*9EL. YAGI	E	80	F1
FX8VHF	144.955	AF79H	20	BIG WHEEL	OMNI	450	A1
FX1UHF	432.830	BI21B	10	4*BIG WHEEL	OMNI	160	F1
FX4UHF	432.870	ZD52C	10	2*6EL. YAGI	NNE	900	F1
FX3UHF	432.950	ZH53A	10	4*BIG WHEEL	OMNI	160	F1A
FX1SHF	1296.870	BI14B	10	ALFORD SLOT	OMNI	160	F1
GB3SIX	50.020	XN49F	100 ERP	3EL. YAGI	W	58	F1A
GB3CTC	70.030	XK46D	40 ERP	2EL. YAGI	NE	320	F1A
GB3WHA	70.040	AL71D	16 ERP	2EL. YAGI	NW	168	F1A
GB3BUX	70.050	ZN61A	20 ERP	2*TURNSTILE	OMNI	460	A1A/F1A
GB3ANG	70.060	YQ35C	100 ERP	4EL. YAGI	SSE	370	A1A
GB3CTC	144.915	XK46D	40 ERP	3EL. YAGI	NE	320	A1A
GB3VHF	144.925	AL52J	50 ERP	2*3EL. YAGI	WNW/NNW	275	F1A/F1B
GB3LER	144.965	ZU65F	50 ERP	4EL. YAGI	NNE	107	F1A
GB3ANG	144.975	YQ35C	20 ERP	3EL. YAGI	SSE	370	F1A
GB3WHA	432.810	AL71D	25 ERP	2*8+8EL. YAGI	NW/E	165	F1A
GB3SUT	432.890	ZM31B	60 ERP	2*8+8EL. YAGI	N/SE	270	F1A
GB3MLY	432.910	ZN32B	50 ERP	8+8EL. YAGI	SE	600	F1A

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CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
GB3CTC	432.970	XK46D	5 ERP	4EL. YAGI	NE	320	F1A
GB3ANG	432.990	YQ35C	100 ERP	9EL. YAGI	SSE	370	F1A
GB3BPO	1296.830	AM77J	700 ERP	2*32ELSLOT.WAVEG	W/E	85	F1A
GB3AND	1296.870	ZL63B	50 ERP	STACK. SLOTS	OMNI	85	F1A
GB3DUN	1296.890	ZL08E	2 ERP	HB9CV	N	263	F1A
GB3IOW	1296.900	ZK34A	100 ERP	ALFORD SLOT	OMNI	250	F1A
GB3CLE	1296.910	YM48H	10 ERP	2*15+15EL. YAGI	N/SE	573	F1A
GB3MLE	1296.930	ZN32B	50 ERP	CORNERREFLECTOR	SSE	600	F1A
GB3EDN	1296.990	YP04G	25 ERP	2*CORNER REFLCT.	NW/SE	117	F1A
GB3NEW	2304.010	ZL63B	5 ERP	????	E	85	F1A
GB3LDN	2304.050	AL41A	25 ERP	????	NW/NE	??	F1A
GB3UDS	3456.000	ZN42C	4 ERP	SLOT WAVEGUIDE	N/S	400	F2
GB3LBH	10100.000	AL31C	1.5 ERP	WAVEGUIDE	OMNI	45	F2/F3
GB3IOW	10100.000	ZK34A	0.15 ERP	SLOT WAVEGUIDE	OMNI	250	F2
GB3ALD	10120.000	YJ30H	1 ERP	SECT. HORN	NNE	90	F2
GB3MHX	10368.830	AM77J	1 ERP	1.2M DISH	E	60	F1
GB3XGH	10400.000	YN67B	1 ERP	????	OMNI	??	F2
GB3LEX	10400.000	ZM24D	???	SLOT WAVEGUIDE	??	??	F2
HB9HB	144.865	DH66C	10	10EL. YAGI	NNW	1300	F1
HB9W	144.875	EH43D	0.036 ERP	HALO	OMNI	490	A1
HB9F	432.984	DG40C	15 ERP	CORNERREFLECTOR	N/S	3573	F1
HB9F	1296.945	DG08C	15 ERP	2*CORN.REFLECTOR	NE/SW	937	F1
I1O	144.180	DF58C	0.02	DIPOLE	N/S	625	A1
IS0A	144.810	EA08A	16 ERP	TURNSTILE	OMNI	??	A1
I7A	144.820	HB29A	2 ERP	BIG WHEEL	OMNI	1012	A1
I0A	144.825	GB12D	32 ERP	2*BIG WHEEL	OMNI	30	A1
I1G	144.830	DF58C	10	BIG WHEEL	OMNI	625	A1
IT9G	144.840	GY67C	35 ERP	5EL. YAGI	N	150	A1
IX1A	144.845	DF15B	2	6EL. YAGI	NW	3350	A1
I5A	144.850	FD23H	4 ERP	BIG WHEEL	OMNI	918	A1
I8A	144.890	HY70F	7	2*TURNSTILE	OMNI	1958	A1
I0N	432.120	EF14B	50 ERP	????	??	??	??
IT9B	432.805	GX05B	3	2*MINI WHEEL	OMNI	825	A1
I0B	432.825	GB12D	40 ERP	4*BIG WHEEL	OMNI	30	A1
I1H	432.830	DF38C	12 ERP	3EL. YAGI	N/S	625	A1
I5B	432.850	FD25H	35 ERP	20EL. YAGI	NW	56	A1
I2B	432.860	EF16J	35 ERP	2*10EL. YAGI	SE/SW	490	A1
I2H	432.870	FF32J	2 ERP	TURNSTILE	OMNI	990	A1
IV3B	432.880	GF30H	4 ERP	TURNSTILE	OMNI	418	A1
I6B	432.885	HC31G	3	2*TURNSTILE	OMNI	444	A1
I8B	432.890	HY70F	3	2*MINI WHEEL	OMNI	1956	A1
I0H	432.900	GB14E	4 ERP	2*MINI WHEEL	OMNI	373	A1
I1I	1296.105	DF58C	0.4 ERP	SQUARECORNER	S	625	A1
LA5VHF	144.855	JD25E	50	4*10EL. YAGI	SSW	60	A1
LA1VHF	144.860	ET13E	25	TURNSTILE	OMNI	1882	A1
LA6VHF	144.865	PD???	25	9EL. YAGI	??	??	A1
LA2VHF	144.870	FX52D	50	10EL. YAGI	NNE	710	A1
LA3VHF	144.880	DS77J	25	16EL. YAGI	S	100	A1
LA4VHF	144.890	CU27G	50	4*8EL. YAGI	NE	48	A1
LA7UHF	432.830	CU47D	25	??EL. YAGI	S	558	A1
LA5UHF	432.855	JD25E	15	??EL. YAGI	SW	60	A1
LA1UHF	432.860	FT05G	12	BIG WHEEL	OMNI	364	A1
LA2UHF	432.870	FX52D	40	21EL. YAGI	NNE	710	A1
LA3UHF	432.880	ES71A	6	15EL. YAGI	S	15	A1
LA4UHF	432.890	CT47E	5	DIPOLE	OMNI	75	A1/F1
LA2SHF	1295.985	FX43G	0.2	????	OMNI	??	A1
LA2UHG	1295.985	FX???	0.2	????	OMNI	??	A1
LA1UHG	1295.990	FT63G	3	BIG WHEEL	OMNI	75	A1
LA8UHG	1295.995	FT05G	2	MINI WHEEL	OMNI	364	A1
LZ2F	145.980	ND40F	25 ERP	????	OMNI	295	??
OE3XXA	144.126	II71D	0.5	????	OMNI	??	??
OE3XXA	432.378	II71D	1 ERP	4EL. YAGI	NNE	??	A1
OE3XMB	432.400	HI08B	0.1	9EL. YAGI	NW	1246	A1
OE3XMB	1296.350	HI08B	0.1	10EL. GROUP	NW	1246	A1
OE3XPA	1297.153	HI78C	0.1	11EL. YAGI	NW	725	A1A
OH2NUA	144.300	MU52J	0.5	TURNSTILE	OMNI	??	A1
OH8VHF	144.800	MZ79H	40	16EL.COLLINEAR	N/S	240	A1
OH6VHF	144.900	KW59F	50/100	2*6EL. YAGI	N/SW	220	A1
OH2NRA	432.300	MU65G	5	TURNSTILE	OMNI	20	A1
OK0EA	144.952	HK18D	0.004	2*DIPOLE	N/S	1450	F1
OK0EB	144.963	HI12A	1	BIG WHEEL	OMNI	1083	F1
OK0ET	144.992	KI18A	1	3EL. YAGI	W	981	F1
OK1EP	432.885	IK77H	??	????	??	1500	F1
OK0EA	432.935	HK18D	0.004	2*DIPOLE	NW/SW	1450	F1
OK0EA	1295.975	HK18D	1	2*10EL. YAGI	NW/SW	1450	F1
ON4VHF	144.985	CK23E	2.5	BIG WHEEL	OMNI	??	F1

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CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
ON5UHF	1296.880	BK39J	10 ERP	????	OMNI	180	F1
OY6VHF	144.885	WW76D	60 ERP	4EL. YAGI	SE	350	A1
OY6UHF	432.885	WW76D	30 ERP	5EL. YAGI	SE	350	A1
OZ7IGY	144.930	FP39B	50 ERP	BIG WHEEL	OMNI	96	A1
OZ2UHF	432.450	EP03C	6	BIG WHEEL	OMNI	??	F1
OZ7IGY	432.930	FP39B	50 ERP	BIG WHEEL	OMNI	96	A1
OZ2ALS	432.982	EP79C	5	2*MALT. CROSS	OMNI	??	A1
OZ3UHF	1296.060	FR43J	0.25	HB9CV	SE	95	A1
OZ7IGY	1296.930	FP39B	5 ERP	BIG WHEEL	OMNI	96	A1
PA0DSW	432.895	CM35C	0.5	MALT. CROSS	OMNI	10	A1
PA0QHN	432.900	CM53J	1	GAIN 3DB	OMNI	20	F1
PA0EHB/A	1296.875	CL48?	4	GAIN 6DB	OMNI	61	F1
PA0QHN	1296.920	CM53J	4	GAIN 6DB	OMNI	20	F1
PA0ZM/A	1296.975	DM65H	5	GAIN 20DB	NE	34	F1
PA0TBA	2320.900	CL20A	1	10 DB GAIN	NW/W	??	??
PA0QHN	2320.920	CM53J	2	GAIN 6DB	OMNI	20	F1
PA0MS/A	10368.045	CL48A	0.05	GAIN 21DBI	NW	56	F1
PA0DBQ	10368.100	CM72?	0.04	GAIN 20DB	W	75	F1
PE1BLE	10368.200	CM55?	0.01	GAIN 14DB	SSW	35	F1
SK2VHF	144.875	JY69H	30	2*CLOVER LEAF	OMNI	300	A1
SK2VHG	144.890	???	60	16EL. YAGI	S	480	??
SK7VHF	144.920	GP38C	30	2*CLOVER LEAF	OMNI	190	A1
SK1VHF	144.950	JR51D	10	2*CLOVER LEAF	OMNI	60	A1
SK4MPI	144.960	HU46D	100	4*6EL. YAGI	N	510	A1
SK3UHF	432.855	IW40B	10	4*DOUBLE QUAD	OMNI	180	A1
SK7UHF	432.920	GP38C	7	CLOVER LEAF	OMNI	190	A1
SK6UHF	432.925	GR41D	10	CLOVER LEAF	OMNI	75	A1
SK7UHH	432.940	IQ23J	1 ERP	2*CLOVER LEAF	OMNI	??	A1
SK4UHF	432.960	HT55J	60	4*10EL.LOG.PER.	N/SW/SE	285	A1
SK5UHF	432.975	IU79G	25 ERP	BIB WHEEL	OMNI	90	A1
SK6UHI	1296.800	GQ45D	10 ERP	CLOVER LEAF	OMNI	220	A1
SK0UHG	1296.835	IT60H	15 ERP	2*HELICAL	OMNI	30	F1
SK7UHG	1296.920	HR21J	2 ERP	BIG WHEEL	OMNI	350	A1
SK6UHG	1296.925	FR29G	10	4*BIG WHEEL	OMNI	35	A1
SK4UHG	1296.960	GU79D	4	2*15EL. YAGI	S	450	??
SK6UHJ	2320.800	FS58F	1	2*??EL. YAGI	S/SW	80	A1
SK6SHG	10368.800	FS58F	10 ERP	20 DB HORN	S	80	A1
SP8VHA	144.430	LL53D	1	DIPOLE	OMNI	??	A1
SP9VHI	144.935	JK80C	0.05	CROSSDIPOLE	OMNI	200	A1
SP3VHG	144.945	HL08J	6	2*DIPOLE	OMNI	240	A1
SP6VHF	144.966	HK29D	0.15	2EL. YAGI	NE	1602	A1
SP2VHC	144.980	JO51B	28	CLOVER LEAF	OMNI	??	A1
SP6VHF	431.998	HK29B	0.06	2EL. YAGI	NE	1602	A1
SP9VHB	432.093	JJ19F	5	DIPOLE	N	944	A1
SP8VHA	432.290	LL53D	1	????	OMNI	??	A1
SP9VHB	1296.280	JJ19F	5	6EL.REFLECTOR	N	944	A1
UB5SAY	144.007	MJ72D	5	V-DIPOLE	OMNI	300	A1
UK5EAS	144.050	RI56?	0.2	GROUNDPLANE	OMNI	??	A1
UK0FAI	144.090	???	0.5	V-DIPOLE	OMNI	??	A1
UP2WN	144.136	MP72J	3	????	??	??	A1
UK3MBQ	144.156	SR08E	3	2*DIPOLE	OMNI	130	A1
UK5UDX	144.177	PK52F	5	DIPOLE	N/S	169	A1
UK4NAU	144.185	YS60G	3	DIPOLE	NNE/WSW	120	F1
UK4NBY	144.199	YT45F	5	9EL. YAGI	NNW	??	A1
UK5JAA	144.250	RE13A	1	TURNSTILE	OMNI	1000	A1
UK3TAA	144.250	VQ60G	0.5	V-DIPLOE	OMNI	??	A1
UK5GAA	144.371	QG05D	5	DIPOLE	N/S	??	A1
UK5YAB	144.500	MI60E	5	DIPOLE	??	??	A1
UK2CAU	144.942	NO55A	0.2	DIPOLE	N/S	??	A1
UK5UBZ	145.002	PK52C	2.5	V-DIPOLE	OMNI	187	A1
YO2KHP	144.957	KF17F	2.5	TURNSTILE	OMNI	80	A1
YO3KAA	145.900	NE41J	0.2	DIPOLE	OMNI	80	A1
YU3VHF	144.506	HG76A	2	CROSSDIPOLE	OMNI	1219	A1
YU2V	144.930	ID54F	1	CROSSDIPOLE	OMNI	780	A1
YU3UHF	432.507	HG76A	??	LOG.PERIODIC	??	1219	A1
Y41M	144.932	GL53G	0.2 ERP	2*DIPOLE	OMNI	232	A1
Y41B	144.985	FN28F	10	2*BIG WHEEL	OMNI	??	F1
Y41N	432.030	GK05G	0.1	DOUBLE QUAD	NW/SE	360	A1
ZB2VHF	50.035	XW64G	20	5EL. YAGI	WNW	117	F1A
ZB2VHF	70.120	XW64G	10	4EL. QUAD	N	117	F1A
ZB2VHF	144.145	XW64G	15/35	8EL. YAGI	NE	117	F1A
5B4CY	50.500	QU14G	35	5EL. YAGI	WNW	2000	A1
5B4CY	70.112	QU15B	10	4EL. YAGI	WNW	117	F1A
5B4CY	144.139	QU14G	40	6+6EL. YAGI	NW	2000	A1
9H1VHF	144.830	HV03F	1.5	TURNSTILE	OMNI	??	A1

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CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
GB3BIX	50.020	XN49F	100 ERP	3EL. YAGI	W	58	F1A
ZB2VHF	50.035	XW64G	20	5EL. YAGI	WNW	117	F1A
5B4CY	50.500	QU14G	35	5EL. YAGI	WNW	2000	A1
GB3CTC	70.030	XK46D	40 ERP	2EL. YAGI	NE	320	F1A
GB3WHA	70.040	AL71D	16 ERP	2EL. YAGI	NW	168	F1A
GB3BUX	70.050	ZN61A	20 ERP	2*TURNSTILE	OMNI	460	A1A/F1A
GB3ANG	70.060	YQ35C	100 ERP	4EL. YAGI	SSE	370	A1A
5B4CY	70.112	QU15B	10	4EL. YAGI	WNW	117	F1A
ZB2VHF	70.120	XW64G	10	4EL. QUAD	N	117	F1A
EI4RF	70.130	WN38C	25 ERP	2*5EL. YAGI	NE/SE	120	A1A
UB5SAY	144.007	MJ72D	5	V-DIPOLE	OMNI	300	A1
UK5EAS	144.050	RI56?	0.2	GROUNDPLANE	OMNI	??	A1
UK0FAI	144.090	???	0.5	V-DIPOLE	OMNI	??	A1
OE3XXA	144.126	II71D	0.5	????	OMNI	??	??
UP2WN	144.136	MP72J	3	????	??	??	A1
5B4CY	144.139	QU14G	40	6+6EL. YAGI	NW	2000	A1
ZB2VHF	144.145	XW64G	15/35	8EL. YAGI	NE	117	F1A
EA3XS	144.152	BB22E	20/250	16EL. YAGI	NE	??	??
UK3MBQ	144.156	SR08E	3	2*DIPOLE	OMNI	130	A1
UK5UDX	144.177	PK52F	5	DIPOLE	N/S	169	A1
I1O	144.180	DF58C	0.02	DIPOLE	N/S	625	A1
UK4NAU	144.185	YS60G	3	DIPOLE	NNE/WSW	120	F1
UK4NBY	144.199	YT45F	5	9EL. YAGI	NNW	??	A1
UK5JAA	144.250	RE13A	1	TURNSTILE	OMNI	1000	A1
UK3TAA	144.250	VQ60G	0.5	V-DIPLOE	OMNI	??	A1
OH2NUA	144.300	MU52J	0.5	TURNSTILE	OMNI	??	A1
UK5GAA	144.371	QB05D	5	DIPOLE	N/S	??	A1
SP8VHA	144.430	LL53D	1	DIPOLE	OMNI	??	A1
UK5YAB	144.500	MI60E	5	DIPOLE	??	??	A1
YU3VHF	144.506	HG76A	2	CROSSDIPOLE	OMNI	1219	A1
OH8VHF	144.800	MZ79H	40	16EL.COLLINEAR	N/S	240	A1
IS0A	144.810	EA08A	16 ERP	TURNSTILE	OMNI	??	A1
I7A	144.820	HB29A	2 ERP	BIG WHEEL	OMNI	1012	A1
I0A	144.825	GB12D	32 ERP	2*BIG WHEEL	OMNI	30	A1
I1G	144.830	DF58C	10	BIG WHEEL	OMNI	625	A1
9H1VHF	144.830	HV03F	1.5	TURNSTILE	OMNI	??	A1
IT9G	144.840	GY67C	35 ERP	5EL. YAGI	N	150	A1
IX1A	144.845	DF15B	2	6EL. YAGI	NW	3350	A1
I5A	144.850	FD23H	4 ERP	BIG WHEEL	OMNI	918	A1
DL0UB	144.850	GM47B	5W	4*DIPOLE	OMNI	80	F1
LA5VHF	144.855	JD25E	50	4*10EL. YAGI	SSW	60	A1
LA1VHF	144.860	ET13E	25	TURNSTILE	OMNI	1882	A1
HB9HB	144.865	DH66C	10	10EL. YAGI	NNW	1300	F1
LA6VHF	144.865	PD???	25	9EL. YAGI	??	??	A1
EA1VHF	144.867	VD59E	25	5EL. YAGI	N	??	A1
LA2VHF	144.870	FX52D	50	10EL. YAGI	NNE	710	A1
HB9W	144.875	EH43D	0.036 ERP	HALO	OMNI	490	A1
SK2VHF	144.875	JY69H	30	2*CLOVER LEAF	OMNI	300	A1
LA3VHF	144.880	DS77J	25	16EL. YAGI	S	100	A1
OY6VHF	144.885	WW76D	60 ERP	4EL. YAGI	SE	350	A1
SK2VHB	144.890	???	60	16EL. YAGI	S	480	??
LA4VHF	144.890	CU27G	50	4*8EL. YAGI	NE	48	A1
I8A	144.890	HY70F	7	2*TURNSTILE	OMNI	1958	A1
FX0THF	144.895	AI46H	30	2*TURNSTILE	OMNI	246	F1
OH6VHF	144.900	KW59F	50/100	2*6EL. YAGI	N/SW	220	A1
FX3THF	144.905	YI13D	30	2*9EL. YAGI	E	80	F1
DL0PR	144.910	EO54C	150	6EL. YAGI	N/S	100	A1
DK0DE	144.915	DK12F	1	10EL. YAGI	NNE	165	F1
GB3CTC	144.915	XK46D	40 ERP	3EL. YAGI	NE	320	A1A
EA6VHF	144.917	BZ???	25	5EL. YAGI	NE	150	A1
SK7VHF	144.920	GP38C	30	2*CLOVER LEAF	OMNI	190	A1
GB3VHF	144.925	AL52J	50 ERP	2*3EL. YAGI	WNW/NNW	275	F1A/F1B
OZ7I8Y	144.930	FP39B	50 ERP	BIG WHEEL	OMNI	96	A1
YU2V	144.930	ID54F	1	CROSSDIPOLE	OMNI	780	A1
Y41M	144.932	GL53G	0.2 ERP	2*DIPOLE	OMNI	232	A1
SP9VHI	144.935	JK80C	0.05	CROSSDIPOLE	OMNI	200	A1
DL0UH	144.940	EL68F	1 ERP	V-DIPOLE	OMNI	385	A1
UK2CAU	144.942	NO55A	0.2	DIPOLE	N/S	??	A1
SP3VHB	144.945	HL08J	6	2*DIPOLE	OMNI	240	A1
SK1VHF	144.950	JR51D	10	2*CLOVER LEAF	OMNI	60	A1
OK0EA	144.952	HK18D	0.004	2*DIPOLE	N/S	1450	F1
FX8VHF	144.955	AF79H	20	BIG WHEEL	OMNI	450	A1
YO2KHP	144.957	KF17F	2.5	TURNSTILE	OMNI	80	A1
SK4MPI	144.960	HU46D	100	4*6EL. YAGI	N	510	A1
OK0EB	144.963	HI12A	1	BIG WHEEL	OMNI	1083	F1
GB3LER	144.965	ZU65F	50 ERP	4EL. YAGI	NNE	107	F1A
DF0ANN	144.966	FJ47E	0.02	DIPOLE	OMNI	630	F1
SP6VHF	144.966	HK29D	0.15	2EL. YAGI	NE	1602	A1
DL0SB	144.975	GJ77J	15	4*4EL. YAGI	OMNI	1310	A1

EUROPEAN VHF UHF SHF BEACON LIST 25.11.1983

CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
GB3ANG	144.975	YQ35C	20 ERP	3EL. YAGI	SSE	370	F1A
SP2VHC	144.980	JO51B	28	CLOVER LEAF	OMNI	??	A1
ON4VHF	144.985	CK23E	2.5	BIG WHEEL	OMNI	??	F1
Y41B	144.985	FN28F	10	2*BIG WHEEL	OMNI	??	F1
OK0ET	144.992	KI18A	1	3EL. YAGI	W	981	F1
UK5UBZ	145.002	PK52C	2.5	V-DIPOLE	OMNI	187	A1
YO3KAA	145.900	NE41J	0.2	DIPOLE	OMNI	80	A1
LZ2F	145.980	ND40F	25 ERP	????	OMNI	295	??
DL0RW/A	431.996	GJ12D	1	2*DIPOLE QUAD	NW/SW	825	A1
SP6VHF	431.998	HK29B	0.06	2EL. YAGI	NE	1602	A1
DB0AC	432.015	DJ55J	15	4*11EL. YAGI	OMNI	380	F2
Y41N	432.030	GK05B	0.1	DOUBLE QUAD	NW/SE	360	A1
DL0BQ	432.050	EJ23D	0.2	DISCONE	OMNI	???	A1
DK0OE	432.087	DK12F	1.5	19EL. YAGI	NNE	165	F1
SP9VHB	432.093	JJ19F	5	DIPOLE	N	944	A1
I0N	432.120	EF14B	50 ERP	????	??	??	??
SP8VHA	432.290	LL53D	1	????	OMNI	??	A1
OH2NRA	432.300	MU65B	5	TURNSTILE	OMNI	20	A1
OE3XXA	432.378	II71D	1 ERP	4EL. YAGI	NNE	??	A1
OE3XMB	432.400	HI08B	0.1	9EL. YAGI	NW	1246	A1
OZ2UHF	432.450	EP03C	6	BIG WHEEL	OMNI	??	F1
DJ4WG	432.455	FJ21G	0.005	11EL. YAGI	NE	265	A1
YU3UHF	432.507	HG76A	??	LOG.PERIODIC	??	1219	A1
DB0GO	432.540	EM71E	2	SLOTRADIAT	OMNI	???	A1
IT9B	432.805	GX05B	3	2*MINI WHEEL	OMNI	825	A1
GB3WHA	432.810	AL71D	25 ERP	2*8+8EL. YAGI	NW/E	165	F1A
I0B	432.825	GB12D	40 ERP	4*BIG WHEEL	OMNI	30	A1
FX1UHF	432.830	BI21B	10	4*BIG WHEEL	OMNI	160	F1
LA7UHF	432.830	CU47D	25	??EL. YAGI	S	558	A1
I1H	432.830	DF38C	12 ERP	3EL. YAGI	N/S	625	A1
DB0KI	432.841	FK68B	2	4*4EL. YAGI	OMNI	690	F1
I5B	432.850	FD25H	35 ERP	20EL. YAGI	NW	56	A1
DL0UB	432.850	GM47B	5	4*DOUBLE QUAD	OMNI	80	F1
SK3UHF	432.855	IW40B	10	4*DOUBLE QUAD	OMNI	180	A1
LA5UHF	432.855	JD25E	15	??EL. YAGI	SW	60	A1
I2B	432.860	EF16J	35 ERP	2*10EL. YAGI	SE/SW	490	A1
DB0TW	432.860	EM73E	0.02	????	OMNI	433	F1
LA1UHF	432.860	FT05G	12	BIG WHEEL	OMNI	364	A1
I2H	432.870	FF32J	2 ERP	TURNSTILE	OMNI	990	A1
LA2UHF	432.870	FX52D	40	21EL. YAGI	NNE	710	A1
FX4UHF	432.870	ZD52C	10	2*6EL. YAGI	NNE	900	F1
LA3UHF	432.880	ES71A	6	15EL. YAGI	S	15	A1
IV3B	432.880	GF30H	4 ERP	TURNSTILE	OMNI	418	A1
I6B	432.885	HC31G	3	2*TURNSTILE	OMNI	444	A1
OK1EP	432.885	IK77H	??	????	??	1500	F1
OY6UHF	432.885	WW76D	30 ERP	5EL. YAGI	SE	350	A1
LA4UHF	432.890	CT47E	5	DIPOLE	OMNI	75	A1/F1
DB0AE	432.890	EN33C	??	????	??	??	F1
I8B	432.890	HY70F	3	2*MINI WHEEL	OMNI	1956	A1
GB3SUT	432.890	ZM31B	60 ERP	2*8+8EL. YAGI	N/SE	270	F1A
PA0DSW	432.895	CM35C	0.5	MALT. CROSS	OMNI	10	A1
PA0QHN	432.900	CM53J	1	GAIN 3DB	OMNI	20	F1
DB0YI	432.900	EM80B	1	BIG WHEEL	OMNI	480	A1
I0H	432.900	GB14E	4 ERP	2*MINI WHEEL	OMNI	373	A1
GB3MLY	432.910	ZN32B	50 ERP	8+8EL. YAGI	SE	600	F1A
DB0AD	432.913	DK20D	1	11EL. YAGI	W	290	F1
SK7UHF	432.920	GP38C	7	CLOVER LEAF	OMNI	190	A1
SK6UHF	432.925	GR41D	10	CLOVER LEAF	OMNI	75	A1
OZ7IBY	432.930	FP39B	50 ERP	BIG WHEEL	OMNI	96	A1
OK0EA	432.935	HK18D	0.004	2*DIPOLE	NW/SW	1450	F1
DL0UH	432.940	EL68F	0.3 ERP	V-DIPOLE	OMNI	385	A1
SK7UHH	432.940	IQ23J	1 ERP	2*CLOVER LEAF	OMNI	??	A1
DB0LB	432.945	EI06D	0.2	CORNERDIPOLE	N/S	367	F1
DB0AH	432.950	FN65F	3.5	DIPOLE	OMNI	118	A1
FX3UHF	432.950	ZH53A	10	4*BIG WHEEL	OMNI	160	F1A
SK4UHF	432.960	HT55J	60	4*10EL.LOG.PER.	N/SW/SE	285	A1
DF0ANN	432.966	FJ47E	1	CLOVER LEAF	OMNI	630	F1
GB3CTC	432.970	XK46D	5 ERP	4EL. YAGI	NE	320	F1A
DL0SG	432.974	GJ77J	7	4*11EL. YAGI	OMNI	1310	A1
SK5UHF	432.975	IU79G	25 ERP	BIG WHEEL	OMNI	90	A1
OZ2ALS	432.982	EP79C	5	2*MALT. CROSS	OMNI	??	A1
HB9F	432.984	DG40C	15 ERP	CORNERREFLECTOR	N/S	3573	F1
DF0AAD	432.990	FO64A	10 ERP	BIG WHEEL	OMNI	250	F1
GB3ANG	432.990	YQ35C	100 ERP	9EL. YAGI	SSE	370	F1A
DL1XV	433.143	GH25C	10	11EL. YAGI	NW	1500	A1
OK0EA	1295.975	HK18D	1	2*10EL. YAGI	NW/SW	1450	F1
LA2SHF	1295.985	FX43G	0.2	????	OMNI	??	A1
LA2UHG	1295.985	FX???	0.2	????	OMNI	??	A1
LA1UHG	1295.990	FT63G	.3	BIG WHEEL	OMNI	75	A1

EUROPEAN VHF UHF SHF BEACON LIST 25.11.1983

CALL	QRG (MHZ)	QTH	POWER (W)	ANTENNA	QTF	ASL (M)	KEYING
LA8UHG	1295.995	FT05G	2	MINI WHEEL	OMNI	364	A1
DB0FB	1296.000	EH11H	4	DIPOLE	N/S	1200	F1
DJ2LF/A	1296.024	DL38J	??	????	??	??	??
DF5EO/A	1296.025	DL02E	0.8	DBL.HELICAL	OMNI	170	F1
OZ3UHF	1296.060	FR43J	0.25	HB9CV	SE	95	A1
III	1296.105	DF58C	0.4 ERP	SQUARECORNER	S	625	A1
DB0AJ	1296.180	FH09B	10	6EL. GROUP	N/W	720	A1
SP9VHB	1296.280	JJ19F	5	6EL.REFLECTOR	N	944	A1
OE3XMB	1296.350	HI08B	0.1	10EL. GROUP	NW	1246	A1
SK6UHI	1296.800	GQ45D	10 ERP	CLOVER LEAF	OMNI	220	A1
DB0BP	1296.805	EI30G	4	4*5EL. YAGI	OMNI	760	F1
GB3BPO	1296.830	AM77J	700 ERP	2*32ELSLOT.WAVEG	W/E	85	F1A
SK0UHG	1296.835	IT60H	15 ERP	2*HELICAL	OMNI	30	F1
DB0JO	1296.854	DL48A	350 ERP	4*15+15EL. YAGI	W	218	F1
FX1SHF	1296.870	BI14B	10	ALFORD SLOT	OMNI	160	F1
GB3AND	1296.870	ZL63B	50 ERP	STACK. SLOTS	OMNI	85	F1A
PA0EHG/A	1296.875	CL48?	4	GAIN 6DB	OMNI	61	F1
ON5UHF	1296.880	BK39J	10 ERP	????	OMNI	180	F1
GB3DUN	1296.890	ZL08E	2 ERP	HB9CV	N	263	F1A
DB0JC	1296.895	EK08F	1.5	4EL.SLOT WAVEG	OMNI	620	F1A
DB0AN	1296.900	DL08B	1	BIG WHEEL	OMNI	100	F2
DB0JR	1296.900	GH22H	0.2	CORNERREFLECTOR	NNW	1560	F2
GB3IOW	1296.900	ZK34A	100 ERP	ALFORD SLOT	OMNI	250	F1A
DB0AD	1296.905	DK20D	1	DIPOLE	W/E	290	F1
DB0JB	1296.910	EI03A	1	BIG WHEEL	OMNI	??	??
GB3CLE	1296.910	YM48H	10 ERP	2*15+15EL. YAGI	N/SE	573	F1A
PA0QHN	1296.920	CM53J	4	GAIN 6DB	OMNI	20	F1
DB0VC	1296.920	FO64A	10	2*BIG WHEEL	OMNI	250	F1
SK7UHG	1296.920	HR21J	2 ERP	BIG WHEEL	OMNI	350	A1
SK6UHG	1296.925	FR29G	10	4*BIG WHEEL	OMNI	35	A1
OZ7IGY	1296.930	FP39B	5 ERP	BIG WHEEL	OMNI	96	A1
GB3MLE	1296.930	ZN32B	50 ERP	CORNERREFLECTOR	SSE	600	F1A
HB9F	1296.945	DG08C	15 ERP	2*CORN.REFLECTOR	NE/SW	937	F1
DF0ANN	1296.956	FJ47E	2	4*DOUBLE QUAD	OMNI	630	F1
SK4UHG	1296.960	GU79D	4	2*15EL. YAGI	S	450	??
PA0ZM/A	1296.975	DM65H	5	GAIN 20DB	NE	34	F1
GB3EDN	1296.990	YP04G	25 ERP	2*CORNER REFLCT.	NW/SE	117	F1A
DB0LB	1297.040	EI06D	0.2	DIPOLE	OMNI	367	F1
OE3XPA	1297.153	HI78C	0.1	11EL. YAGI	NW	725	A1A
DB0KI	1298.000	FK68B	0.15	4*DOUBLE QUAD	OMNI	690	F1
GB3NEW	2304.010	ZL63B	5 ERP	????	E	85	F1A
GB3LDN	2304.050	AL41A	25 ERP	????	NW/NE	??	F1A
SK6UHJ	2320.800	FS58F	1	2*??EL. YAGI	S/SW	80	A1
PA0TBA	2320.900	CL20A	1	10 DB GAIN	NW/W	??	??
DC6MR	2320.900	DL48A	0.5	DIPOLE	N	315	F1
PA0QHN	2320.920	CM53J	2	GAIN 6DB	OMNI	20	F1
DB0VC	2320.920	FO64A	5	BIG WHEEL	OMNI	230	F1
DF0ANN	2320.965	FJ47E	0.5	DOUBLE QUAD	OMNI	630	F1
DB0AS	2320.967	GH22H	0.5	28EL. YAGI	NW	1560	A1
DC8EC/A	2321.050	FI79G	4	6EL. GROUP	NW	580	F3
DL7QY/A	3456.000	EJ80B	0.05	HORN	E	450	A1
GB3UOS	3456.000	ZN42C	4 ERP	SLOT WAVEGUIDE	N/S	400	F2
DB0AS	3456.115	GH22H	0.08	12EL. GROUP	NW	1560	A1
DC0DA	3456.360	DL38E	120 ERP	0.7M DISH	N	220	F1
DL7QY/A	5760.000	EJ80B	0.01	HORN	E	450	A1
DB0AS	5760.192	GH22H	0.05	6 DB HORN	NW	1560	A1
DC0DA	5760.600	DL38E	8.5 ERP	0.7M DISH	N	220	F1
GB3LBH	10100.000	AL31C	1.5 ERP	WAVEGUIDE	OMNI	45	F2/F3
GB3IOW	10100.000	ZK34A	0.15 ERP	SLOT WAVEGUIDE	OMNI	250	F2
GB3ALD	10120.000	YJ30H	1 ERP	SECT. HORN	NNE	90	F2
DB0JX	10350.000	DL63A	0.01	10 DB GAIN	OMNI	115	F2
DL7QY/A	10368.000	EJ80B	0.01	HORN	E	450	A1
PA0MS/A	10368.045	CL48A	0.05	GAIN 21DBI	NW	56	F1
PA0DBQ	10368.100	CM72?	0.04	GAIN 20DB	W	75	F1
PE1BLE	10368.200	CM55?	0.01	GAIN 14DB	S&W	35	F1
DB0AS	10368.345	GH22H	0.02	10 DB HORN	NW	1560	A1
SK6SHG	10368.800	FS58F	10 ERP	20 DB HORN	S	80	A1
GB3MHX	10368.830	AM77J	1 ERP	1.2M DISH	E	60	F1
GB3XGH	10400.000	YN67B	1 ERP	????	OMNI	??	F2
GB3LEX	10400.000	ZM24D	???	SLOT WAVEGUIDE	??	??	F2
DB0AS	24192.805	GH22H	0.0005W	15 DB HORN	NW	1560	A1

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NR	CALL	QTH	WKD	TROPO	AURO	MS	ES
1	Y22ME	HM	451	1577	1579	2293	2197
2	SM7AED	GQ	450	1522	1562	2326	2274
3	DK6AS	FM	418	1460	1885	2510	2260*
4	SM7FJE	GQ	407	1642	1600	2241	1761
5	PA0RDY	CM	403	1578	1959	2262	2295
6	OZ1OF	EQ	389	1765	1770	2134	2294
7	SM4BVF	HT	374	1796	1796	2099	2310
8	DK5AI	FL	369	1565	1510	2275	2282
9	F6CJG/P	BF	357	1748	1892	2510	2836
10	SM6EOC	GQ	351	1600	1800	2330	1970
11	OZ1EYX	GQ	350	1577	1602	1893	2382
12	SM5CHK	HS	350	1262	1753	1991	2060
13	SM6AEK	GQ	349	1500	1800	2330	1900
14	DL1MF	GH	348	1530	1512	2085	3255
15	UA3LBO	QO	347	1807	1939	2273	2467
16	OZ1EKI	EP	339	1450	1777	2088	2273
17	OK1KKH/P	HJ	338	1370	1518	2379	2146
18	OZ1FDH	GP	337	1581	1762	2271	2287
19	ON5QW	BL	335	1510	1927	2080	3285
20	DF3XU	FN	332	1643	1808	2106	2222
21	SM5BEI	JU	331	1525	1777	2702	2455
22	PA0OOM	DN	328	1405	1986	2310	2215
23	SM0FFS	JT	327	1820	1580	2030	2190
24	SM6AFH	GQ	326	1500	1554	2330	1900
25	DK3UZ	EN	324	2131	1910	2021	3100
26	DJ5MS	GI	323	1260	1509	2102	1930
27	SM4IVE	HT	322	950	1940	2026	2122
28	OH7PI	NW	316	1902	1715	2151	2272*
29	I6WJB	HC	315	2224	1500	2214	2374
30	DK1KO	FN	315	1625	1745	2124	2194
31	F6DWG	BJ	314	1756	1880	2143	2448
32	HB1YA	IH	314	1612	1534	2103	2885
33	SP2DX	JO	313	1464	1730	2337	----
34	PA2VST	CM	313	1459	1803	2572	2221
35	OZ1DOQ	GP	308	1411	1590	1879	2260
36	SM0HAX	JT	306	1700	1640	1830	2240
37	OZ9FW	GP	305	1328	1618	1954	1963
38	UB5JIN	RE	303	1709	1497	2500	2826*
39	PA3BIY	CM	302	1480	1850	2000	2296
40	UR2RQT	MS	302	1210	1840	2172	1900
41	DK4TG	DL	301	1410	1730	2440	2000
42	DL4EA	DL	300	1468	1723	2078	2247
43	I3TJQ	GF	300	1000	1250	2010	3120
44	I3LGP	GF	297	1000	1387	2020	3150
45	OK3AU	KI	296	1608	1637	2065	2236
46	EA3LL	AB	295	1995	----	2300	3215
47	G3NSM	ZL	295	1489	2003	1872	2481
48	DL7QY	GM	293	1402	1751	2353	1845
49	PA0KDV	DN	291	1475	1610	2051	2352
50	SM4AXY	HT	289	1714	1760	1880	2143
51	UR2EQ	NT	288	1541	1840	2240	2245
52	SM7BWU	HS	287	1585	1770	2099	2007
53	PA0FTF	CK	281	1500	1800	----	2900
54	I4BXN	FE	279	1600	1520	1916	2670
55	G3POI	AL	278	1500	1566	2113	2000
56	Y23FG	FM	277	1560	1375	2010	2082
57	F6BSJ	CG	277	1510	1220	2105	2705
58	DF6NA	EJ	276	1156	1120	2080	1709
59	F8OP	CG	274	1228	1196	2028	2720
60	LA2PT	FT	272	1438	1660	2020	2427
61	SM5CUI	IT	271	1590	1600	2190	----
62	DF1OH	EM	271	1564	1671	2242	2379
63	YO2IS	KF	269	1380	1775	2040	2360
64	Y23ZI	FL	268	1785	1280	1925	2075
65	SM3BIU	HX	268	1460	1890	2260	2250
66	YU2IQ	HE	268	1210	----	1955	3462
67	Y21PL	GL	266	1760	1360	2110	1960
68	SP5JC	KM	266	1740	1740	1980	1861
69	F1FHI	ZH	265	1739	1292	2125	2467
70	OH3TH	LV	265	1355	1669	2217	2069+
71	UQ2GFZ	NR	265	1154	1855	1884	2159
72	DK2PR	EN	264	1445	1515	1940	2425
73	SM4COK	HT	261	1440	1570	2080	1940
74	SM7WT	GP	260	1590	1680	1930	2180
75	I4EAT	FE	260	1550	1420	2240	2500
76	PA0WWM	CM	260	1303	1839	1997	2212
77	G4DSC	ZO	259	1485	1485	1942	2285
78	DK1PZ	FL	257	1567	1364	1867	1866
79	OH2BBF	LT	257	1388	2000	2125	2144
80	OZ1FTU	FP	257	1282	1558	1903	2315
81	DJ9CZ	DL	256	1650	1862	1925	2015
82	SM2CKR	KX	256	1630	1660	2310	1810
83	SM3AKW	JW	256	1598	2078	2142	2504
84	SM7JUQ	GP	255	1579	1646	1870	2027
85	UR2GZ	MS	253	1577	1794	2141	2174
86	OZ1ASL	FO	251	1763	1675	2061	2323
87	YU3ES	GF	251	1167	1004	2074	2483
88	YU1EU	KE	250	1680	----	2200	2380
89	DF1JC	DL	249	1270	1830	2348	2007
90	LX1GR	DJ	249	868	1104	2206	1409
91	OE3XUA	HH	248	1610	1240	2160	1785
92	SM5DRV	HR	248	1330	1410	1810	----
93	ON4YZ	CK	247	1530	1510	----	2360
94	YU7EW	KF	246	1868	1172	1930	2425
95	OZ1EYE	FQ	246	1379	1271	2329	2600
96	SM0DJW	IS	246	1340	1810	1840	2160
97	PA0HWM	CK	246	1268	1508	1845	3103
98	HG8ET	KG	245	1445	1845	2000	2279
99	OK1KHI/P	HK	242	1803	1180	----	2040
100	F6CTW	BI	241	1676	1713	2207	2416
101	ON4YZ	CK	241	1530	1510	----	2110
102	YU2EZA	IG	241	1416	1413	2084	2377
103	PA3AOU	DM	241	1392	1673	1763	2193
104	ON6UG	BL	241	1089	1013	2640	3296
105	OZ6OL	FP	239	1800	1700	----	1800
106	G4IGO	YL	239	1358	1770	1956	2198
107	OZ8SL	GP	238	1476	1305	----	2188
108	SM7GEP	HR	238	1467	1768	1695	2043
109	OH0JN	JU	238	1451	1856	2108	2198
110	PA0RLS	CL	238	1350	1890	1890	2204
111	YU7BCX	KF	237	1868	1172	1956	2425
112	SM3DCX	IV	237	1300	1850	1990	----
113	RQ2GAG	MQ	236	1432	1714	----	1973
114	PA3BBA	CM	236	1300	1436	1907	2311
115	UA3TCF	WQ	236	1131	1974	2498	2332
116	UA3MBJ	SS	235	1560	2006	2573	2390
117	DF6OB	FM	234	1421	1349	1877	2013
118	SM5BSZ	JT	233	1830	1720	1890	2080
119	DL7ZL	GM	232	1401	1254	3200	3800
120	SM5FRH	HT	231	1580	1690	1650	----
121	SM4GBC	GT	231	1286	1815	1856	1670
122	OZ3ZW	FO	230	1763	1863	1415	1958
123	OZ1CLL	GP	230	1369	1969	1448	2208
124	SM5CNQ	HS	228	1698	1751	1909	1843
125	Y24QO	GM	228	1250	960	1846	1840
126	OK1FM	GJ	226	1843	1438	2200	1827
127	SM3COL	IW	226	1784	1693	2122	2367
128	SM6CKU	GR	225	1530	1560	1470	1790
129	YU3CAB	HG	225	1463	1530	2165	3356
130	SM3UL	IV	225	1275	1521	2110	2363
131	G3LTF	AL	224	1824	1846	2021	2174
132	G8FUF	AL	224	1810	1410	2466	1800
133	GJ4ICD	YJ	223	1620	1100	2050	2090
134	UQ2GLO	KQ	223	1447	1802	1992	1576
135	DK8VS	DJ	223	1350	1080	2240	3230
136	G3CHN	YK	222	2656	2138	----	2358
137	DF2ZC	DK	221	1090	1686	2004	2009
138	PA3BRS	CM	219	1312	1738	1613	2112
139	SM0IOT	JT	218	1300	1700	1820	2100
140	UC2AAB	NN	217	1350	1850	1980	2280
141	DK2LM	EJ	215	1014	1098	1956	2444
142	DL7YW	GM	213	1299	1106	1895	2170
143	Y22HA	GO	213	1250	1071	2058	2041
144	SM5EJN	IT	212	1770	1630	2240	1920
145	SM5AQJ	JT	212	1380	1580	1930	----
146	PA2CHR	CL	211	1370	1108	1695	2300
147	DK3XT	FN	211	1350	1430	1800	1990
148	YU2JL	HD	211	1156	----	2108	2019
149	YU2KDE	JF	209	1731	1097	2074	2196
150	SM5CNF	HS	208	1660	1730	1850	----
151	DF5DL	EL	208	1389	1596	2003	2020
152	PA0XMA	DM	208	1285	1330	2300	1930
153	I1DMP	DF	208	1001	930	1864	2718
154	LA9BM	EU	207	1612	1670	1892	2165
155	SM0BYC	IT	207	1380	1710	1890	2390
156	OZ3GW	FQ	207	1340	1580	----	2338
157	YU1EV	KE	206	1650	----	2165	2200
158	F6CER	BI	206	1500	1350	1700	2300
159	PA3BSK	DL	206	1387	1698	1290	2148
160	I4XCC	GD	205	1070	1782	2275	2270
161	Y59UN	GK	204	1790	1220	1920	1630
162	OK1MBS	HK	204	1465	1470	1371	2133
163	SM4ARQ	HT	202	1750	1590	1950	1930
164	UQ2GCB	LR	202	1676	1769	1990	1769
165	LA8AK	DS	202	1325	1722	1797	2303
166	Y23PA	GO	202	1168	1150	1710	----
167	PA3GER	CL	201	1327	1249	2100	2118
168	SM3FBL	IV	200	1563	1680	1955	----

DEADLINE IN 1984 (1)1.2 (2)1.5 (3)1.8 (4)1.11 WKD=NUMBER OF SQUARES WORKED *=EME OP. +=OP. HAS DIED PRINTED BY DL 7 QY

EUROPEAN VHF TOP LIST 144 MHZ 28.11.1983

NR	CALL	QTH	WKD	TROPO	AURO	MS	ES
169	DL2OM	DK	200	1270	1712	2104	2488
170	OZ9PW	EQ	200	1200	1200	1500	2160
171	EA3ADW	BB	198	2311	----	1932	2245
172	G3LQR	AM	196	1776	2150	2150	2150
173	Y24TN	GK	195	1790	1310	1920	1630
174	EA3AIR	BB	194	1241	----	1850	2580
175	OE5JFL	GI	193	1503	1155	1964	1823
176	IW5AVM	FC	192	1466	----	2016	2891
177	HG5KDQ	JH	192	1307	----	1849	2195
178	SM5AGM	JT	191	1930	1740	----	2000
179	PA0BAT	DL	191	1078	1377	2498	2042
180	PE1BNK	CM	189	1328	1341	----	2257
181	UR2RDR	MS	189	1200	1750	1600	2100
182	DL7AN	GM	188	1310	1140	1936	1845
183	PA3AHD	CM	188	1279	1586	1940	1879
184	UQ2NX	MR	187	1712	1745	1707	1870
185	DK3LL	FO	187	1525	1187	1875	1812
186	DL1JF	FO	185	1325	1775	----	2062
187	SM4FXR	HT	184	1280	1430	1760	----
188	LA8AE	FT	182	2041	1573	----	1932
189	UQ2OW	MQ	182	1092	1514	1845	1963
190	SM5FND	HT	181	1445	1601	1616	2060
191	G3SEK	ZL	179	1560	1681	1872	2154
192	SM0DFP	IT	178	1830	1590	2030	----
193	SM5LE	JT	178	1440	1470	2190	----
194	UB5WN	PK	178	1376	1270	2410	1457
195	OE3CEW	II	177	1464	1344	1744	2000
196	PA0CSL	CM	176	1528	1610	1750	1960
197	RR2TEJ	NT	176	1422	1760	----	2070
198	OH2BWL	MU	176	1056	1586	1961	2221
199	G3COJ	ZL	175	1630	1650	----	1852
200	UR2RGM	MT	175	1131	1768	1429	2157
201	G4MCU	AL	174	1567	1630	1627	2000
202	DG1BP	DN	174	1201	1609	2005	1352
203	DC7OH	GM	173	1349	1289	1680	2260
204	DL7YS	GM	173	1208	1052	1550	1891
205	F6FHP	AE	172	1752	----	2243	2105
206	G8KBQ	YL	172	1501	1775	1865	2235
207	DB6BX	DM	172	1398	1094	----	2059
208	G3PBV	YK	171	1540	1466	1563	2315
209	DL7WC	GM	171	1360	1240	1550	1800
210	PA0SGL	CM	171	1258	1513	1848	1772
211	UA1MC	PU	170	1500	1540	2145	----
212	F9FT	CJ	170	1440	1440	2017	----
213	OZ1CFO	ER	170	1262	865	1939	2105
214	SM5CPD	IT	169	1820	1210	1370	1960
215	EA1TH	YC	169	1366	----	1674	2292
216	UR2AO	MT	169	1162	1176	1792	2136
217	PA0JOZ	CM	169	1159	1420	1666	1980
218	F5DE	AF	168	1850	900	1800	2300
219	OH0NC	JU	167	1533	1265	1647	2097
220	PE1AAP	CM	167	1326	1086	----	2052
221	DL5LH	FO	167	1313	1614	----	2080
222	UR2NW	LT	166	1380	1570	1797	----
223	DF5DE	EK	166	1186	1670	1845	1752
224	SP8AOV	LL	165	1224	1723	1821	1851
225	DL7ACG	GM	164	1592	850	1997	----
226	UA3LAW	PO	164	1372	1675	2208	----
227	PA3CAP	CM	164	1305	977	1687	2008
228	SM0CPA	IT	163	1856	----	----	----
229	UQ2AO	MQ	163	1647	1679	1472	----
230	PA0LSC	CM	163	1528	1590	1750	1960
231	OZ1DPR	EP	163	1373	1215	1327	2015
232	HB9QQ	EH	163	1330	1250	1685	1520
233	UP2BBC	LP	163	1260	1904	1989	----
234	UR2HD	LS	163	1050	1918	----	----
235	SM0AGP	IT	162	1820	1710	1560	----
236	G3WSN	AL	162	1522	1821	2076	2077
237	OE5XPL	HI	159	1434	836	1929	1680
238	Y25QL	GL	158	1825	950	----	----
239	DK2RY	FJ	158	1300	1400	1800	----
240	EA5HM	ZZ	157	1750	----	1800	2100
241	Y24BO	GM	157	1380	1440	----	1854
242	OK1IDK	GJ	156	1843	1438	1983	1776
243	OK1AGE/P	HK	156	1481	1136	----	----
244	PE1BZD	CM	155	1359	1547	1889	1990
245	DF5JJ	DL	155	1272	1256	1620	2074
246	G8MFJ	ZL	155	1209	1210	1329	2168
247	G3FPK	ZL	154	1406	1480	----	2069
248	PA0VV	CM	154	1372	1635	1845	1952
249	9H1CD	HV	151	1960	----	----	2400
250	EA1TA	VD	151	1820	----	1739	2334
251	DK2NH	FN	151	1607	1432	----	1996
252	OE1RKU	II	151	1497	1493	1658	2364

NR	CALL	QTH	WKD	TROPO	AURO	MS	ES
253	SM4DHN	GU	151	1390	1300	1770	----
254	OK1CA/P	HK	147	1481	1065	950	----
255	DG7FZ	EK	146	1123	1190	----	----
256	EA1ED	VD	145	1818	----	1533	2119
257	9H1BT	HV	144	1950	----	2031	2506
258	SM0DRV	IT	144	1820	1400	1530	2070
259	F1BBI	BI	142	1543	----	----	2115
260	SM5CJF	IT	142	1440	1280	----	----
261	SM7FMD	HR	142	1276	1031	----	1780
262	PA0JMV	CL	141	1220	1590	1790	----
263	EA1BLA	VD	140	1826	----	1842	2308
264	G3KEQ	ZL	138	1335	1275	----	1800
265	UR2DZ	MT	138	1300	1810	1855	----
266	DF5BL	DM	138	1091	1659	----	2051
267	EA6FB	AY	137	1964	----	1800	1960
268	SP9AFI	JJ	136	1540	980	----	----
269	SM6BFQ	GS	136	1200	1830	----	----
270	EA4QR	YA	134	2092	----	1466	2584
271	SP9FG	JJ	134	1647	1283	----	1630
272	SM0FOB	JT	133	1830	1490	1390	1860
273	OH0AA	JU	133	1526	1461	----	----
274	F6EAS	ZI	133	1380	----	2230	2020
275	SM6CYZ/7	GQ	132	1120	1200	----	1590
276	SM6PF	GS	131	1470	1200	----	----
277	DF3BL	DM	131	1091	1350	----	2051
278	F1AUQ	CH	129	1600	----	2025	1604
279	EA1QJ	VD	128	1820	----	2101	2099
280	DJ6XV	DL	127	1010	991	----	2125
281	OE1APS	II	125	1343	1765	1674	2005
282	EA7PZ	XX	122	1820	----	----	2305
283	EA3XU	BB	120	2200	----	----	2060
284	LA9FY	EU	119	778	1242	1128	----
285	HB9AOF	DG	113	1181	----	----	1981
286	DG1NZ	FJ	113	1180	1230	----	1728
287	EB4DF	YA	112	1940	----	1670	2240
288	EA5DFY	AY	106	1369	----	1620	2654
289	OK1KTL/P	GK	105	907	----	----	----
290	DL7QY	FJ	102	1368	1628	1345	1689
291	EA3IH	BB	100	1297	----	1857	2565
292	EA1QF	YC	100	1099	----	1951	2293
293	HB9MIO/P	DH	99	1316	----	----	2183
294	EA7AJX	YX	97	1720	----	1750	2456
295	EB5AZT	ZY	95	1391	----	----	2237
296	DL0UL/P	EI	94	1010	----	----	2019
297	OZ7IS	GP	93	1020	880	1294	1842
298	EA4AAW	WZ	92	1884	----	----	2297
299	GM4CXM	XP	91	1428	1583	1709	2023
300	EA7AG	YW	85	1626	----	1677	2127
301	EA1RCA/P	WD	84	1860	----	----	1781
302	EA3FD	BC	83	1220	----	----	1512
303	OE3PQU	HI	82	1556	944	----	1930
304	EA8XS	SO	80	3031	----	----	3150
305	EA2AX	ZB	79	1438	----	----	2177
306	PE1HWO	CL	79	1070	875	----	----
307	HB9AJF	EH	76	1013	----	----	1621
308	EA3CCK	BB	75	1410	----	----	2074
309	EA7CR	WX	73	1370	----	----	2150
310	EA3MM	BB	72	1197	----	----	1812
311	EA1ACD	VD	70	1820	----	----	1939
312	EA7BVD	XX	65	1580	----	----	2282
313	EB4BK	YA	63	584	----	----	1880
314	EA3CSX	BB	62	1829	----	----	2064
315	EA1YV	VC	59	1710	----	----	1961
316	EA2LP	ZD	59	1618	----	----	1441
317	EA3DLV	BB	58	1352	----	----	2157
318	EA3CCK/6	BZ	57	1126	----	----	1824
319	EA7BIH	YX	56	2285	----	----	2353
320	ED1RCF	WD	56	1862	----	----	----
321	EB7NK	YW	53	1620	----	1065	2150
322	EA1KV	VC	48	1706	----	1824	2001
323	EB4REM	YA	48	1600	----	----	2250
324	EA7APD	WX	46	1835	----	----	1581
325	EA1CDH	XB	44	1860	----	----	1740
326	EA5EZ	ZZ	44	1500	----	----	1812
327	EB4KI	YA	41	585	----	----	----
328	EA3BTZ	BB	37	1239	----	----	1199
329	EB5YE	ZZ	36	1378	----	----	----
330	EA5BAX	ZZ	36	1378	----	----	----
331	EA3AYK	BB	30	1220	----	----	----
332	EA1TF	VD	24	1832	----	----	1885
333	EB7DF/7	YY	23	1480	----	----	----
334	EA1ZK	VD	23	1000	----	----	----
335	EA2ARD	ZD	21	1144	----	----	----
336	EB8EH	SO	20	480	----	----	1875

THE LIST IS PUBLISHED CONTINUOUSLY. DATA COMPILED ABOVE BASED ON UNCONFIRMED CLAIMS BY OPERATORS. PRINTED BY DL 7 QY

EUROPEAN UHF TOP LIST 432 MHZ 28.11.1983

NR	CALL	QTH	WKD	TROPO	AURO
1	DL7ZL	GM	168	1305	1249*
2	DK5AI	FL	166	1506	798*
3	DF3XU	FN	165	1607	1057
4	DL7QY	FJ	158	1368	1618
5	OZ7IS	GP	152	1387	1000
6	SM3AKW	JW	151	1190	919*
7	G3LQR	AM	144	2031	873
8	F1FHI	ZH	143	1892	----
9	UA3LBO	QO	140	1426	1612
10	DL7YC	GM	140	1225	----
11	SM6HYG	FS	138	1685	720
12	PA0EZ	CM	138	1310	1028
13	DJ9DL	DL	131	1274	615
14	SM6CKU	GR	129	1293	660
15	G3LTF	AL	127	1520	890
16	DK6AS	FM	127	1360	620
17	DB6BX	DM	126	1398	----
18	Y22ME	HM	126	1364	874
19	OZ9FW	GP	125	1348	1026
20	OK1CA/P	HK	124	1267	----
21	OZ2OE	EP	122	1429	1020
22	PA0FRE	CL	122	1400	815
23	F6GNR	ZH	120	1894	----
24	OK1KHI/P	HK	120	1525	----
25	PA0WWM	CM	120	1342	726
26	PE1ALA	CM	118	1336	788
27	DB6NT	FK	117	1505	----
28	DJ6MB	DK	117	1253	921
29	SM0FZH	JT	116	1900	957
30	F6APE	ZH	116	1706	----
31	PE0AGO	DM	116	1382	----
32	G3SEK	ZL	116	1269	170*
33	Y23FG	FM	115	1560	680
34	DL7APV	GM	115	1308	850
35	DL3UZ	FN	114	1270	----
36	OZ1EKI	EP	113	1325	700
37	SM7BAE	GP	113	1220	850
38	OH3TH	LV	113	1199	943+
39	SM6FYU	GQ	112	1441	706
40	DF7VX	EL	112	1105	658
41	DK0NA	FK	112	1096	----
42	PE1CQQ	DM	111	1356	490
43	SM5BEI	JU	110	1325	1016
44	DF3EE	DL	110	1267	1019
45	SM5CPD	IT	110	1230	640
46	DN5FF	BL	110	1170	736
47	OH0NC	KU	109	1545	920
48	SM5DWC	IT	109	1400	810
49	SM0FFS	JT	109	1380	740
50	PA0RDY	CM	109	1330	----
51	SM4AXY	HT	105	1714	1100
52	DL4EA	DL	105	1265	1009
53	SM0CPA	IT	104	1856	797
54	PA3AOH	DL	104	1116	530
55	GJ4ICD	YJ	102	1340	803
56	DK2NH	FN	101	1607	805
57	G3COJ	ZL	101	1465	812
58	SM0DFP	IT	101	1410	830
59	DB2VY	DJ	101	1335	----
60	OK1KIR/P	GK	101	1331	----
61	PA0JOZ	CM	101	1156	----
62	DC7QH	GM	100	1231	509
63	DL7AN	GM	99	1240	----
64	G3PBV	YK	98	1572	----
65	DC9XO	EM	96	1600	----
66	DC9CSA	GM	96	1171	----+
67	DL7ACG	GM	95	1279	----
68	OZ7LX	FP	93	1315	720
69	PA3BSK	DL	93	1129	----
70	DK1PZ	FL	93	1018	----
71	OK1AIY/P	HK	92	1351	----
72	PA2DOL	CL	92	1088	----
73	G8KBQ	YL	91	1327	----
74	SM0DYE	JT	91	1205	845
75	PA0CRA	CM	90	1412	----
76	F9FT	CJ	90	960	----
77	DF1OH	EM	89	1261	1038
78	LA8AE	FT	88	1585	843
79	ON5QW	BL	88	1395	----
80	F6DWG	BJ	88	1350	----
81	DD2EK	DL	88	1284	----
82	Y22HA	GO	87	1414	----
83	DF5JJ	DL	87	908	----
84	ON4YZ	CK	86	1460	----
85	G3UBX	YM	86	1101	----
86	PE1HQO	DN	85	1273	460
87	G4FRE	AL	85	1225	----
88	Y23PA	GO	85	1102	----
89	OZ3GW	FQ	85	1090	620
90	F1BUU	ZE	84	1250	----
91	OZ3ZW	FO	84	1237	613
92	F6CER	BI	83	1350	500
93	DF3CK	FH	83	1283	867
94	DL6NAQ	EK	83	1253	----
95	ON5GF	CK	83	1115	----
96	ON5GF	CK	83	1115	----
97	ON5GF	CK	83	1115	----
98	ON7HP	??	83	799	----
99	OZ1CFO	ER	82	1330	----
100	Y24QO	GM	81	1100	----
101	OZ1HDA	ER	79	1370	----
102	PA3BGL	CN	79	1250	----
103	DJ6XV	DL	79	968	508
104	ON4YZ	CK	78	1460	----
105	DF1JC	DL	78	1270	----
106	DK2ZF	FN	78	1223	----
107	PE1GVK	CL	78	1208	----
108	LA8AK	DS	78	1188	776
109	HB9MIN/P	DH	78	1100	----
110	DB5AQ	FL	78	1050	----
111	PA0VV	CM	77	1180	----
112	DG1NZ	FJ	77	1146	----
113	DJ7YP	EM	77	971	----
114	PA2CHR	CL	76	1265	----
115	DL5FAU	EK	76	1120	----
116	Y22EN	GK	75	1395	----
117	G4LRT	ZM	75	1394	----
118	PA2DRV	CL	75	1147	----
119	DL6WU	EJ	74	1305	740*
120	DL7HR	FI	74	1256	980
121	DC9BU/A	EK	74	1253	----
122	OE3XUA	HH	74	1215	----
123	G4MCU	AL	74	1192	----
124	OH2BBF	LT	74	1164	773
125	SM4IAZ	HT	73	1055	1134
126	SM7GEP	HR	72	1428	533
127	Y23BD	GM	72	1150	----
128	DF2VQ	DL	72	1077	475
129	G8HVY	YK	71	1500	----
130	G4BEL	AM	71	1175	----
131	UR2EQ	NT	71	1160	907
132	SM5CUI	IT	71	1150	1260
133	Y24BO	GM	71	1066	838
134	SM7CFE	HQ	70	1420	----
135	OZ1HDB	ER	70	1418	----
136	SM5CUL	IT	68	1150	1260
137	PA3BRS	CM	67	1292	----
138	PE1AAP	CM	67	1132	----
139	DG4GAN	EI	66	1504	----
140	SM7GWU	HS	66	1192	628
141	OZ9SW	EQ	65	1050	----
142	SM7FMD	HR	64	1594	----
143	DG4BB	EN	64	1194	----
144	G3W5N	AL	63	1385	----
145	SP9FG	JJ	63	1327	----
146	DL0SP/P	GM	63	1150	----
147	DF6NA	EJ	63	1102	----
148	PE1HWO	CL	63	1050	----
149	RQ2GAG	MQ	62	1317	709
150	UP2BBC	LP	62	1125	807
151	F6CJG/P	BF	61	1170	----
152	DK3OL	DL	61	909	----
153	HB9AOF	DG	61	820	----
154	SM5DSN	IT	60	1470	670
155	OK1KTL/P	GK	60	993	----
156	ON6UG	BL	60	970	420
157	DK8VS	DJ	60	920	----
158	SM5LE	JT	59	1560	710
159	G8SFM	YL	59	1255	----
160	DL7RU	GM	59	1231	----
161	DC4XH	EN	59	1037	----
162	DK0IK	EN	59	752	----
163	F6HLD/P	CG	58	1545	----
164	F6BSJ	CG	58	1525	----
165	PE0DOL	CL	58	1033	----
166	DG7FZ	EK	57	1147	----
167	DL4OL	FM	57	1018	----
168	DF1EQ	DL	57	811	----
169	I6BQA	GD	56	813	----
170	DK3UC	FN	55	1380	600
171	DG1BP	DN	55	952	----
172	G4MUT	ZL	54	1197	----
173	PA0JME	CL	54	1046	----
174	PA0XMA	DM	54	980	485
175	PA2HJS	CK	54	832	----
176	DL5LH	FO	53	1256	630
177	PA0KDV	DN	53	920	----
178	DK1KO	FN	53	920	----
179	IW5AFB	FC	53	738	----
180	OE1RKU	II	52	1354	----
181	PA0JTA	CL	52	920	----
182	DL0SO/A	DL	52	888	----
183	DL2OM	DK	52	780	639
184	OE1APS	II	51	1341	----
185	DF7YU	EL	50	1147	----
186	SM6FHZ	GQ	50	1010	800
187	SM3IVE	HT	50	938	703
188	HB9QQ	EH	49	1080	----
189	PA3BBA	CM	49	1028	----
190	Y21PL	GL	49	828	----
191	YU3CAB	HG	49	684	----
192	DL0UP/P	EI	49	676	----
193	SP1DSU	HN	48	1340	730
194	UR2NW	LT	48	1060	675
195	EA3XU	BB	47	1230	----
196	SP1FPG	HN	47	968	----
197	DD3KF	DK	47	862	----
198	SP5JC	KM	46	1120	866
199	UR2RQT	MS	46	853	853
200	UQ2NX	MR	45	1355	----
201	OH2BWL	MU	45	1223	1005
202	SM3COL	IW	45	621	455
203	IW5AVM	FC	44	1458	----
204	OE3PQU	HI	44	1120	----
205	OZ1FDH	GP	44	1033	822
206	F6ECI	BI	44	880	----
207	I2FUM/2	EE	44	875	----
208	DL2HAD	EN	44	798	----
209	SM2CKR	KX	43	1215	820
210	DF3XZ	FN	43	956	----
211	DC8LG	FH	43	934	----
212	DC9VA	DJ	43	920	----
213	DC7OH	GM	42	1079	----
214	SM0AGP	IT	42	740	410
215	SM4DHN	GU	41	1240	1030
216	UQ2OW	MQ	40	934	833
217	DL7WC	GM	40	795	----
218	G8ROU	ZN	39	1255	----
219	DL9HN	FN	39	1093	----
220	GM3ZSS	YR	38	1400	----
221	UQ2GFZ	NR	38	1328	590
222	HB9MIO/P	DH	38	1010	----
223	DK0IK/P	DO	38	800	----
224	DL0UL/P	EI	38	676	----
225	HG1YA	IH	38	631	----
226	OE5XPL	HI	37	1176	----
227	DL8DAU	DL	37	737	----
228	UA3MBJ	SS	36	1200	800
229	OE1ERC/9	FH	36	709	----
230	HG2KML	JH	36	600	----
231	UR2AO	MT	35	1131	----
232	UR2GZ	MS	35	1035	----
233	DL9DAK	DL	35	824	----
234	UR2RGM	MT	35	820	----
235	DG5BQ	EN	35	739	----
236	DL7YW	GM	35	724	----
237	YU3USB/3	GG	35	632	----
238	I3ZVN	FF	34	866	----
239	F6EAS	ZI	34	630	----
240	SM3UL	IV	34	585	674
241	OK1VAM	GK	34	511	----
242	DK2PR	EN	33	1200	----
243	SM3BIU	HX	33	920	720
244	DF1EO	DL	33	767	----
245	EA3LL	AB	32	1315	----
246	UR2RIW	LS	32	1100	----
247	DJ5LZ	FI	32	931	----
248	DB9SB	EJ	32	853	----
249	SM5EVK	IS	32	740	----
250	UR2RIC	LS	31	673	----
251	UQ2GCG	LR	30	1275	396
252	I2FHW	EE	30	700	----

DEADLINE IN 1984 (1)1.2 (2)1.5 (3)1.8 (4)1.11 WKD=NUMBER OF SQUARES WORKED *=EME OP. +=OP. HAS DIED PRINTED BY DL 7 QY

EUROPEAN SHF TOP LIST 1296 MHZ 28.11.1983

1	PE1CHQ	DM	88	1200	32	DL7ZL	GM	54	1112	63	DF3EE	DL	36	752
2	PA0EZ	CM	84	1261	33	ON5GF	CK	54	1010	64	SM0FFS	JT	35	1040
3	G3LQR	AM	80	1232	34	G4LRT	ZM	51	1152	65	SM5BEI	JU	35	877
4	F1FHI	ZH	79	1538	35	DK6AS	FM	51	990	66	PA3BGL	CN	34	1155
5	DL7QY	FJ	78	1261	36	DL7YC	GM	49	1040	67	DL7APV	GM	34	1112
6	DF3XU	FN	74	1277	37	DD3KL	DK	48	713	68	DF7VX	EL	34	886
7	SM6HYG	FS	71	1685	38	DB2VY	DJ	46	783	69	DK1PZ	FL	34	865
8	PA0WWM	CM	71	1298	39	SM0DFP	IT	45	1057	70	OZ3ZW	FO	34	798
9	HB9AMH/P	DH	71	1264	40	PE1ALA	CM	44	1315	71	DL3NQ	EJ	33	920
10	G3LTF	AL	71	1078	41	DK5AI	FL	44	883	72	DL0SO/A	DL	33	642
11	PA0FRE	CL	70	1337	42	SM6CKU	GR	44	820	73	F6DWG	BJ	32	1196
12	PE0AGO	DM	70	1196	43	OH0NC	KU	43	1537	74	LX1DU	CJ	32	600
13	ON5GF	CK	67	1010	44	F6CER	BI	43	1350	75	G4BEL	AM	31	1025
14	DB6NT	FK	65	1105	45	OK1CA/P	HK	42	1089	76	DC0DA	DL	31	815
15	G4BYV	AM	65	1028	46	HB9RG	EH	42	820	77	PA2HJS	CK	31	690
16	DC9XO	EM	64	963	47	DK2NH	FN	42	805	78	DK0IK	EN	31	672
17	DB6BX	DM	62	1052	48	LA8AE	FT	41	1271	79	LA8AK	DS	30	1117
18	PA2DOL	CL	62	1027	49	PA3AOH	DL	41	940	80	G3PBV	YK	30	996
19	OZ2OE	EP	61	1425	50	DL3NI	DL	41	798	81	OZ1HDA	ER	29	888
20	PA0CRA	CM	61	1286	51	DF1EQ	DL	41	762	82	PA0JOZ	CM	29	846
21	DK3UC	FN	60	1223	52	PA2DRV	CL	40	1314	83	DF3CK	FH	27	1240
22	DK0NA	FK	59	1096	53	SM0FZH	JT	39	1254	84	DJ6MB	DK	27	879
23	OZ7IS	GP	58	1205	54	G3COJ	ZL	39	963	85	DC8UG	DK	27	802
24	PE1CQQ	DM	58	1167	55	DC7QH	GM	38	1216	86	DG4BB	EN	27	741
25	OK1AIY/P	HK	55	1351	56	DL5FAU	EK	38	740	87	F6BSJ	CG	25	720
26	DL6NAQ	EK	55	1253	57	SM5DWC	IT	37	1060	88	UR2EQ	NT	25	588
27	OK1KIR/P	GK	55	1208	58	PA3BSK	DL	37	821	89	SM4AXY	HT	24	1000
28	ON5GF	CK	55	1010	59	DL9GU	EJ	37	678	90	PA0VV	CM	24	622
29	DL4EA	DL	55	906	60	SM0CPA	IT	36	1141	91	SM5CPD	IT	24	610
30	DF5JJ	DL	55	897	61	SM6ESG	GR	36	980	92	G4FRE	AL	23	641
31	DC9BU/A	EK	54	1253	62	DD2EK	DL	36	845	93	I2FUM/2	EE	22	972

EUROPEAN SHF TOP LIST 2320 MHZ 28.11.1983

1	PA0EZ	CM	38	827	15	DL3NI	DL	19	788	29	OZ7IS	GP	11	860
2	DL7QY	FJ	34	1018	16	DL3NQ	EJ	18	592	30	PA2DRV	CL	11	776
3	DB6NT	FK	34	742	17	PA0WWM	CM	18	542	31	DC8UG	DK	11	648
4	G3LQR	AM	30	924	18	DL9GU	EJ	18	374	32	PA0JGF	DM	11	444
5	G4BYV	AM	28	1028	19	DC0DA	DL	17	429	33	DD3KL	DK	10	549
6	SM6HYG	FS	27	1290	20	OK1AIY/P	HK	16	1027	34	DF5QZ	DL	10	468
7	PE0AGO	DM	27	730	21	ON5GF	CK	15	800	35	DF5JJ	DL	10	213
8	DC9XO	EM	23	701	22	PA2DOL	CL	15	781	36	G3LTF	AL	9	1017
9	PE1CQQ	DM	22	605	23	DK3UC	FN	15	661	37	LA8AE	FT	9	829
10	DK0NA	FK	22	527	24	OZ2OE	EP	13	809	38	DF3CK	FH	9	418
11	OK1KIR/P	GK	21	866	25	DF1EQ	DL	13	461	39	PA2HJS	CK	9	388
12	G4LRT	ZM	20	1022	26	DC3QS	DM	13	419	40	PA0JME	CL	9	262
13	DL5FAU	EK	20	582	27	OE1ERC/9	FH	12	657	41	SM6ESG	GR	8	880
14	PA0FRE	CL	19	864	28	DL7YC	GM	12	634	42	G4FRE	AL	8	641

EUROPEAN SHF TOP LIST 3456 MHZ 28.11.1983

1	DB6NT	FK	14	528	9	DC9DX	EM	10	341	17	PA0JME	CL	5	220
2	PA0CRA	CM	13	802	10	PA2DOL	CL	9	528	18	SM6HYG	FS	4	925
3	G3LQR	AM	12	924	11	DK0NA	FK	8	528	19	PA2HJS	CK	4	388
4	DF5JJ	DL	12	417	12	DF5QZ	DL	7	587	20	PA0JGF	DM	4	376
5	DC0DA	DL	11	429	13	DC3QS	DM	7	419	21	DF1EQ	DL	4	118
6	DL3NQ	EJ	11	398	14	DD3KL	DK	6	434	22	G4AGN/P	ZN	4	115
7	G4BYV	AM	10	903	15	PE1CQQ	DM	5	303	23	PE0AGO	DM	2	134
8	DL7QY	FJ	10	565	16	G4FRE/P	AL	5	251	24	PA2DRV	CL	2	123

EUROPEAN SHF TOP LIST 5760 MHZ 28.11.1983

1	SM6HYG	FS	9	980	5	DC0DA	DL	5	212	9	HB9AJF	EH	3	217
2	PA0CRA	CM	7	802	6	DL7QY	FJ	5	171	10	DB8NC	FK	3	59
3	G3LQR	AM	6	924	7	PA2DOL	CL	4	529	11	DF5QZ	DL	2	326
4	DB6NT	FK	6	528	8	DK0NA	FK	4	528	12	OK1VAM/P	HK	2	303

EUROPEAN SHF TOP LIST 10368 MHZ 28.11.1983

1	I6ZAU	GD	17	832	15	G3LQR	AM	7	376	29	HB9MIO/P	DH	5	217
2	I3CLZ/3	FF	13	571	16	I4AOR	FE	7	320	30	DL3NQ	EJ	5	113
3	YU3JN/3	GF	13	563	17	I4ZTD/4	FE	7	290	31	PA0JME	CL	4	220
4	I4XCC/6	GD	12	563	18	PA0CRA	CM	7	268	32	DK7GN/P	EI	4	166
5	I4CHY/4	FE	11	633	19	PA0EZ	CM	7	262	33	OE3XUA	HH	4	77
6	I3ZJL/3	FF	11	572	20	DJ7FJ/P	DH	7	243	34	SM0DFP	IT	4	60
7	IW4AKY	FE	11	570	21	PA2DOL	CL	7	217	35	OH2BWL	MU	4	57
8	I4QIG/4	FE	11	440	22	HB9AJF	EH	7	204	36	ON6UG	BL	3	174
9	YU3URI	HG	10	344	23	DL7QY	FJ	7	171	37	DG4BB	EN	3	132
10	DJ4YJ/P	EH	9	358	24	I4FKD/4	FE	6	260	38	YU3CAB	HG	3	107
11	I4BER	FE	9	340	25	HB9MDP/P	EH	6	205	39	DF1EQ	DL	2	74
12	YU3TAL	GF	9	322	26	F0GOH/P	DH	6	184	40	DL0SO/A	DL	2	65
13	I2BBH/2	EE	9	237	27	IW3QCV	GF	5	290	41	DF1EO/P	DL	2	63
14	HB9MIN/P	DH	8	310	28	DB6NT	FK	5	285	42	DJ6TA	DK	2	51

EUROPEAN SHF TOP LIST 24192 MHZ 28.11.1983

1	DJ7FJ/P	EH	5	170	3	DJ4YJ/P	FH	2	243	5	DK0NA	FK	1	34
2	HB9MIN/P	DH	3	178	4	F0GOH/P	DH	2	89	6	DL7QY	FJ	1	13

THE LIST IS PUBLISHED CONTINUOUSLY. DATA COMPILED ABOVE BASED ON UNCONFIRMED CLAIMS BY OPERATORS. PRINTED BY DL 7 QY