

Ausbreitungsbedingungen auf KW

- *Grundlagen KW Ausbreitung
(MUF LUF FOT)*
- *gängige Hilfsmittel*
- *professionelle Einrichtungen*
- *eigene Beobachtungen*
- *Diskussion*

Inhalt

- Cluster
- Reverse Beacon Network
- NCDXF Bakenbeobachtung
- Berechnungsprogramme
- HB9F Homepage
- Bandwacht Reports
- Professionelle Einrichtungen
- Signale 90 Grad zur Antenne
- Eigene Messungen

Ziele

- Möglichkeiten Software aufzeigen
- Zu persönlichen Tests anregen
- Eigene Beobachtungen bestätigen
- Anregen um Aktivitäten zu erhöhen

Ausbreitung auf 80m

- Lokalzeit 1145
- Verbindung über 80 km
- Frequenz?
- Seit 10 Jahren auf 3.724 MHz
- Eine Antenne super, eine in Bäumen
- 3 mal ist die Verbindung wegen der Ausbreitung nicht zu Stande gekommen
- Optimal wäre 5.250 bis 5.450 MHz

Cluster

Cluster

dxsummit.fi/CustomFilter.aspx

Meistbesucht SP Google 20Min NZZ SRF Meteo USKA HB9F Astro amfu ricardo D-LINK NSLU1 NSLU2 IF

DXSUMMIT BY RADIO X ARCALA  WWW.RADIOARCALA.COM

NEWS DX SPOTS **BAND SPOTS** ANNOUNCEMENTS SEND SPOT SEARCH FORUM DONATE RADIO ARCALA

» [137kHz](#) » [472kHz](#) » [1.8MHz](#) » [3.5MHz](#) » [5MHz](#) » [7MHz](#) » [10MHz](#) » [14MHz](#) » [18MHz](#) » [21MHz](#) » [24MHz](#) » [28MHz](#) » [50MHz](#) » [70MHz](#) » [144MHz](#)
 » [220MHz](#) » [430MHz](#) » [1.2GHz](#) » [2.3GHz](#) » [3.4GHz](#) » [5.6GHz](#) » [10GHz](#) » [24GHz](#) » [47GHz](#) » [Beacon](#) » [Digital](#) » [IOTA](#) » [QRP](#) » [Satellite](#) » [Mobile](#)

» **LAST DX SPOTS ON 14MHZ - RELOADED EVERY 3 MINUTES**

Y03AIS-@	14265.0	3V8SQ	Tunisia	1546	23	Nov	Tunisia
N7XR	14051.1	G3V		1546	23	Nov	England
UA6JFG	14017.6	VE7GL	WW	1546	23	Nov	Canada
EA7VT	14265.0	3V8SQ	59 TNX QS0	1546	23	Nov	Tunisia
RA6AN-@	14056.3	SJ2W		1545	23	Nov	7S
DL9JON	14048.0	VK6LW		1545	23	Nov	Australia
ES2TL	14214.0	VK2PR	TNX! 73!	1545	23	Nov	Australia
W8KR	14062.0	P3F		1545	23	Nov	Not Found
RA6AN-@	14054.1	9M8DX		1544	23	Nov	Not Found
BG8OKU	14072.0	XU7TZG	calling cq	1544	23	Nov	Cambodia

Cluster

<http://www.dxsummit.fi/Search.aspx>

» SPOT DATABASE SEARCH

Search string:

Search: DX Call Any column

Year:

Band:

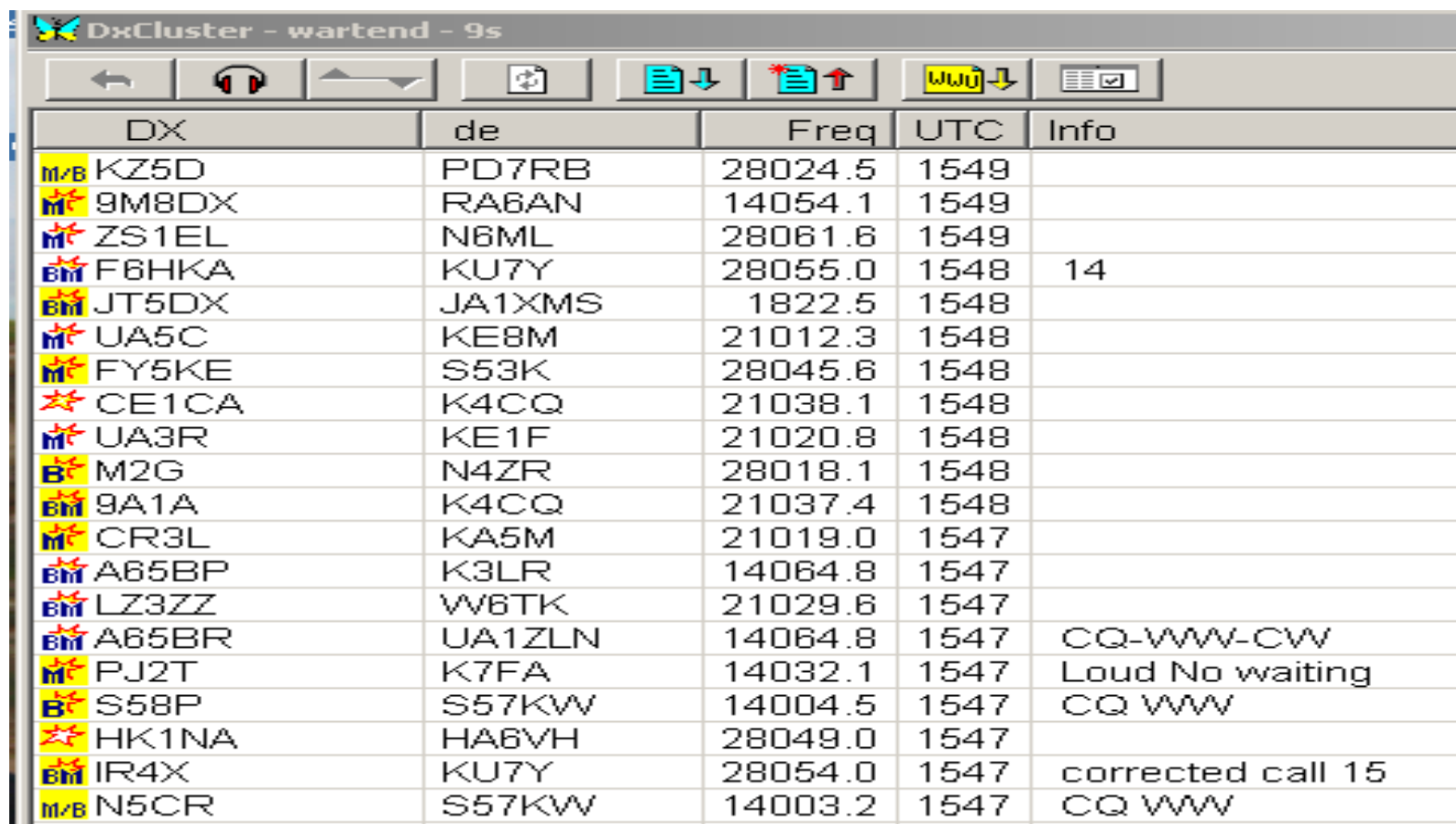
Mode:

Number of spots:

DL4EAX	3521.9	HB9LCW	cqww	1544	23	Nov	Switzerland
OK1FHI	21080.5	HB9CZF	CQ-WW-CW	1537	23	Nov	Switzerland
VE2EZD	21080.5	HB9CZF	CQ WW	1531	23	Nov	Switzerland
K4CQ	21026.9	HB9LL		1530	23	Nov	Switzerland
K4CQ	21027.2	HB9LL		1530	23	Nov	Switzerland
N3MAV	28463.5	HB9HLM	Calling CQ	1518	23	Nov	Switzerland
WA1N	28138.9	HB9HFN		1515	23	Nov	Switzerland
CT3FW-@	28079.8	HB9CXZ	599 TKS(CW),CQWW 2013	1514	23	Nov	Switzerland
WB8YYY	28176.5	HB9AFI		1514	23	Nov	Switzerland
WD5DJX	28468.0	HB9W		1510	23	Nov	Switzerland
N9HTZ	28467.9	HB9W		1504	23	Nov	Switzerland
WB2AA	28139.0	HB9HFN		1500	23	Nov	Switzerland

Cluster













<http://www.mixw.net/>



DX	de	Freq	UTC	Info
M/B KZ5D	PD7RB	28024.5	1549	
M 9M8DX	RA6AN	14054.1	1549	
M ZS1EL	N6ML	28061.6	1549	
Bm F6HKA	KU7Y	28055.0	1548	14
Bm JT5DX	JA1XMS	1822.5	1548	
M UA5C	KE8M	21012.3	1548	
M FY5KE	S53K	28045.6	1548	
CE1CA	K4CQ	21038.1	1548	
M UA3R	KE1F	21020.8	1548	
B M2G	N4ZR	28018.1	1548	
Bm 9A1A	K4CQ	21037.4	1548	
M CR3L	KA5M	21019.0	1547	
Bm A65BP	K3LR	14064.8	1547	
Bm LZ3ZZ	W6TK	21029.6	1547	
Bm A65BR	UA1ZLN	14064.8	1547	CQ-WWW-CW
M PJ2T	K7FA	14032.1	1547	Loud No waiting
B S58P	S57KW	14004.5	1547	CQ WWW
HK1NA	HA6VH	28049.0	1547	
Bm IR4X	KU7Y	28054.0	1547	corrected call 15
M/B N5CR	S57KW	14003.2	1547	CQ WWW

Cluster

<http://www.mixw.net/>

DX	de	Freq	UTC	Info
 KC1XX	S53K	28017.2	1550	
 JA3YBK	LZ1QZ	3518.9	1549	
 D4C	UT5ZA	21030.2	1549	CQ WW CW
 E20YLM	RA6AN	14052.5	1549	
 PA6NB	PA2J	28046.6	1549	
 KZ5D	PD7RB	28024.5	1549	
 9M8DX	RA6AN	14054.1	1549	
 FY5KE	S53K	28045.6	1548	
 A65BR	UA1ZLN	14064.8	1547	CQ-WW-CW
 S58P	S57KW	14004.5	1547	CQ WW
 HK1NA	HA6VH	28049.0	1547	
 N5CR	S57KW	14003.2	1547	CQ WW

Cluster

<http://www.voacap.com/skimmer/>

Nordic Real-Time Propagation ... Find: Band: All

SN 228 | SFI 146 | Kp 1 | Ap 4 | Kt 1 | At 8 | Bz -1.2 | XRY B9.41 | Pf 0.5 | Au 5

» All » 160M » 80M » 40M » 30M » 20M » 17M » 15M » 12M » 10M » 6M

	15min	30min	60min	1 day
0	2	3	6	942
46	46	100	208	2281
0	0	0	0	7975
82	82	170	365	2571
27	27	59	150	7950
72	72	118	229	4632
65	65	131	322	4585
131	131	260	621	3263
0	0	0	0	7848

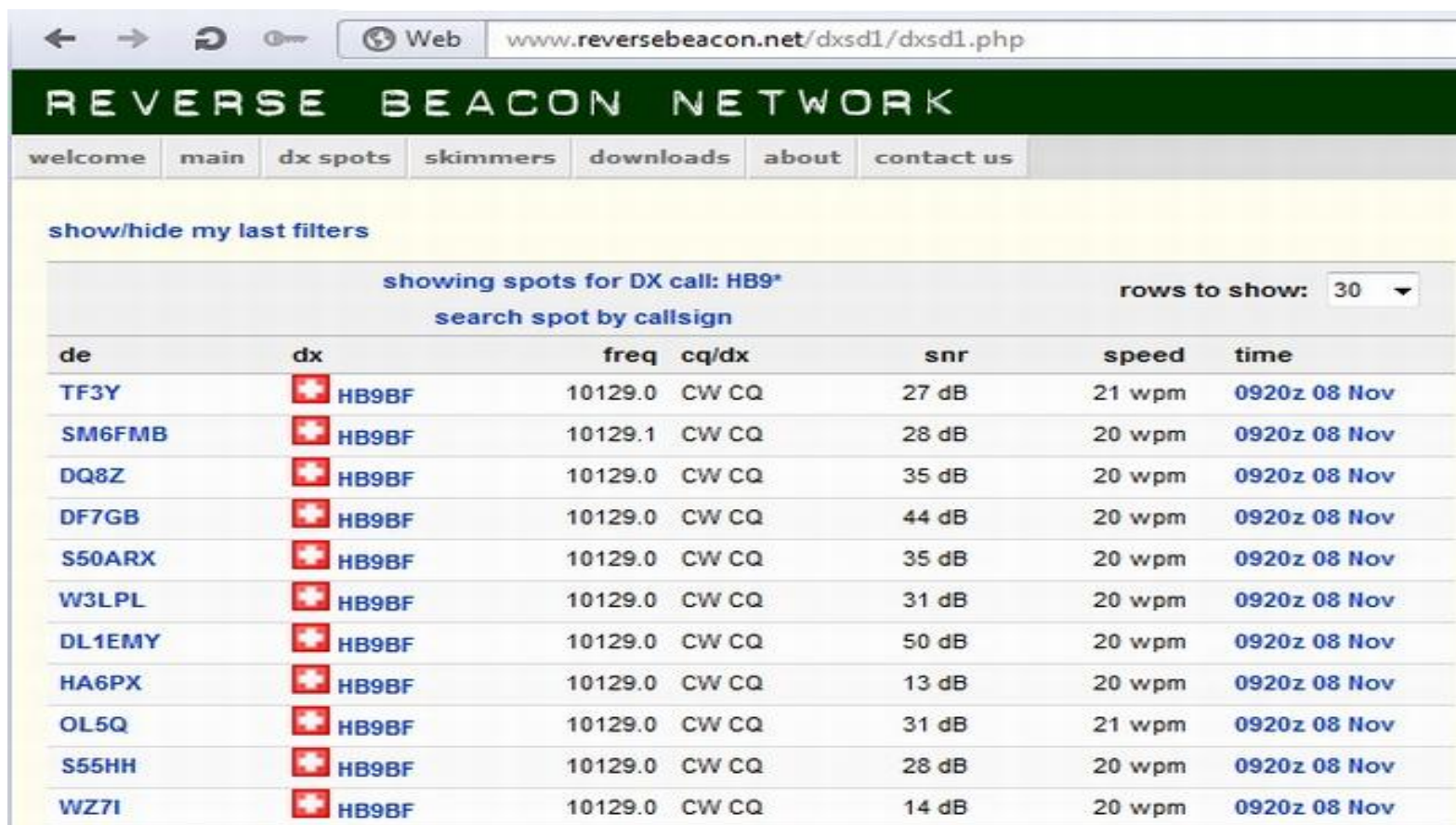
de	freq	dx	snr	speed	mode	time UTC
OH6BG	28015.1	US8IB	26 dB	23 wpm		2013-10-23 10:21:00
SK3W	28015.0	US8IB	29 dB	23 wpm		2013-10-23 10:21:00
OH6BG	28018.4	HB9DAX	26 dB	28 wpm	CQ	2013-10-23 10:21:00
SK3W	28013.0	I24DYU	35 dB	24 wpm	DE	2013-10-23 10:21:00
OH6BG	28025.7	UA9SII	25 dB	22 wpm		2013-10-23 10:21:00
OH6BG	28013.5	R6DZS	48 dB	23 wpm		2013-10-23 10:21:00
OH6BG	28056.2	FSUKL	9 dB	19 wpm	CQ	2013-10-23 10:21:00
SK3W	28004.8	EA8AF	10 dB	23 wpm	CQ	2013-10-23 10:21:00
OH6BG	28056.2	FSUKL	9 dB	19 wpm	DE	2013-10-23 10:20:00
SK3W	28019.1	RW4NJ	48 dB	27 wpm	DE	2013-10-23 10:20:00
OH6BG	28039.1	UA6FZ	21 dB	19 wpm		2013-10-23 10:20:00
OH6BG	28009.0	HA6VR	40 dB	20 wpm	DE	2013-10-23 10:20:00
OH6BG	28001.0	9M2TO	26 dB	31 wpm	CQ	2013-10-23 10:20:00
OH6BG	28025.6	PDOHRS	29 dB	23 wpm		2013-10-23 10:19:00
OH6BG	28015.0	EA6/G4MKP	15 dB	28 wpm	CQ	2013-10-23 10:19:00
OH6BG	28016.1	UB6AIA	40 dB	20 wpm	CQ	2013-10-23 10:19:00
OH6BG	28033.1	IT9ASD	15 dB	20 wpm	DE	2013-10-23 10:19:00
SK3W	28033.0	IT9ASD	24 dB	21 wpm	DE	2013-10-23 10:19:00
SK3W	28173.0	I21EPM/B	19 dB	12 wpm	DE	2013-10-23 10:19:00
OH6BG	28022.3	UA9BU	37 dB	17 wpm	DE	2013-10-23 10:19:00
SK3W	28022.2	UA9BU	25 dB	17 wpm	DE	2013-10-23 10:19:00
OH6BG	28017.0	N5EN	40 dB	23 wpm		2013-10-23 10:19:00
OH6BG	28018.4	HB9DNU	25 dB	27 wpm		2013-10-23 10:19:00
SK3W	28033.1	R7AY	23 dB	21 wpm	CQ	2013-10-23 10:19:00
SK3W	28011.5	RAOUF	9 dB	27 wpm	DE	2013-10-23 10:18:00
OH6BG	28029.0	IT9NJE	27 dB	28 wpm	CQ	2013-10-23 10:18:00
SK3W	28028.9	IT9NJE	33 dB	28 wpm	CQ	2013-10-23 10:18:00
SK3W	28033.1	R7AY	24 dB	20 wpm		2013-10-23 10:18:00
OH6BG	28033.2	R7AY	21 dB	20 wpm	CQ	2013-10-23 10:18:00
OH6BG	28037.1	9H1CG	17 dB	19 wpm	DE	2013-10-23 10:18:00
OH6BG	28251.3	ED4YAK/B	3 dB	15 wpm		2013-10-23 10:17:00
SK3W	28010.5	IK2AFW	18 dB	28 wpm		2013-10-23 10:17:00
OH6BG	28000.6	HB9AEP	25 dB	22 wpm		2013-10-23 10:17:00
OH6BG	28039.0	ER2RM	43 dB	21 wpm		2013-10-23 10:17:00
SK3W	28020.8	RA4PA	28 dB	21 wpm	DE	2013-10-23 10:17:00
OH6BG	28044.1	HA3OU/P	29 dB	29 wpm	CQ	2013-10-23 10:17:00
SK3W	28039.0	L21XZ	9 dB	18 wpm		2013-10-23 10:17:00
OH6BG	28004.0	IK6DTB	25 dB	29 wpm	CQ	2013-10-23 10:17:00
SK3W	28028.8	RA4NBO	26 dB	21 wpm	DE	2013-10-23 10:17:00
OH6BG	28050.1	DR6TV	24 dB	17 wpm	DE	2013-10-23 10:17:00

Reverse Beacon Network












<http://www.reversebeacon.net/>

Reverse Beacon Network

<http://www.reversebeacon.net/>



The screenshot shows a web browser window with the URL www.reversebeacon.net/dxsdl/dxsdl.php. The page title is "REVERSE BEACON NETWORK". There are navigation tabs for "welcome", "main", "dx spots", "skimmers", "downloads", "about", and "contact us". Below the tabs, there is a link "show/hide my last filters". The main content area displays "showing spots for DX call: HB9*" and "search spot by callsign". A dropdown menu indicates "rows to show: 30". The table below lists 12 spots with columns for de, dx, freq, cq/dx, snr, speed, and time.

de	dx	freq	cq/dx	snr	speed	time
TF3Y	 HB9BF	10129.0	CW CQ	27 dB	21 wpm	0920z 08 Nov
SM6FMB	 HB9BF	10129.1	CW CQ	28 dB	20 wpm	0920z 08 Nov
DQ8Z	 HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
DF7GB	 HB9BF	10129.0	CW CQ	44 dB	20 wpm	0920z 08 Nov
S50ARX	 HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
W3LPL	 HB9BF	10129.0	CW CQ	31 dB	20 wpm	0920z 08 Nov
DL1EMY	 HB9BF	10129.0	CW CQ	50 dB	20 wpm	0920z 08 Nov
HA6PX	 HB9BF	10129.0	CW CQ	13 dB	20 wpm	0920z 08 Nov
OL5Q	 HB9BF	10129.0	CW CQ	31 dB	21 wpm	0920z 08 Nov
S55HH	 HB9BF	10129.0	CW CQ	28 dB	20 wpm	0920z 08 Nov
WZ7I	 HB9BF	10129.0	CW CQ	14 dB	20 wpm	0920z 08 Nov

Reverse Beacon Network

The screenshot shows the Reverse Beacon Network website interface. At the top, there's a navigation menu with links: welcome, main, dx spots, skimmers, downloads, about, contact us. The main content area displays a table of spots for DX call HB9*. The table has columns for de, dx, freq, cq/dx, snr, speed, and time. The dx column shows various call signs like HB9HVG, HB9BF, and HB9H. The table is filtered to show spots for DX call HB9*. On the right side, there are options for language (english), spots format (dxwatch), tracking mode on, show flags, show lotw users, tag new spots (10 seconds), map (beta version) (show with grayline, show, hide), spots lifetime (no timeout), watch list (no watchlist), and a Donate button. At the bottom right, it says 'we have 97 skimmers online' and 'we have 275 visitors online'.

de	dx	freq	cq/dx	snr	speed	time
OL5Q	HB9HVG	10125.2	CW CQ	16 dB	19 wpm	0933z 08 Nov
GW8IZR	HB9HVG	10125.1	CW CQ	15 dB	20 wpm	0933z 08 Nov
HB9DCO	HB9HVG	10125.1	CW CQ	13 dB	19 wpm	0933z 08 Nov
DL8LAS	HB9HVG	10125.1	CW CQ	8 dB	20 wpm	0933z 08 Nov
DF7GB	HB9HVG	10125.1	CW CQ	22 dB	20 wpm	0933z 08 Nov
DL1EMY	HB9HVG	10125.1	CW CQ	33 dB	20 wpm	0933z 08 Nov
S50ARX	HB9HVG	10125.2	CW CQ	24 dB	20 wpm	0933z 08 Nov
S55HH	HB9HVG	10125.2	CW CQ	7 dB	20 wpm	0933z 08 Nov
HA6PX	HB9H	10125.1	CW CQ	5 dB	20 wpm	0933z 08 Nov
SM6FMB	HB9HVG	10125.2	CW CQ	7 dB	20 wpm	0932z 08 Nov
DL9GTB	HB9FAX	14071.7	BPSK CQ [LoTW]	33 dB	31 bps	0931z 08 Nov
TF3Y	HB9BF	10125.5	CW CQ	12 dB	20 wpm	0930z 08 Nov
S55HH	HB9BF	10125.6	CW CQ	9 dB	19 wpm	0930z 08 Nov
OL5Q	HB9BF	10125.6	CW CQ	22 dB	20 wpm	0930z 08 Nov
GW8IZR	HB9BF	10125.5	CW CQ	26 dB	20 wpm	0930z 08 Nov
DL8LAS	HB9BF	10125.5	CW CQ	26 dB	20 wpm	0930z 08 Nov
SM6FMB	HB9BF	10125.7	CW CQ	19 dB	20 wpm	0930z 08 Nov
DF7GB	HB9BF	10125.6	CW CQ	31 dB	19 wpm	0930z 08 Nov
DL1EMY	HB9BF	10125.5	CW CQ	44 dB	20 wpm	0930z 08 Nov
S50ARX	HB9BF	10125.6	CW CQ	25 dB	19 wpm	0930z 08 Nov
DK0TE	HB9BF	10125.6	CW CQ	3 dB	20 wpm	0930z 08 Nov
DF7GB	HB9HVG	10127.0	CW CQ	28 dB	19 wpm	0928z 08 Nov
DL1EMY	HB9HVG	10127.0	CW CQ	55 dB	19 wpm	0928z 08 Nov
S50ARX	HB9HVG	10127.0	CW CQ	24 dB	19 wpm	0928z 08 Nov

Verschiedene
Calls oder
verschiedene
Frequenzen

Reverse Beacon Network

TF3Y	HB9BF	10129.0	CW CQ	27 dB	21 wpm	0920z 08 Nov
SM6FMB	HB9BF	10129.1	CW CQ	28 dB	20 wpm	0920z 08 Nov
DQ8Z	HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
DF7GB	HB9BF	10129.0	CW CQ	44 dB	20 wpm	0920z 08 Nov
S50ARX	HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
W3LPL	HB9BF	10129.0	CW CQ	31 dB	20 wpm	0920z 08 Nov
DL1EMY	HB9BF	10129.0	CW CQ	50 dB	20 wpm	0920z 08 Nov
HA6PX	HB9BF	10129.0	CW CQ	13 dB	20 wpm	0920z 08 Nov
OL5Q	HB9BF	10129.0	CW CQ	31 dB	21 wpm	0920z 08 Nov
S55HH	HB9BF	10129.0	CW CQ	28 dB	20 wpm	0920z 08 Nov
WZ7I	HB9BF	10129.0	CW CQ	14 dB	20 wpm	0920z 08 Nov
DL9GTB	HB9BF	10129.0	CW CQ	14 dB	20 wpm	0920z 08 Nov
DL8LAS	HB9BF	10129.0	CW CQ	31 dB	20 wpm	0920z 08 Nov
W3LPL	HB9BCB/P	10121.9	CW CQ	16 dB	5 wpm	0918z 08 Nov
TF3Y	HB9BF	10126.6	CW CQ	22 dB	20 wpm	0917z 08 Nov
K1TTT	HB9HVG	10126.6	CW CQ	16 dB	20 wpm	0916z 08 Nov
SM6FMB	HB9HVG	10126.7	CW CQ	25 dB	20 wpm	0916z 08 Nov
HB9DCO	HB9HVG	10126.6	CW CQ	14 dB	20 wpm	0916z 08 Nov
WE9V	HB9HVG	10126.6	CW CQ	9 dB	20 wpm	0916z 08 Nov
DL9GTB	HB9HVG	10126.6	CW CQ	16 dB	20 wpm	0916z 08 Nov
KM3T	HB9HVG	10126.6	CW CQ	17 dB	20 wpm	0916z 08 Nov
DL8LAS	HB9HVG	10126.6	CW CQ	30 dB	20 wpm	0916z 08 Nov
DQ8Z	HB9HVG	10126.6	CW CQ	38 dB	20 wpm	0916z 08 Nov
S50ARX	HB9HVG	10126.6	CW CQ	28 dB	20 wpm	0916z 08 Nov
DL1EMY	HB9HVG	10126.6	CW CQ	54 dB	21 wpm	0916z 08 Nov
DF7GB	HB9HVG	10126.6	CW CQ	41 dB	20 wpm	0916z 08 Nov
OL5Q	HB9HVG	10126.6	CW CQ	30 dB	20 wpm	0916z 08 Nov
W3LPL	HB9HVG	10126.6	CW CQ	33 dB	20 wpm	0916z 08 Nov
KQ8M	HB9HVG	10126.6	CW CQ	7 dB	20 wpm	0916z 08 Nov
S55HH	HB9HVG	10126.6	CW CQ	21 dB	20 wpm	0916z 08 Nov

Unterschied von zwei Antennen in dB

Station	LogPer	Dipol	Diff
TF3	27	22	5
SM6	28	25	3
DF7	44	41	3
S50	35	28	7
OL5	31	30	1
S55	28	21	7

Reverse Beacon Network

de	dx	freq	cq/dx	snr	speed	time
W3LPL	HB9HVG	10128.0	CW CQ	23 dB	23 wpm	0926z 08 Nov
SM6FMB	HB9HVG	10128.1	CW CQ	20 dB	23 wpm	0926z 08 Nov
TF3Y	HB9HVG	10128.0	CW CQ	18 dB	23 wpm	0926z 08 Nov
GW8IZR	HB9BF	10128.0	CW CQ	15 dB	23 wpm	0925z 08 Nov
HB9DCO	HB9BF	10128.0	CW CQ	11 dB	23 wpm	0925z 08 Nov
DQ8Z	HB9BF	10128.0	CW CQ	18 dB	23 wpm	0925z 08 Nov
DF7GB	HB9BF	10128.0	CW CQ	23 dB	23 wpm	0925z 08 Nov
DL1EMY	HB9BF	10128.0	CW CQ	36 dB	23 wpm	0925z 08 Nov
S50ARX	HB9BF	10128.0	CW CQ	24 dB	23 wpm	0925z 08 Nov
OL5Q	HB9BF	10128.0	CW CQ	16 dB	23 wpm	0925z 08 Nov
S55HH	HB9BF	10128.0	CW CQ	16 dB	23 wpm	0925z 08 Nov
TF3Y	HB9BF	10129.0	CW CQ	27 dB	21 wpm	0920z 08 Nov
SM6FMB	HB9BF	10129.1	CW CQ	28 dB	20 wpm	0920z 08 Nov
DQ8Z	HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
DF7GB	HB9BF	10129.0	CW CQ	44 dB	20 wpm	0920z 08 Nov
S50ARX	HB9BF	10129.0	CW CQ	35 dB	20 wpm	0920z 08 Nov
W3LPL	HB9BF	10129.0	CW CQ	31 dB	20 wpm	0920z 08 Nov
DL1EMY	HB9BF	10129.0	CW CQ	50 dB	20 wpm	0920z 08 Nov
HA6PX	HB9BF	10129.0	CW CQ	13 dB	20 wpm	0920z 08 Nov
OL5Q	HB9BF	10129.0	CW CQ	31 dB	21 wpm	0920z 08 Nov
S55HH	HB9BF	10129.0	CW CQ	28 dB	20 wpm	0920z 08 Nov
WZ7I	HB9BF	10129.0	CW CQ	14 dB	20 wpm	0920z 08 Nov
DL9GTB	HB9BF	10129.0	CW CQ	14 dB	20 wpm	0920z 08 Nov
DL8LAS	HB9BF	10129.0	CW CQ	31 dB	20 wpm	0920z 08 Nov
W3LPL	HB9CB/P	10121.9	CW CQ	16 dB	5 wpm	0918z 08 Nov
TF3Y	HB9BF	10126.6	CW CQ	22 dB	20 wpm	0917z 08 Nov
K1TTT	HB9HVG	10126.6	CW CQ	16 dB	20 wpm	0916z 08 Nov
SM6FMB	HB9HVG	10126.7	CW CQ	25 dB	20 wpm	0916z 08 Nov
HB9DCO	HB9HVG	10126.6	CW CQ	14 dB	20 wpm	0916z 08 Nov
WE9V	HB9HVG	10126.6	CW CQ	9 dB	20 wpm	0916z 08 Nov

Unterschied von zwei Antennen in dB

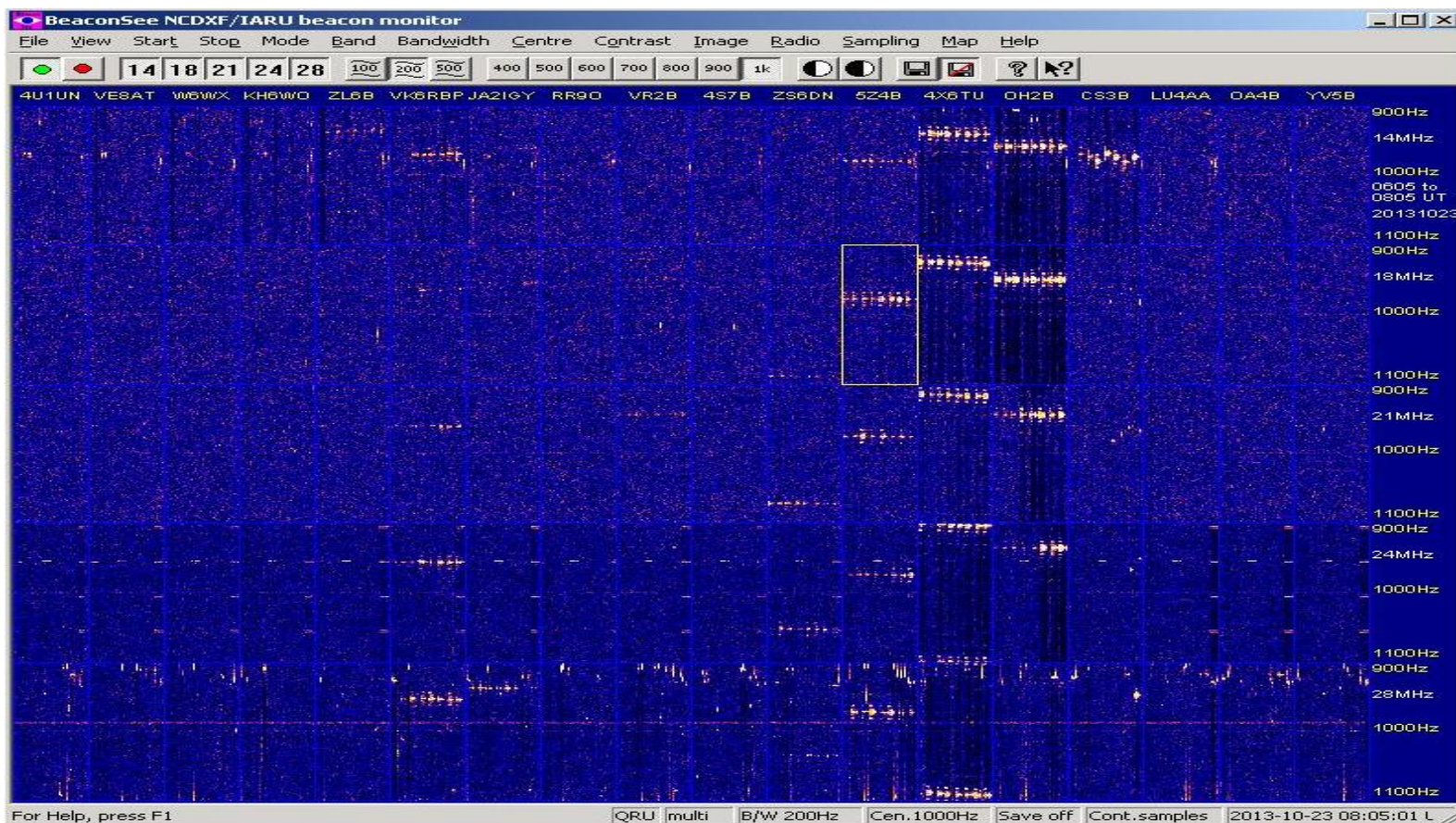
Station	LogPer	Käferlein	Diff
TF3	27	18	9
HB9	11	14	-3
SM6	28	25	3
W3	31	23	8

Beacon See

<http://www.ncdxf.org/beacon/programs/BeaconSee.html>

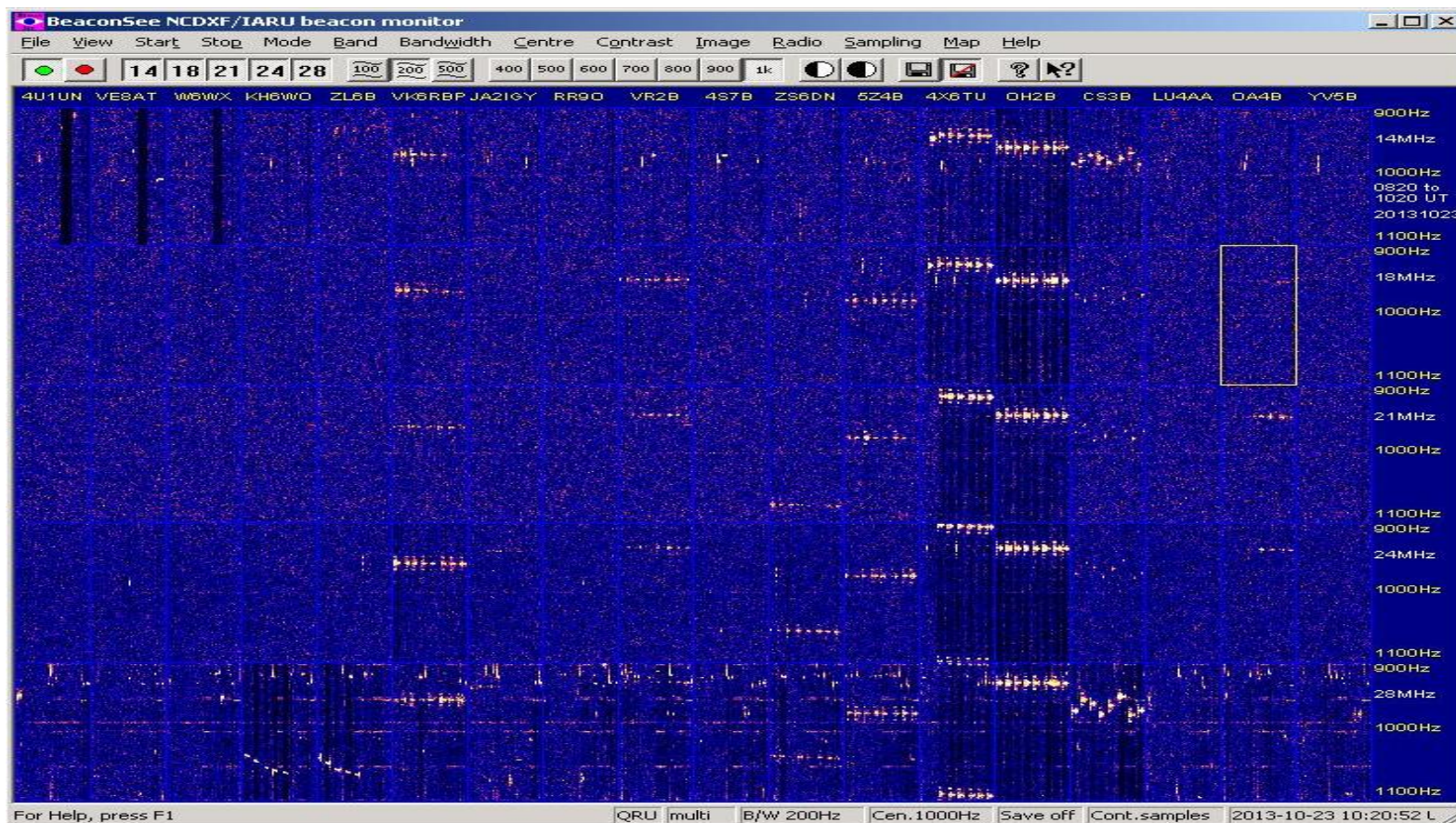
Beacon See

<http://www.ncdxf.org/beacon/programs/BeaconSee.html>



Beacon See

<http://www.ncdxf.org/beacon/programs/BeaconSee.html>

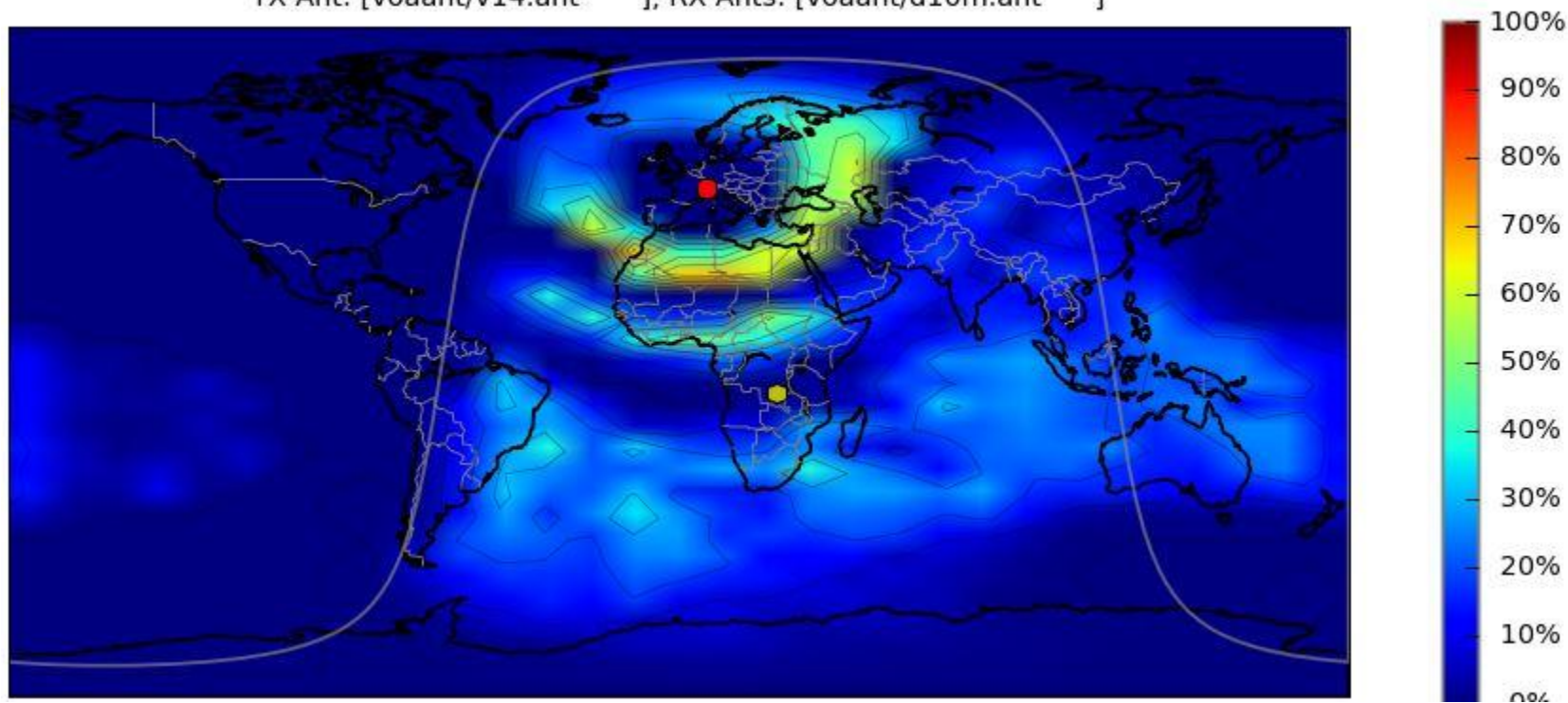


Berechnungsprogramme

- Ausbreitungsberechnung
- <http://www.voacap.com/planner.html>
- FA 8/09
- Verschiedene Leistungen
- 10m Band, GP Antenne
- Grafische Auswertungen

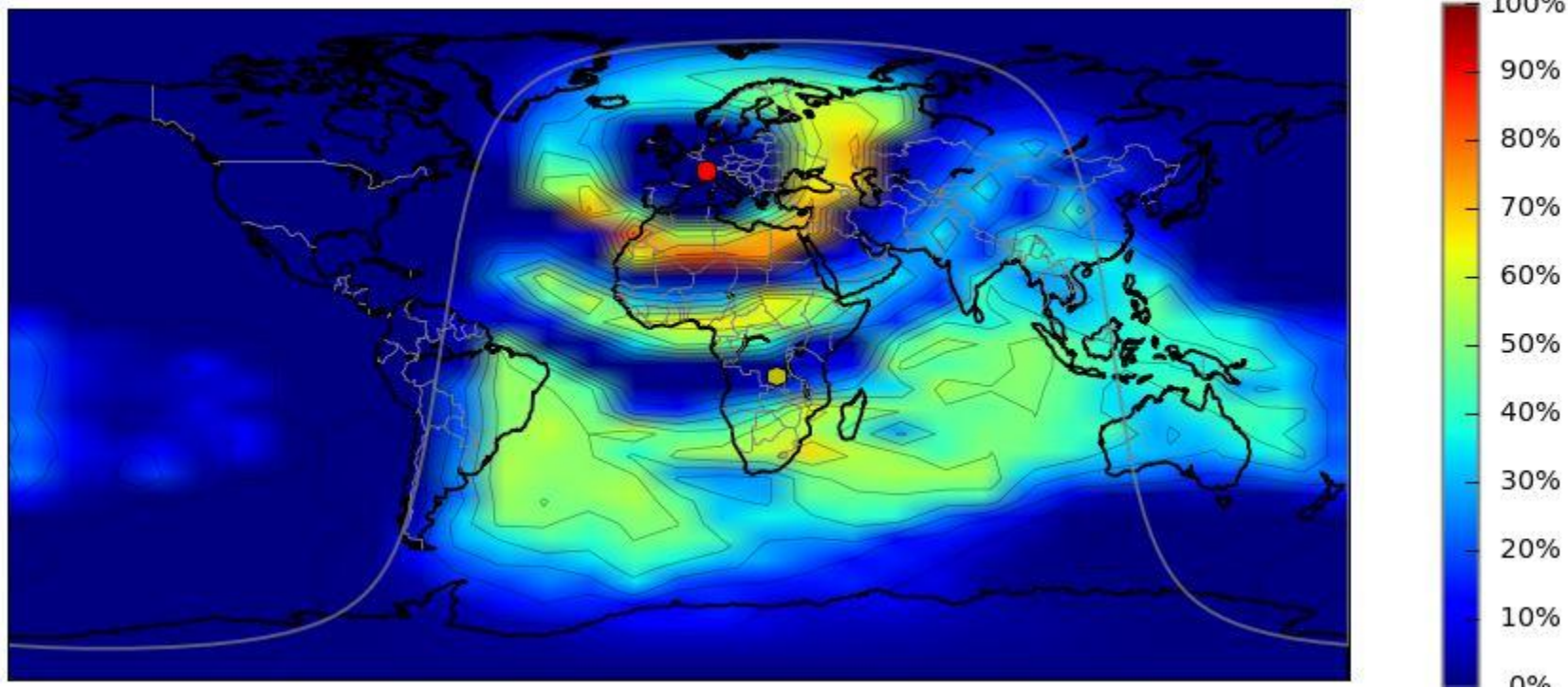
Berechnungsprogramme

Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 1 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



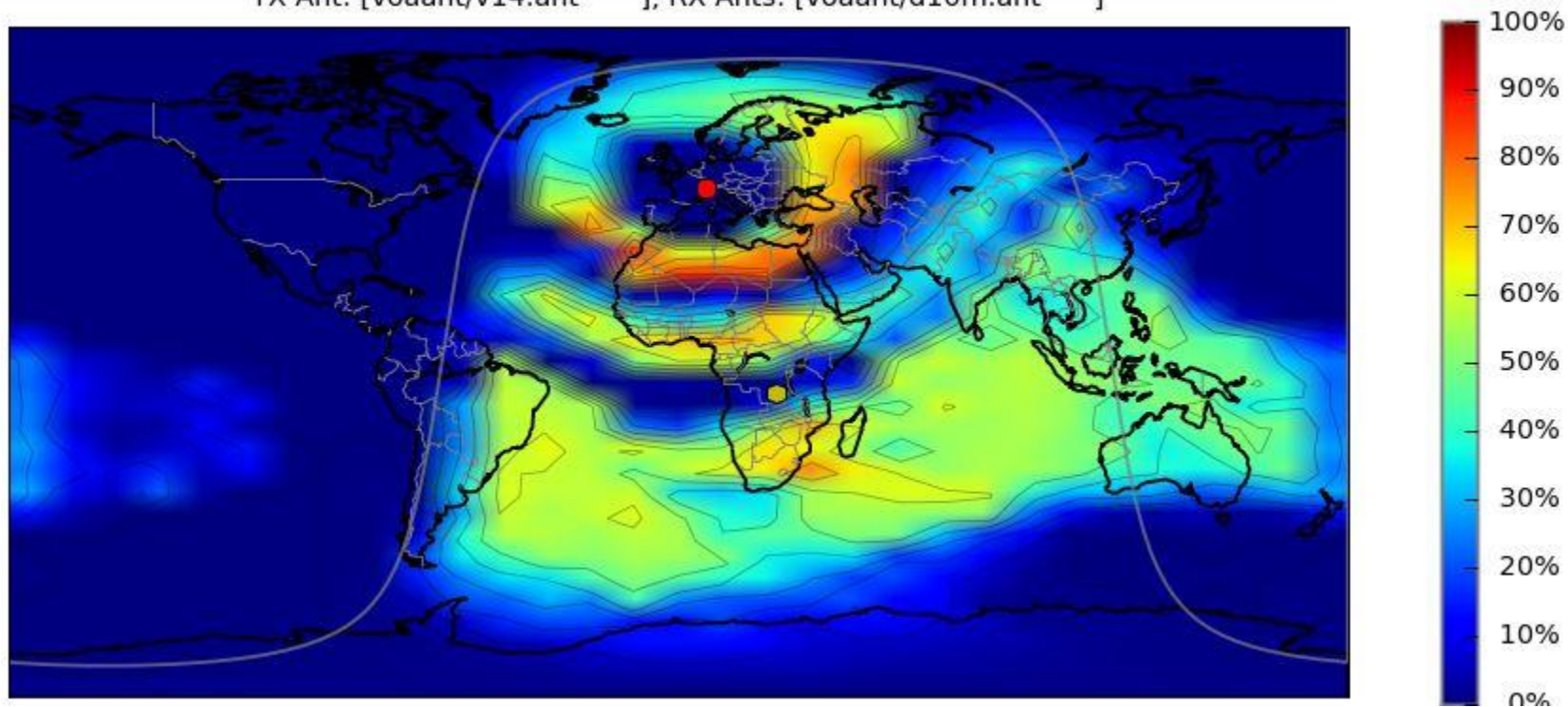
Berechnungsprogramme

Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 4 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



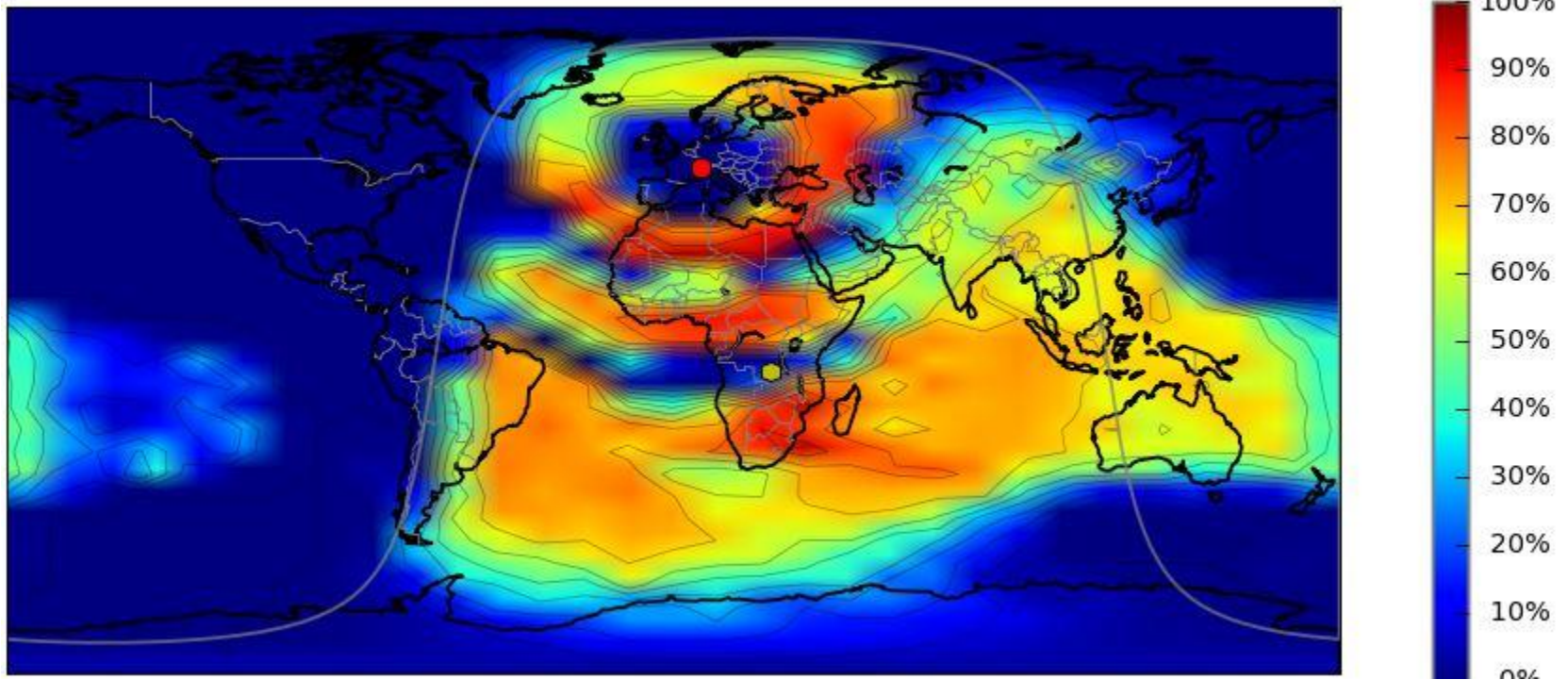
Berechnungsprogramme

Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 8 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



Berechnungsprogramme

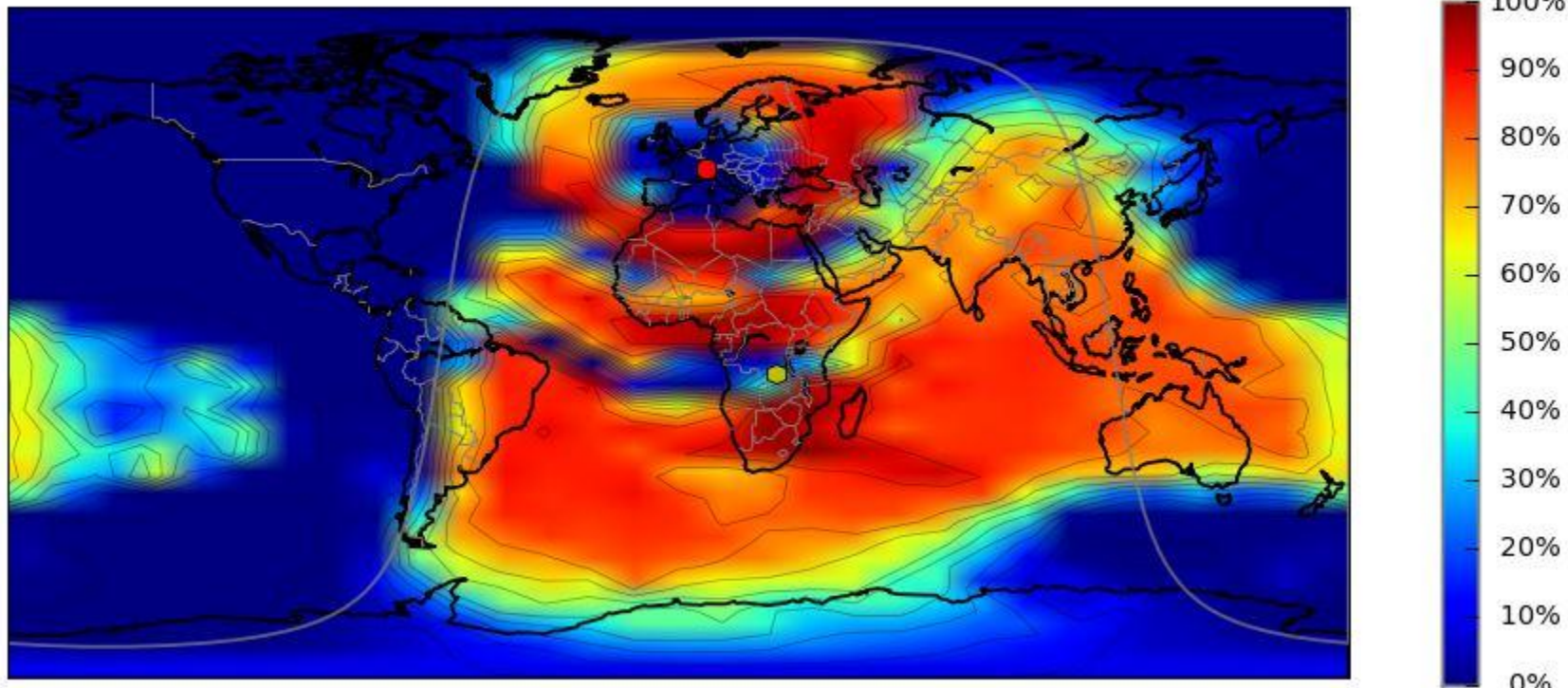
Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 80 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



Berechnungsprogramme

<http://www.voacap.com/planner.html>

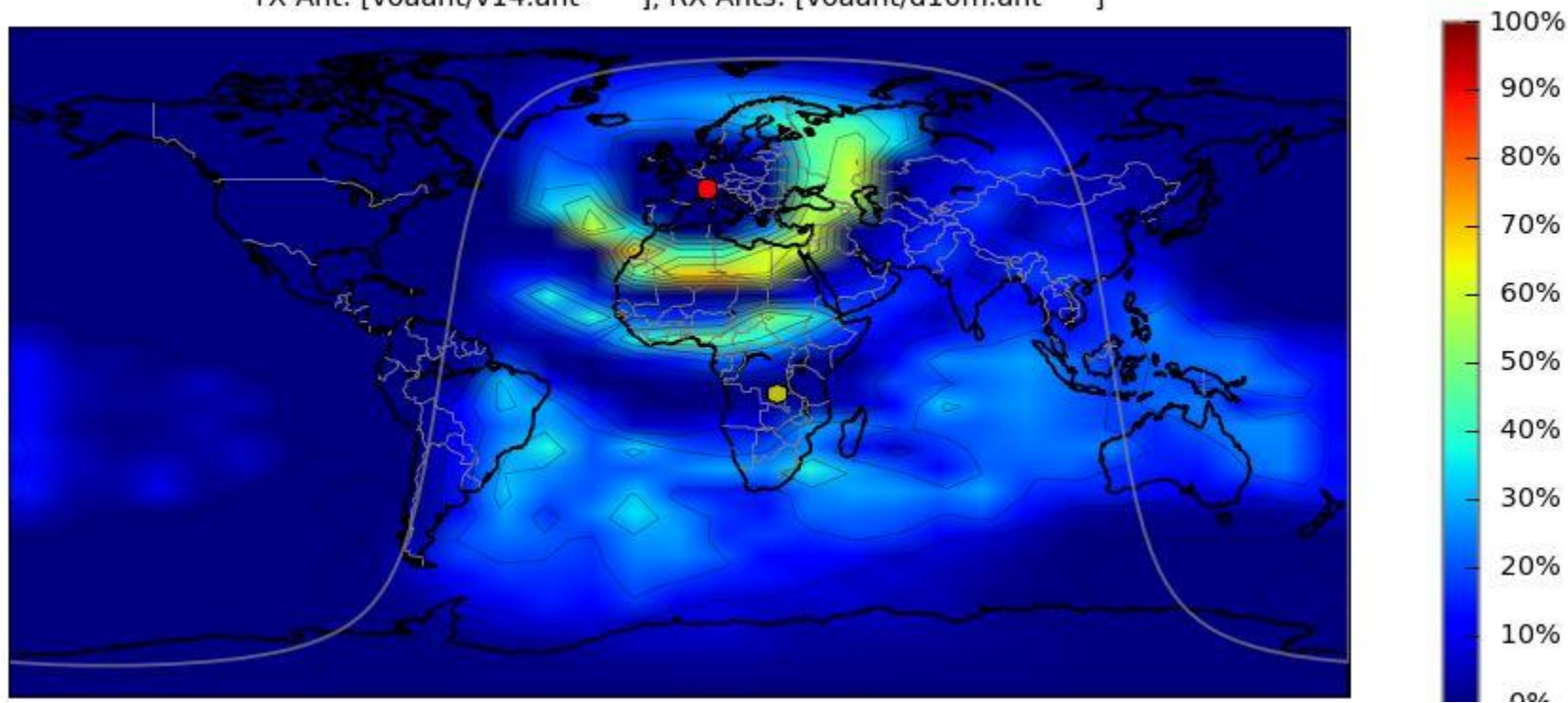
Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 800 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



Berechnungsprogramme

<http://www.voacap.com/planner.html>

Switzerland (46.95N, 7.45E), Oct, 10 UTC, 28.200 MHz, 1 W, SSN 66, Mode: CW
TX Ant: [voaant/v14.ant], RX Ants: [voaant/d10m.ant]



Grundlagendaten

<http://dx.qsl.net/propagation/>

Solar Wind Data

Provides solar wind velocity and energetic particle intensity
Updated at: 1013Z on October 23, 2013

Velocity (km/s):	354.2
Density (protons/cm ³):	2.5

Penticton Observatory SFI Measurement

WWV only updates its SFI reading once a day at 2100Z
The Penticton solar observatory takes measurements at 1800Z, 2000Z, and 2200Z
(WWV uses the 2000Z Penticton measurement)

The Penticton Observatory SFI value on 22-Oct-2013 at 2300Z was: 147

Three Day SFI and A-index Forecast

(updated daily after 2200Z)
This report issued on Oct 22, 2013 at 2200Z

Date	SFI	A-index
22 Oct	145	5
23 Oct	145	8
24 Oct	145	18

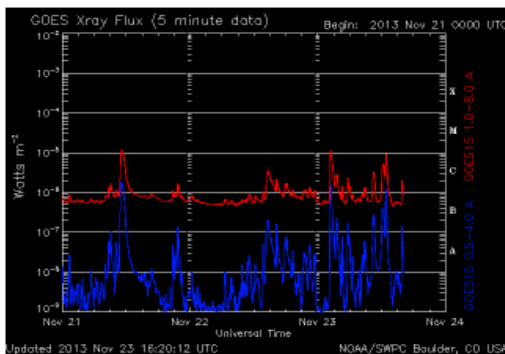
HB9F Homepage

http://relais-hb9f.ch/space_weather/

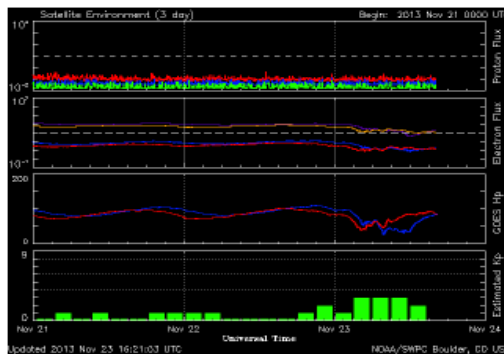
HB9F Homepage

http://relais-hb9f.ch/space_weather/

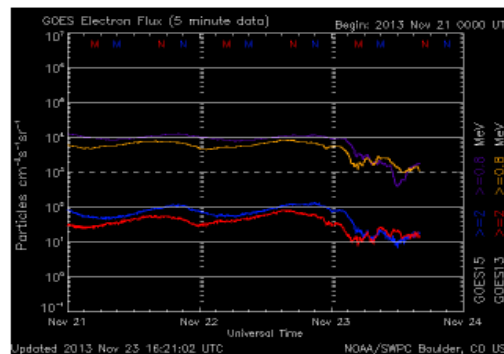
Space weather



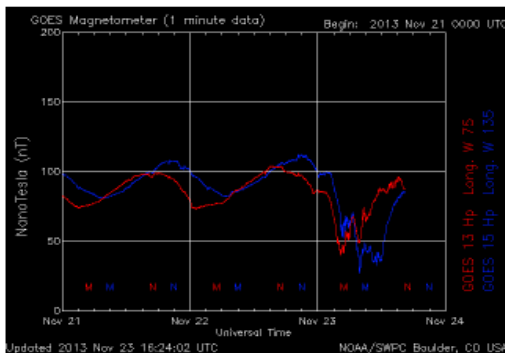
X-Ray Flux



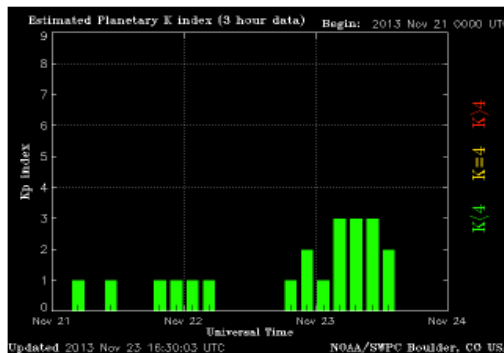
Satellite Environment (combined)



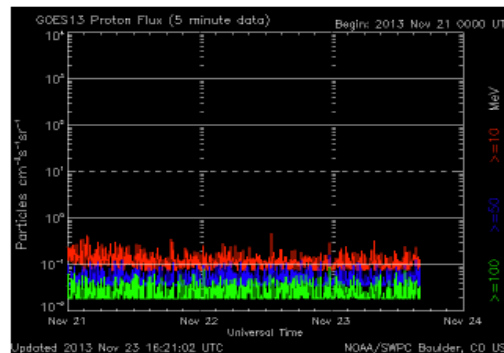
Electron Flux



Magnetometer



Estimated Kp Index



GOES 8 Proton Flux

HB9F Homepage

<http://www.swpc.noaa.gov/today.html>

- This plot shows 3-days of 5-minute solar x-ray flux values measured on the SWPC primary GOES satellite.
- Proton Flux from GOES-13, Electron Flux and GOES Hp from GOES-13 & GOES-15
- This electron flux plot contains the 5-minute averaged integral electron flux (electrons/cm²-s-sr) with energies greater than or equal to 0.8 MeV and greater than or equal to 2 MeV at GOES-13 (W75).

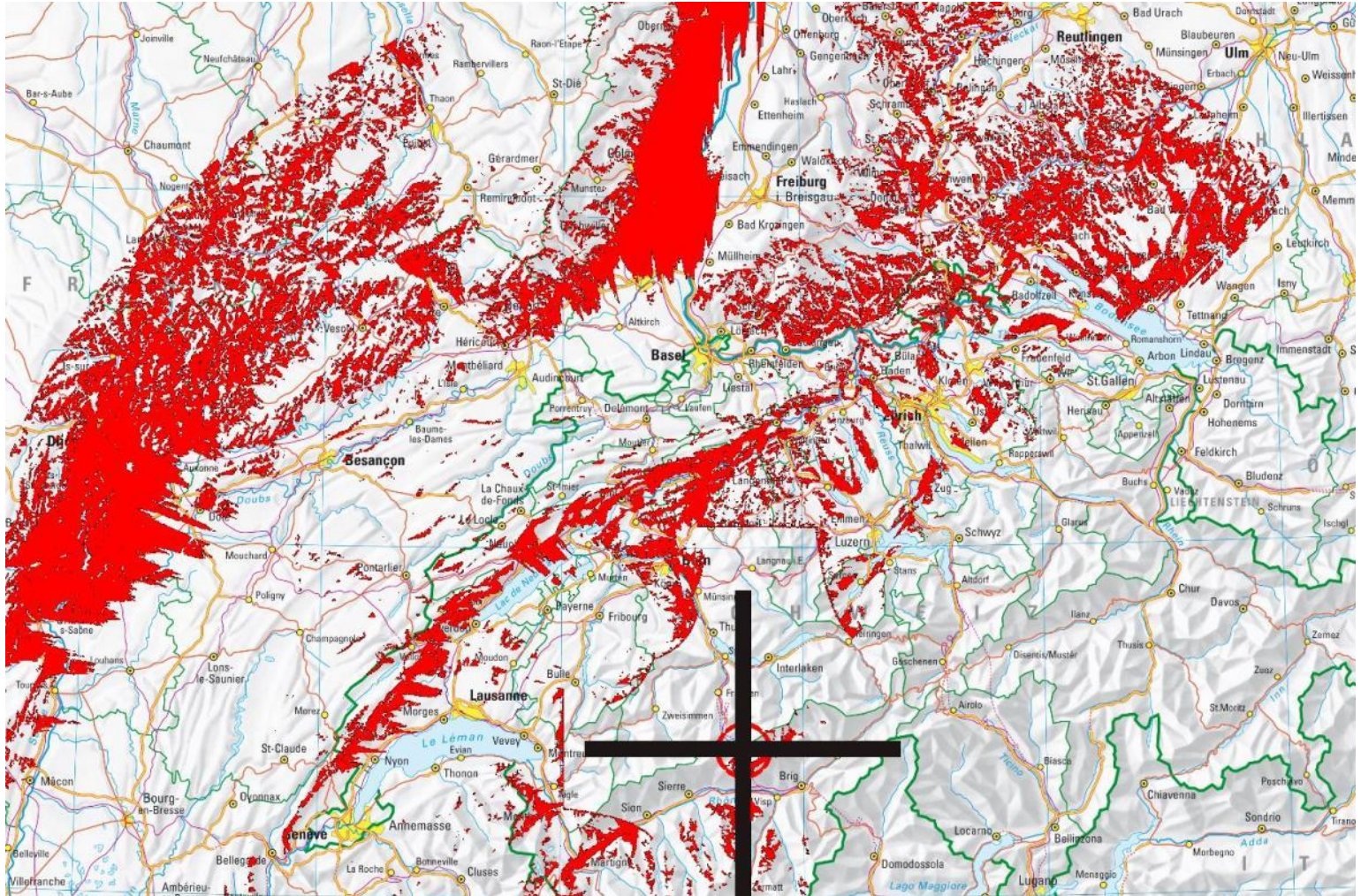
HB9F Homepage

<http://www.swpc.noaa.gov/today.html>

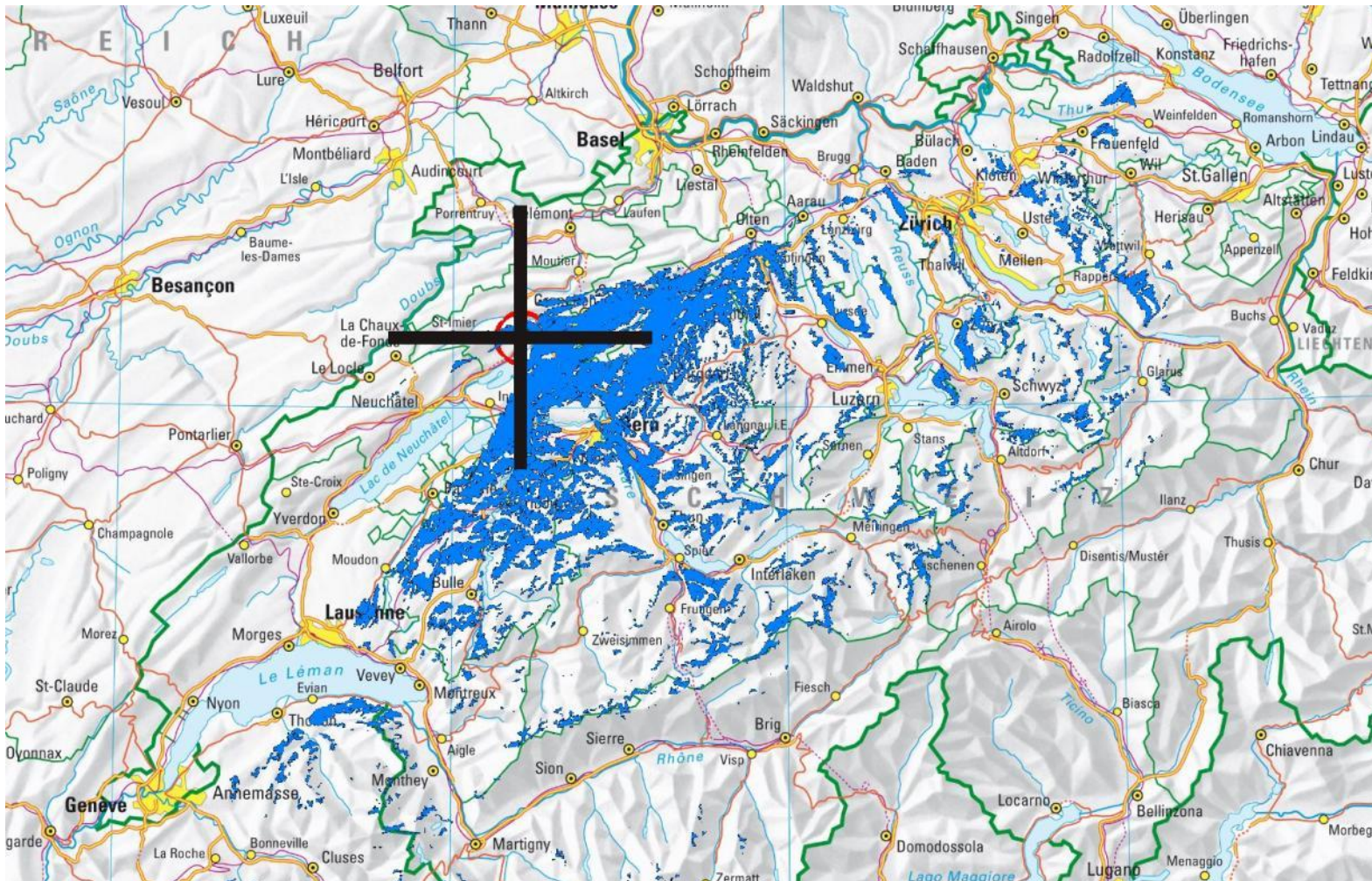
- The GOES Hp plot contains the 1-minute averaged parallel component of the magnetic field in nanoTeslas (nT), as measured at GOES-13 (W75) and GOES-15 (W89).
- The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Centers
- GOES 5-minute averaged integral proton flux (protons/cm²-s-sr) as measured by the SWPC primary GOES satellite

Ausbreitung Relais HB9F

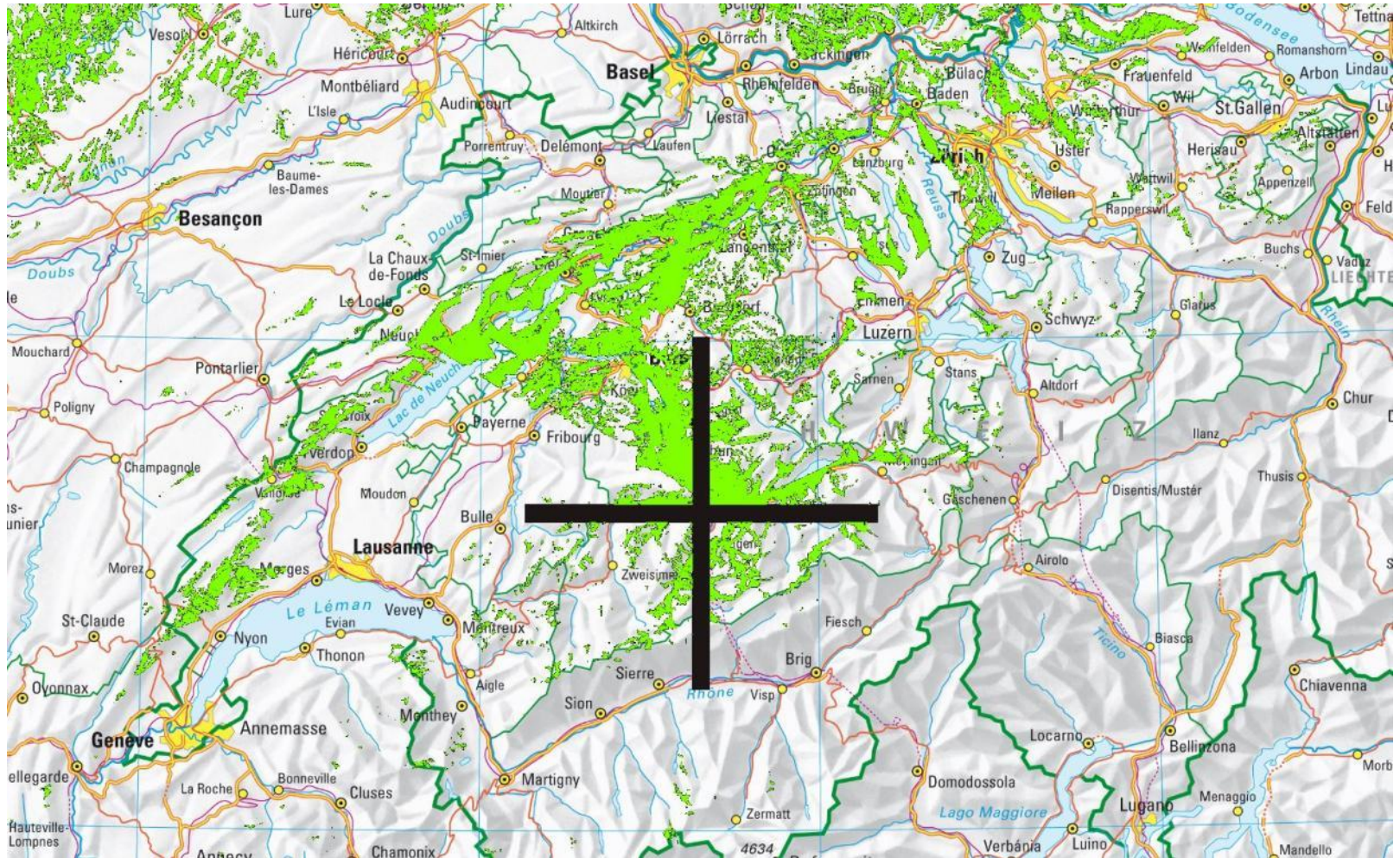
Einsehbarkeit Relais Schilthorn



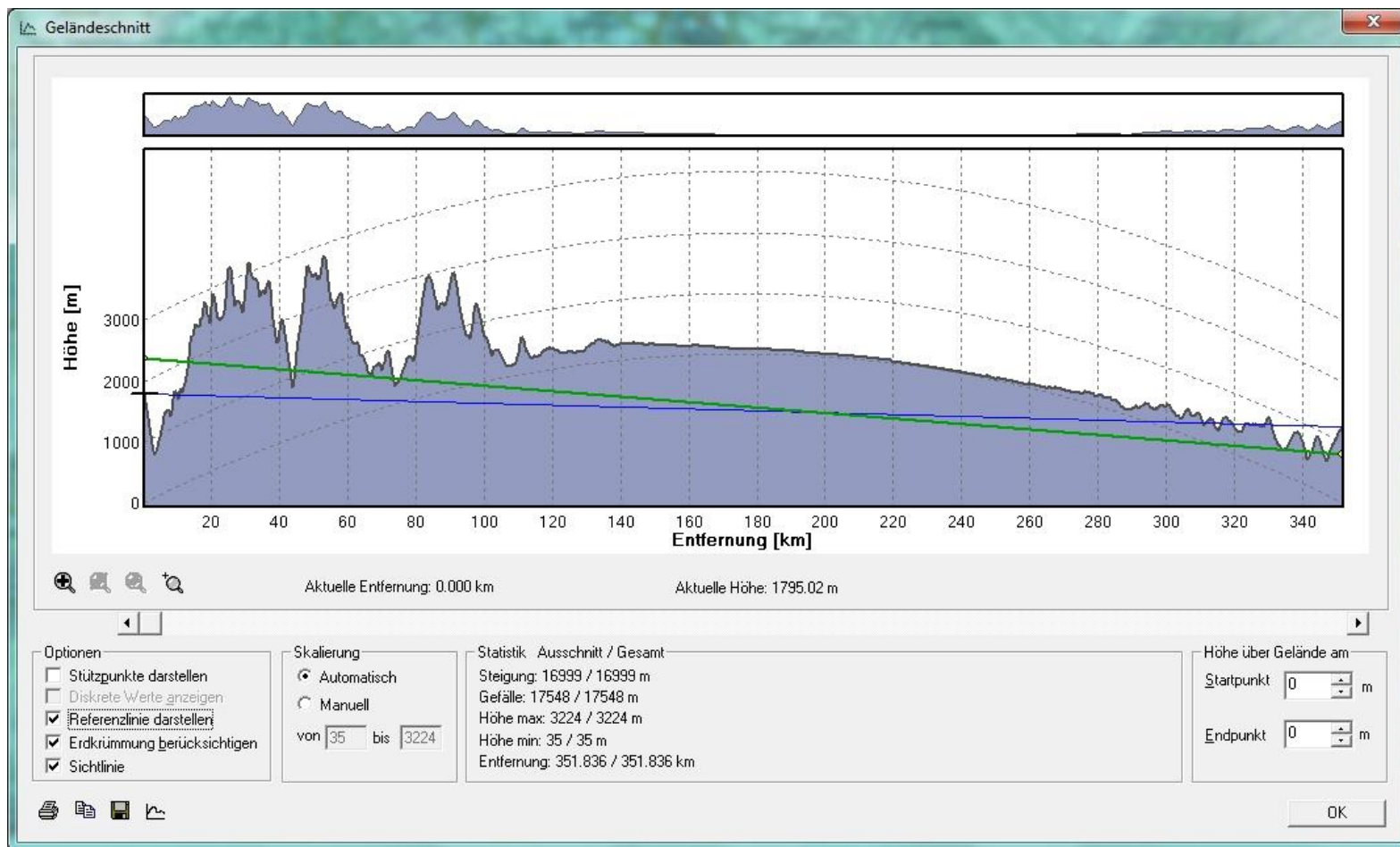
Ausbreitung Relais Magglingen



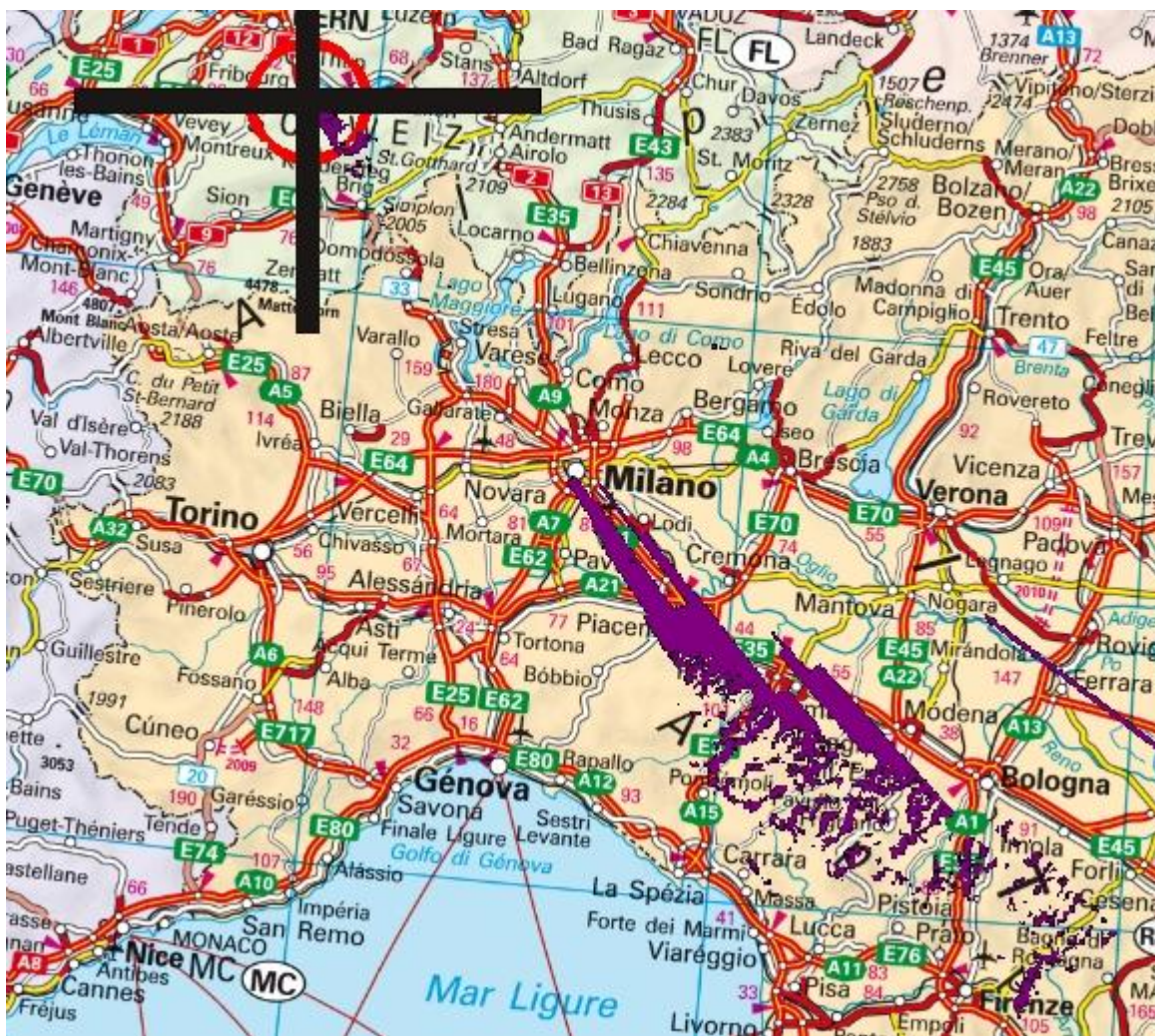
Ausbreitung Relais Niesen



Niesen – Parma Geländeschnitt



Ausbreitung Richtung Apenin



Ausbreitung Richtung Apenin



Bandwacht Reports

- Regelmässige Reports
- Sehr hohe Akzeptanz in Europa
- Standorte und Frequenzen
- Grundlage für „BAKEN“
- Eigene Beobachtungen
- Informationsquelle für Signalanalyse

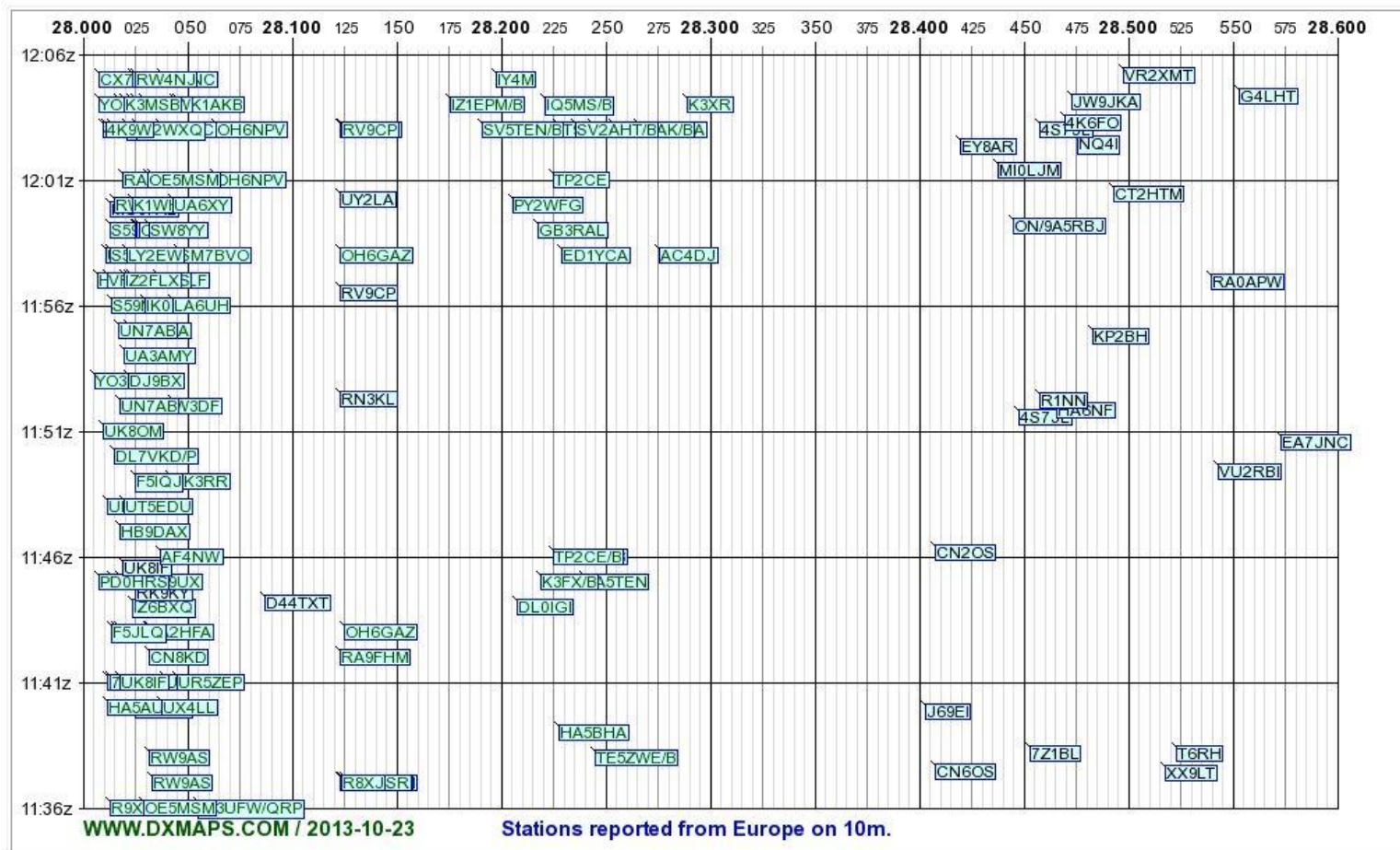
Bandwacht Reports

USKA Monitoring Report: August 2013

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD	SH (BW)	DETAILS
7000.0	2111	26	08		D	A1A			Beacon D
7001.0	2224	01	08			J3E-U		2k7	unident language, several stations
7005.0	1714	22	08			J3E-L			unident language
7007.65	2205	12	08			A3E			unident (weak)
7008.0	1214	19	08			F1B	75	250	often
7008.0	1221	19	08		RWM	F1A		250	after ID "QRT"
7010.0	1936	16	08			MFSK8	125	1750	MIL 188-141A
7010.0	1536	28	08			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D
7013.0	1632	13	08			OFDM60	35.5	~2k7	Spacing 44.5Hz
7022.0	2011	04	08			F1B	50	200	
7025.0	1244	31	08			F1B	50	200	(harmonic found at 14050)
7027.5	2009	20	08		V	A1A			Beacon V, every 3s often
7029.0	1933	24	08		V	A1A			Beacon V, every ~0.9s
7032.0	2147	01	08			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D daily
7038.7	2230	01	08	UKR	D	A1A			Beacon D Sevastopol daily
7038.8	1400	01	08	RUS	P	A1A			Beacon P Kaliningrad daily
7038.9	2229	01	08	RUS	S	A1A			Beacon S Murmansk daily
7039.3	1405	01	08	RUS	K	A1A			Beacon K Petropavlovsk daily
7039.4	1404	01	08	RUS	M	A1A			Beacon M Magadan daily
7065.0	2223	30	08			A3E			BC; voice + music

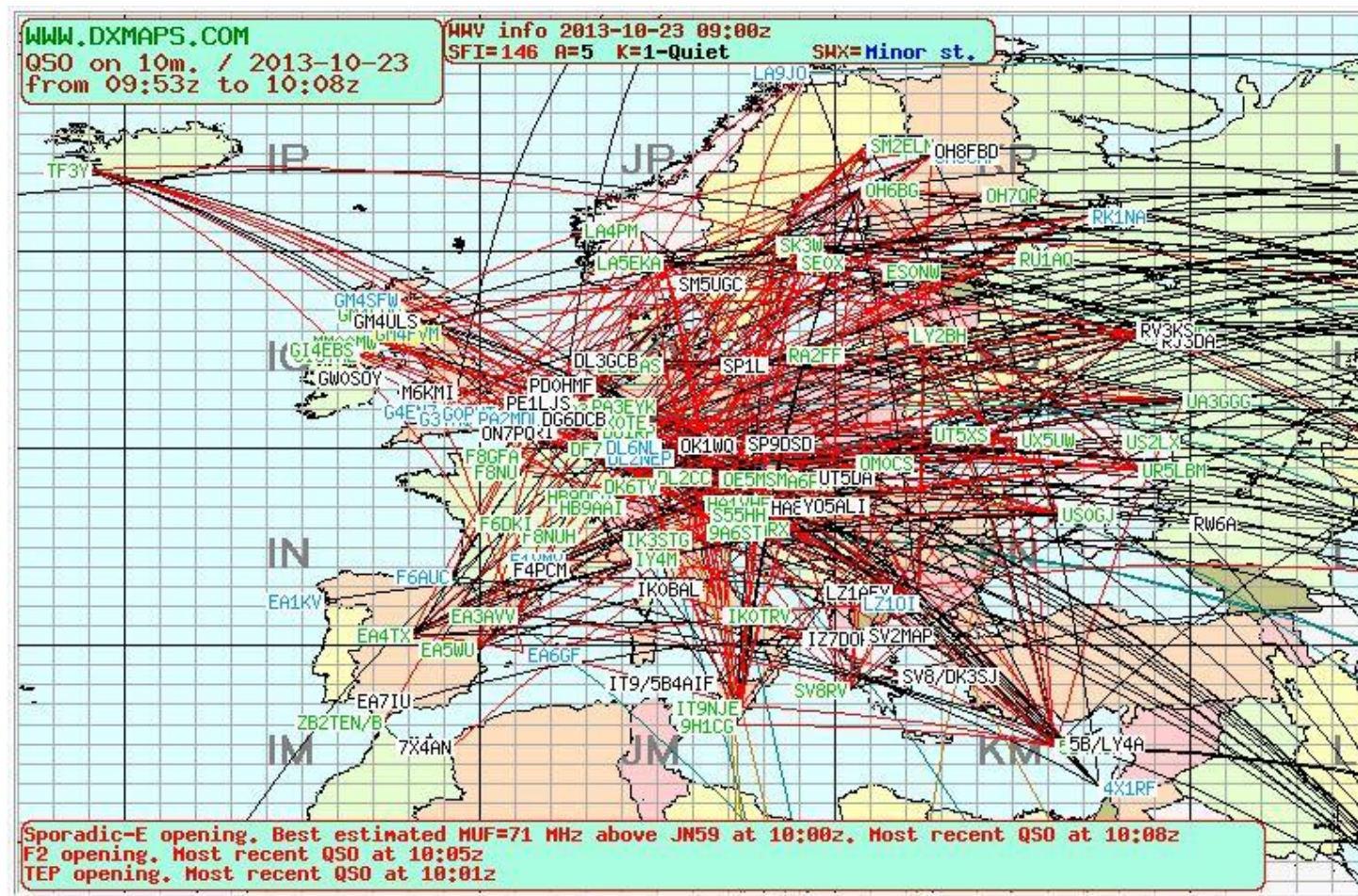
Bandbelegung

<http://www.dxmaps.com/spots/map.php>



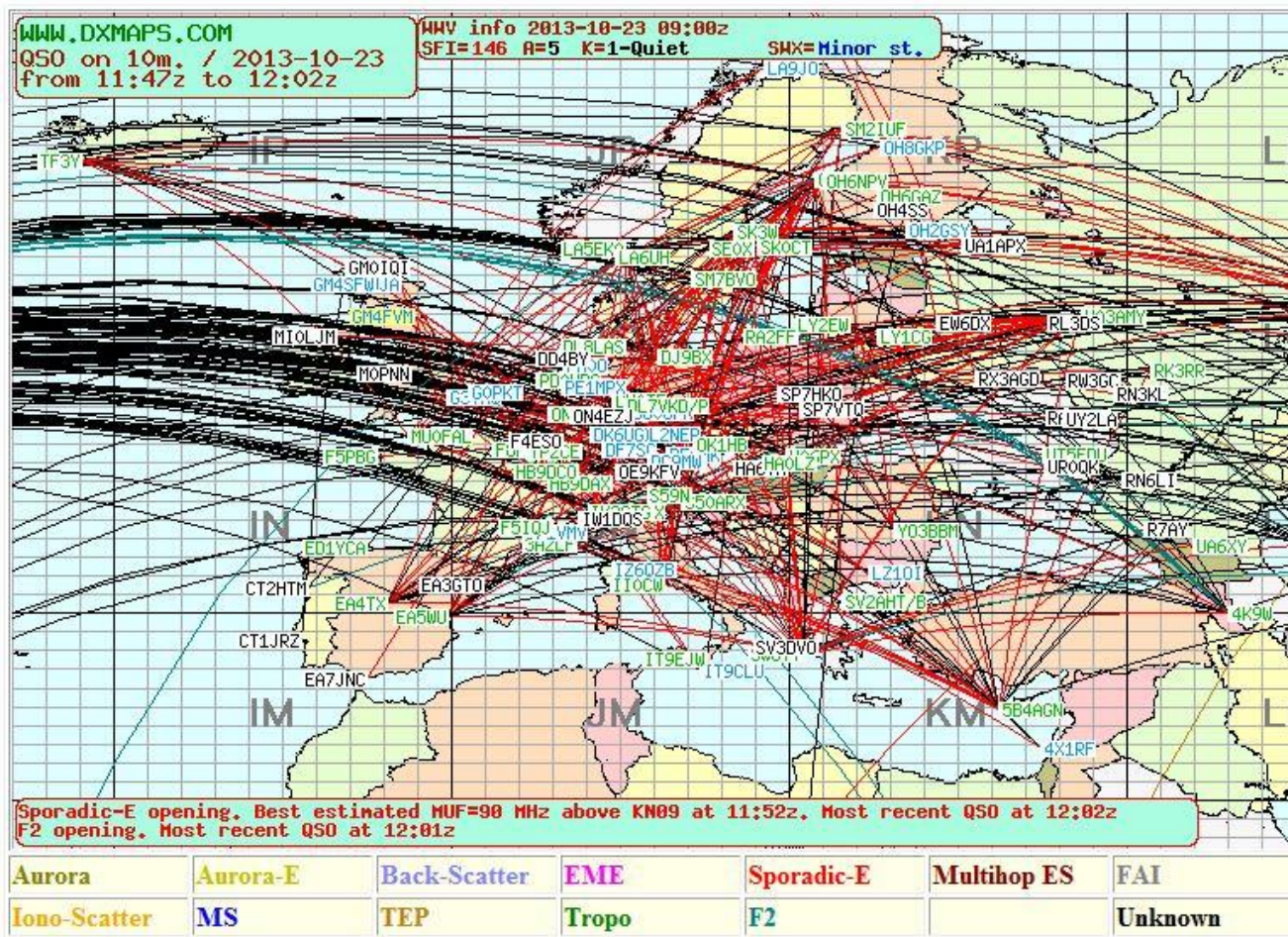
Bandbelegung

<http://www.dxmaps.com/spots/map.php>



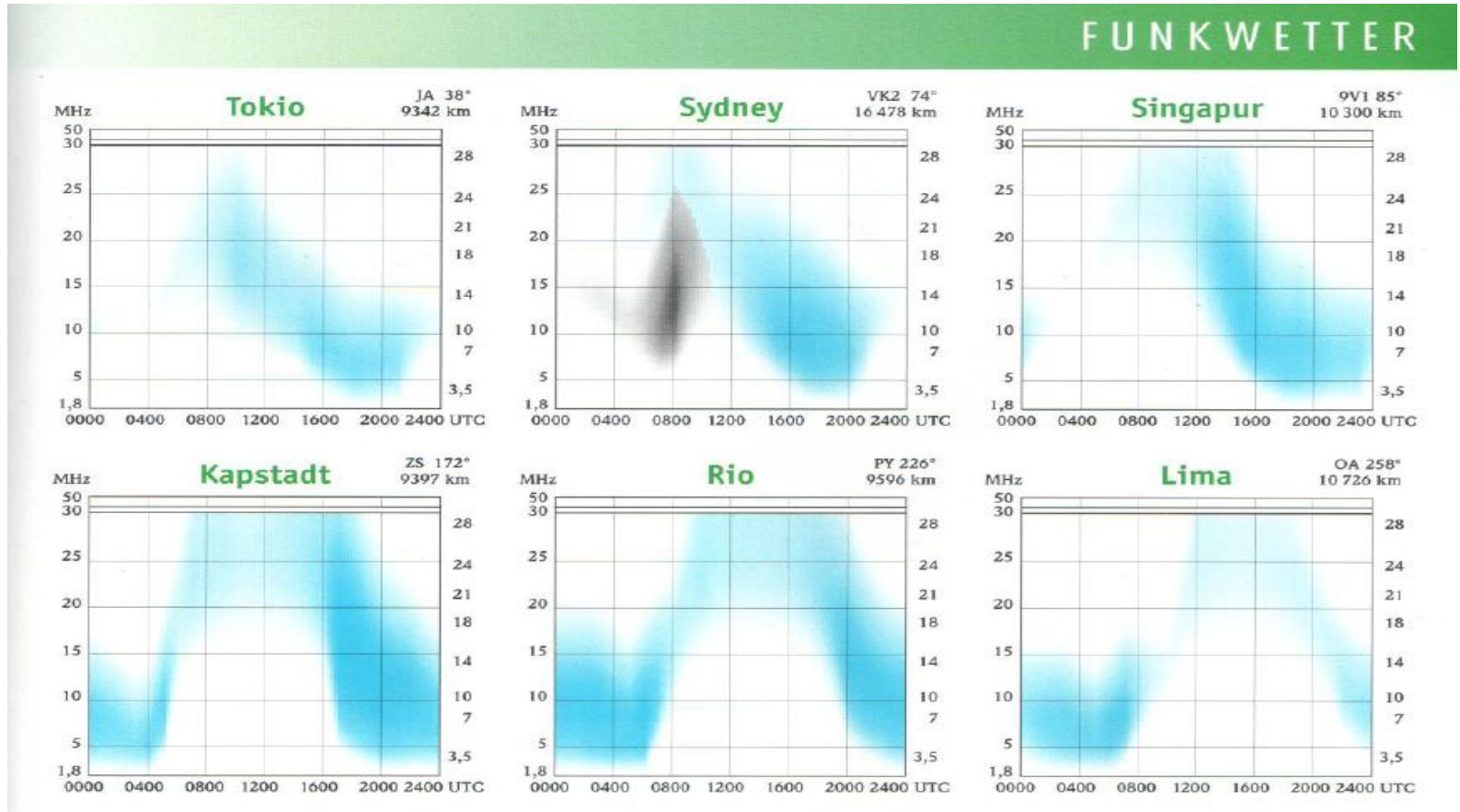
Bandbelegung

<http://www.dxmaps.com/spots/map.php>



Professionelle Einrichtungen

Vorhersagen - CQDL



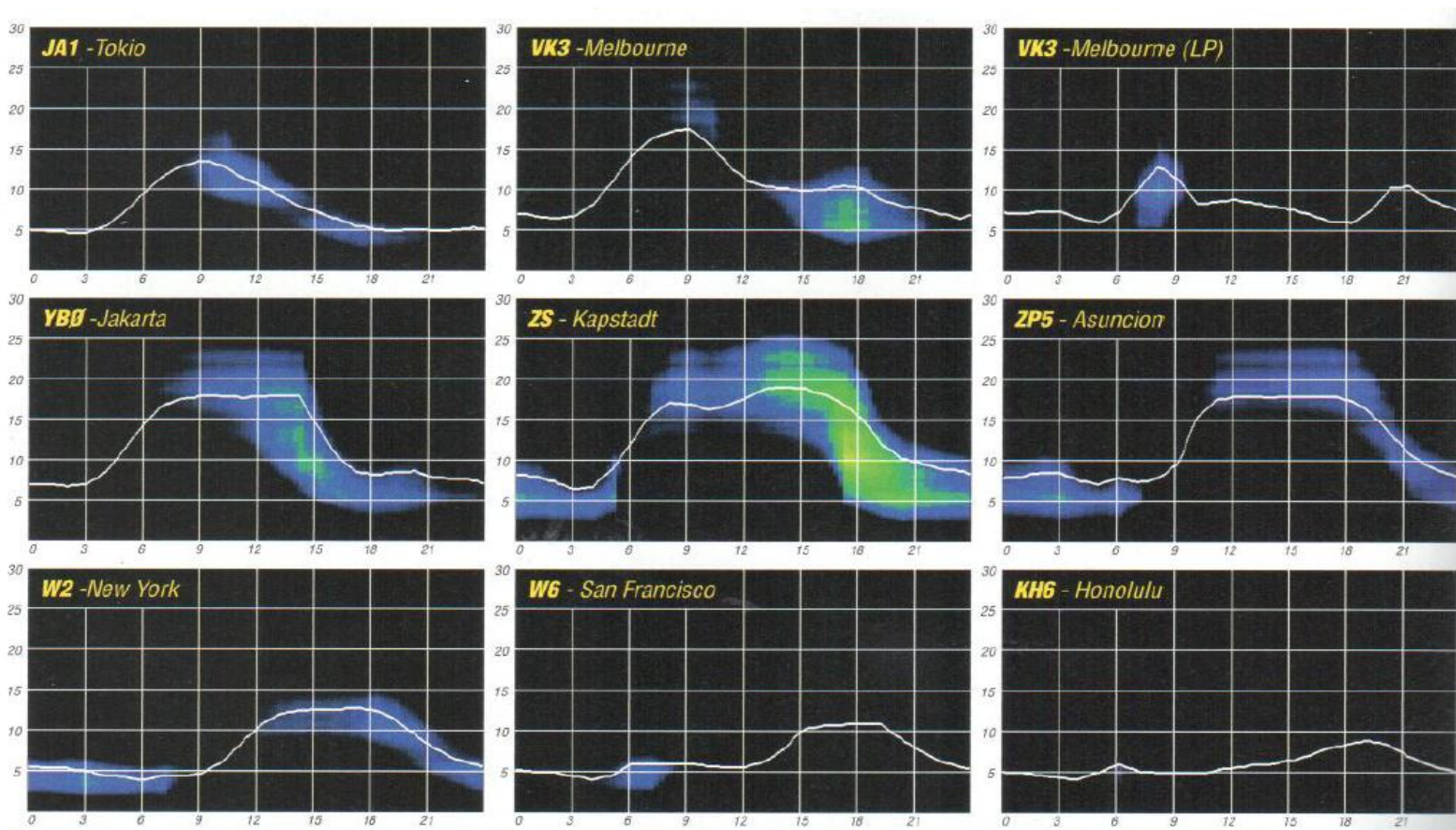
Vorhersagen - RadCom

HF F-Layer Propagation Predictions for November 2013

Compiled by Gwyn Williams, G4FKH

Time (UTC)	3.5MHz	7.0MHz	10.1MHz	14.0MHz	18.1MHz	21.0MHz	24.9MHz	28.0MHz
*** Europe								
Moscow	884...27778	8483..278778	..7666786...	...88888...	...99997....	...8999.....	...997.....	...78.....
*** Asia								
Yakutsk	.....4452	523...367677	3..66..363.5	...75.....	.....	.....	.....	.....
Tokyo	.....3322.	...55377756.	...3.....	.....	.....	.....	.....	.....
Singapore	.....1111.	.....687665	.....66....	.....63....	.....67....	.....66....	.....65....	.....4....
Hyderabad	.....	.....24333	.....54....	.....55....	.....64....	.....5....	.....5....	.....
Tel Aviv	996.....8889	979.....89989	..32...77...	...75567...	...88886...	...6888.....	...888.....	...888.....
*** Oceania								
Wellington	.....	...66662...	...7776....	...6774....	...465.....	...4.....	...5.....	.....
Well (ZL) (LP)	.....	.....	.....	.....	.....	.....	.....	.....
Perth	.....	.....43...	.....785...	.....87....	.....3....	.....	.....	.....
Sydney	.....	...58753..	...38872...	...7885...	...564....	...35....	.....	.....
Melbourne (LP)	.....	...96.....	..3.99.....	...993.....	...7964..4..	...9.....	...8.....	.....
Honolulu	.....	...3...4...	...55647...	...4.....	.....	.....	.....	.....
Honolulu (LP)	.....	.....	.....	.....	.....	.....	.....	.....
W. Samoa	.....	...57677...	...58888...	...7885...	...687....	...76....	...6....	.....
*** Africa								
Mauritius	2.....222	7.....37767	5.....77545	.....74...	.....	.....	.....	.....
Johannesburg	.....	52.....233	74.....7766	.....56...	.....6....	...46....	...44....	.....
Ibadan	.1.....	676.....3456	777.....5777	3.45...277..	...754567..	...77667..	...87777..	...57776..
Nairobi	2.....11	77.....7777	5.....4445	..4...45...	...36....	...5.356...	...66675...	...667....
Canary Isles	666.....1666	7776...6878	88684..58688	...8766768..	...9889...	...7777...	.....	.....
*** S. America								
Buenos Aires	.....	22.6.....	54.9.....33	...8.....	...5.....	...4.....	.....	.....
Rio de Janeiro	.....	3327.....2	55.9.....554	...8.....3..	...64.....	...5.....	...4.....	.....
Lima	.....	22.3.....	34.62...22	.....	.....	.....	.....	.....
Caracas	.....	3334.....3	75.86...275	...73..34..	...57666...	...7774...	...777...	...876...
*** N. America								
Guatemala	.....	22.4.....	42.76.....2	...5.....	...54.....	...54.....	...5.....	.....
New Orleans	3231.....	66.62...6	5..7.....	...5.....	.....	...4.....	...54.....	.....
Washington	3453.....3	77473...67	64.45...544	...63354...	...5445...	...55.....	...66.....	...4.....
Quebec	6663.....45	77.7...666	...66..66..	...66557...	...545.....	...55.....	...66.....	.....
Anchorage	.33.....	66.52...3..3	6...763674.3	.....5....	.....	.....	.....	.....
Vancouver	.....	33.3.....	.....	.....	.....	.....	.....	.....
San Francisco	.....	22.3.....	.....	.....	.....	.....	.....	.....
San Fran (LP)	.....	.....	.....	.....	...6.....	...6.....	...5.....	.....

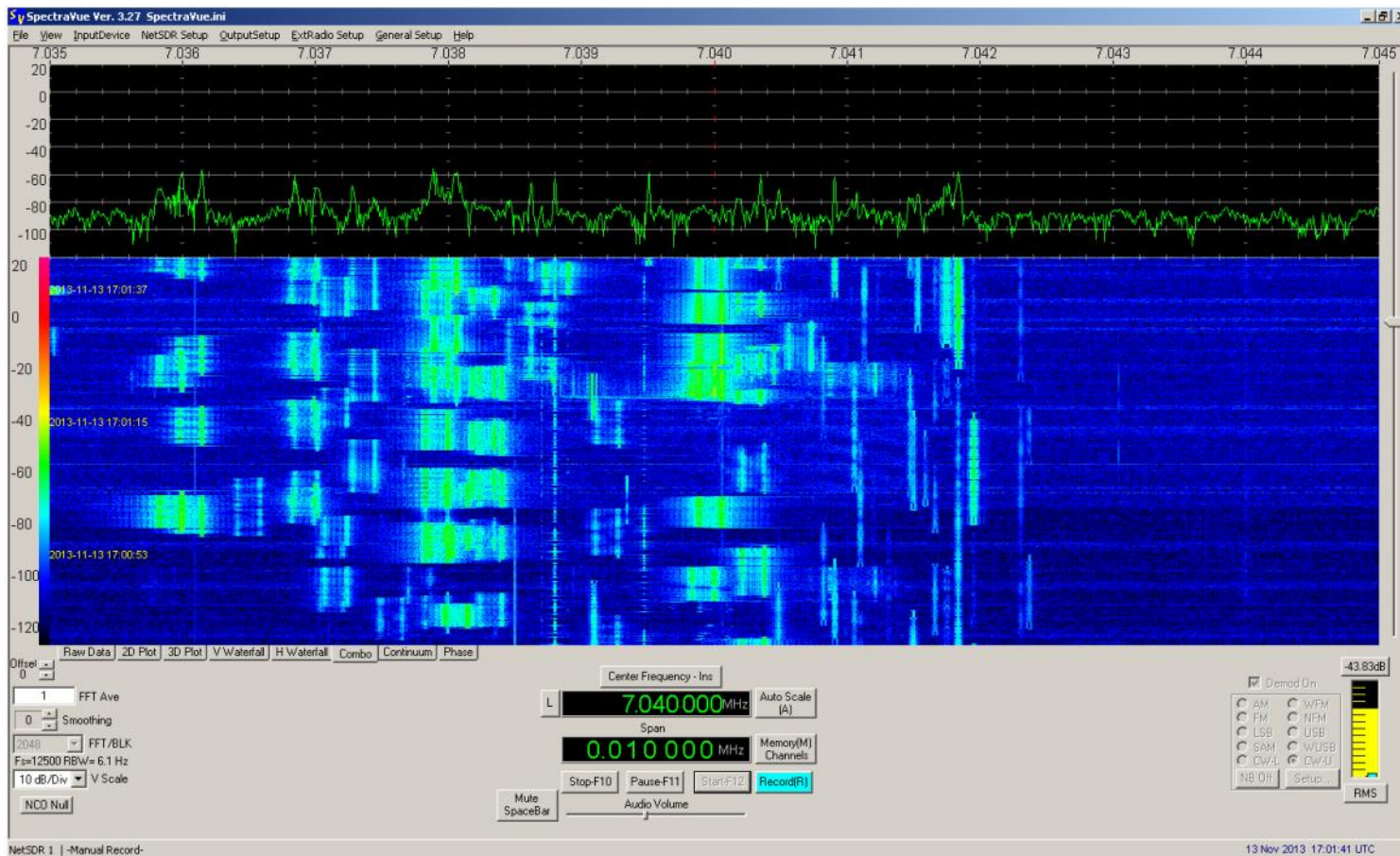
Vorhersagen - Funkamateure



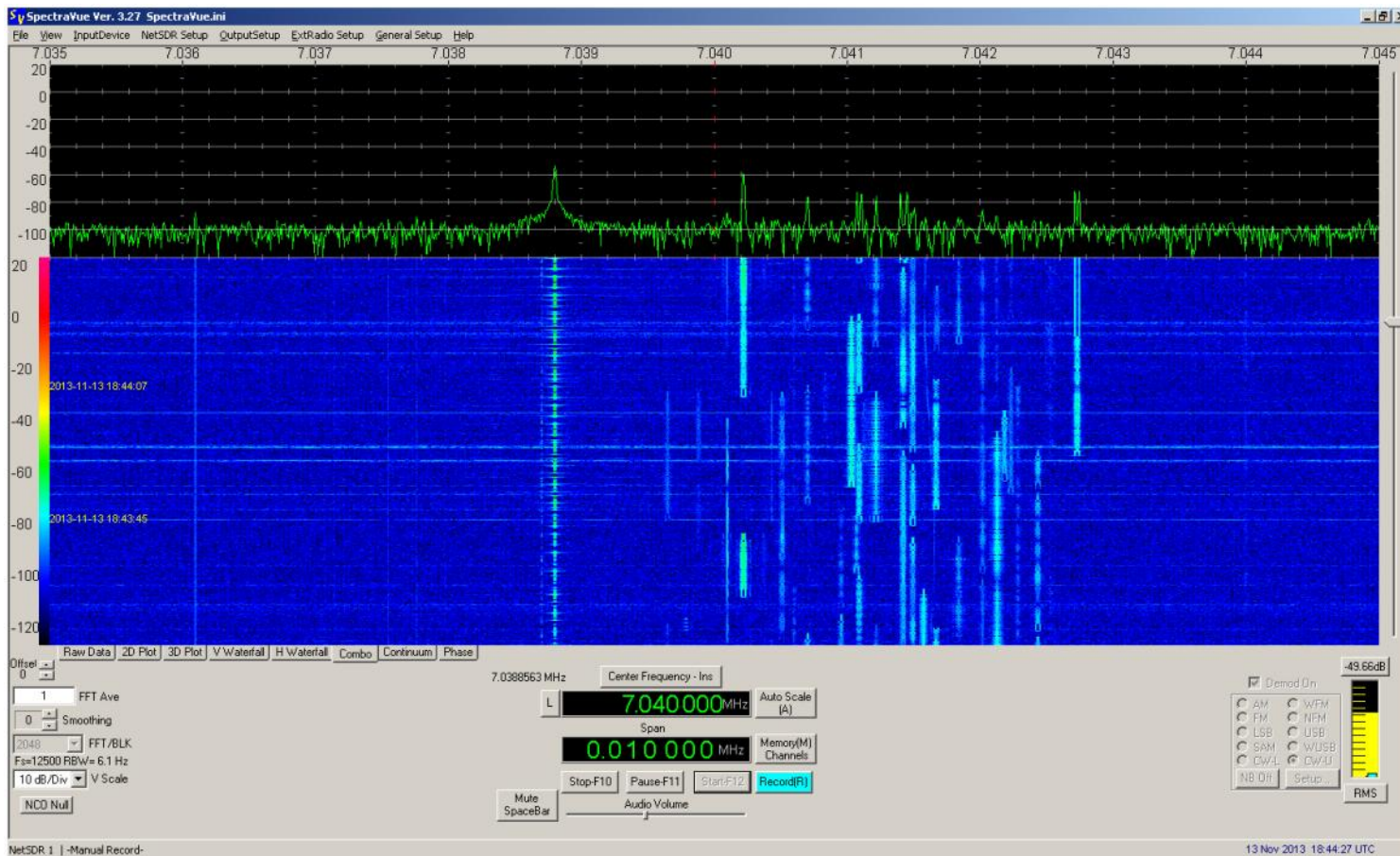
40m Band Letter Beacon

7025.0	1244	31	08			F1B	50	200	(harmonic found at 14050)
7027.5	2009	20	08		V	A1A			Beacon V, every 3s often
7029.0	1933	24	08		V	A1A			Beacon V, every ~0.9s
7032.0	2147	01	08			J7D	12x120	2k7	PSK-2: CIS12 = AT3004D daily
7038.7	2230	01	08	UKR	D	A1A			Beacon D Sevastopol daily
7038.8	1400	01	08	RUS	P	A1A			Beacon P Kaliningrad daily
7038.9	2229	01	08	RUS	S	A1A			Beacon S Murmansk daily
7039.3	1405	01	08	RUS	K	A1A			Beacon K Petropavlovsk daily
7039.4	1404	01	08	RUS	M	A1A			Beacon M Magadan daily
7065.0	2223	30	08			A3E			BC; voice + music
7070.0	2222	02	08		244	MECK2	105	1750	MU 100 141A daily

40m Band Letter Beacon



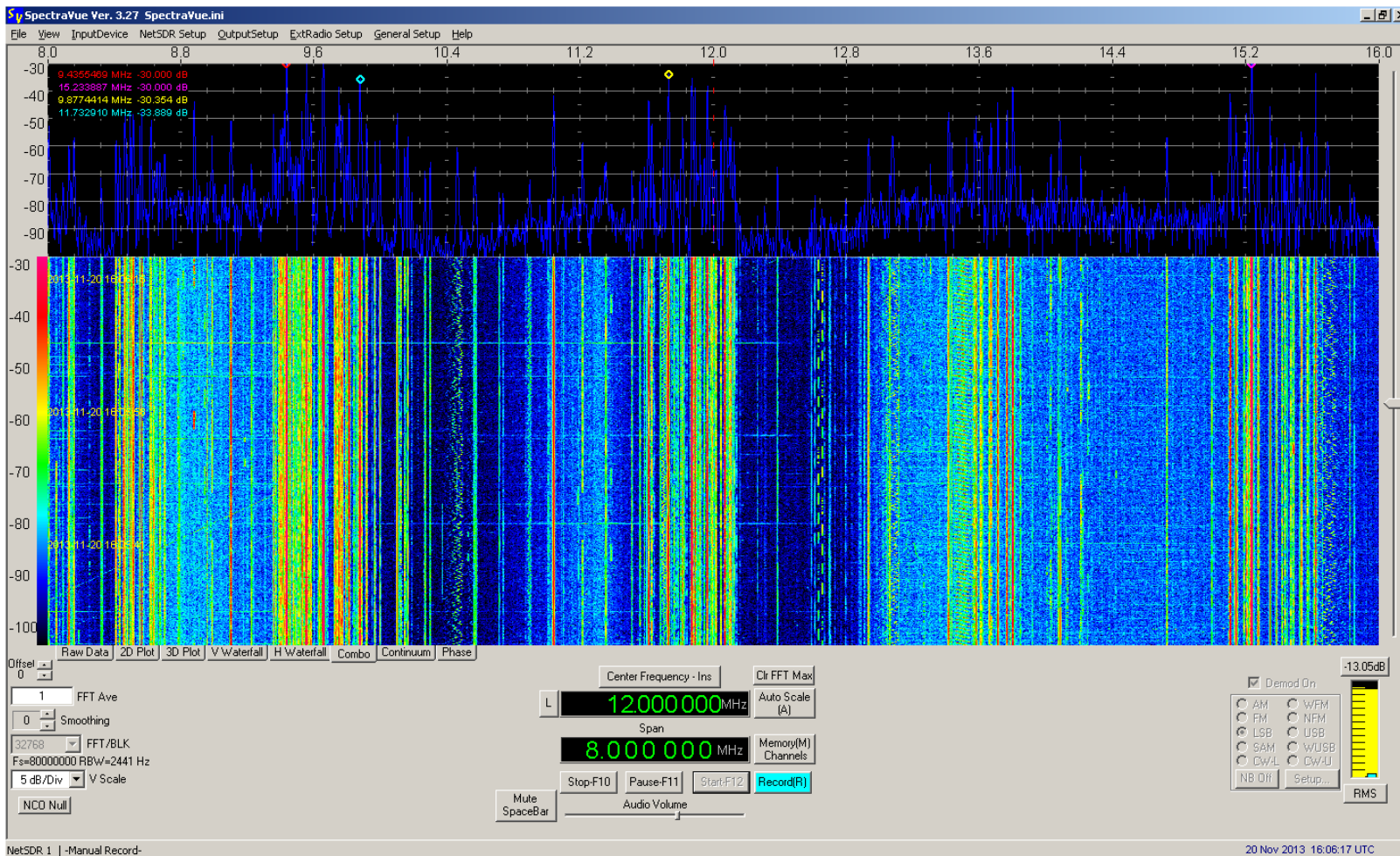
40m Band Letter Beacon



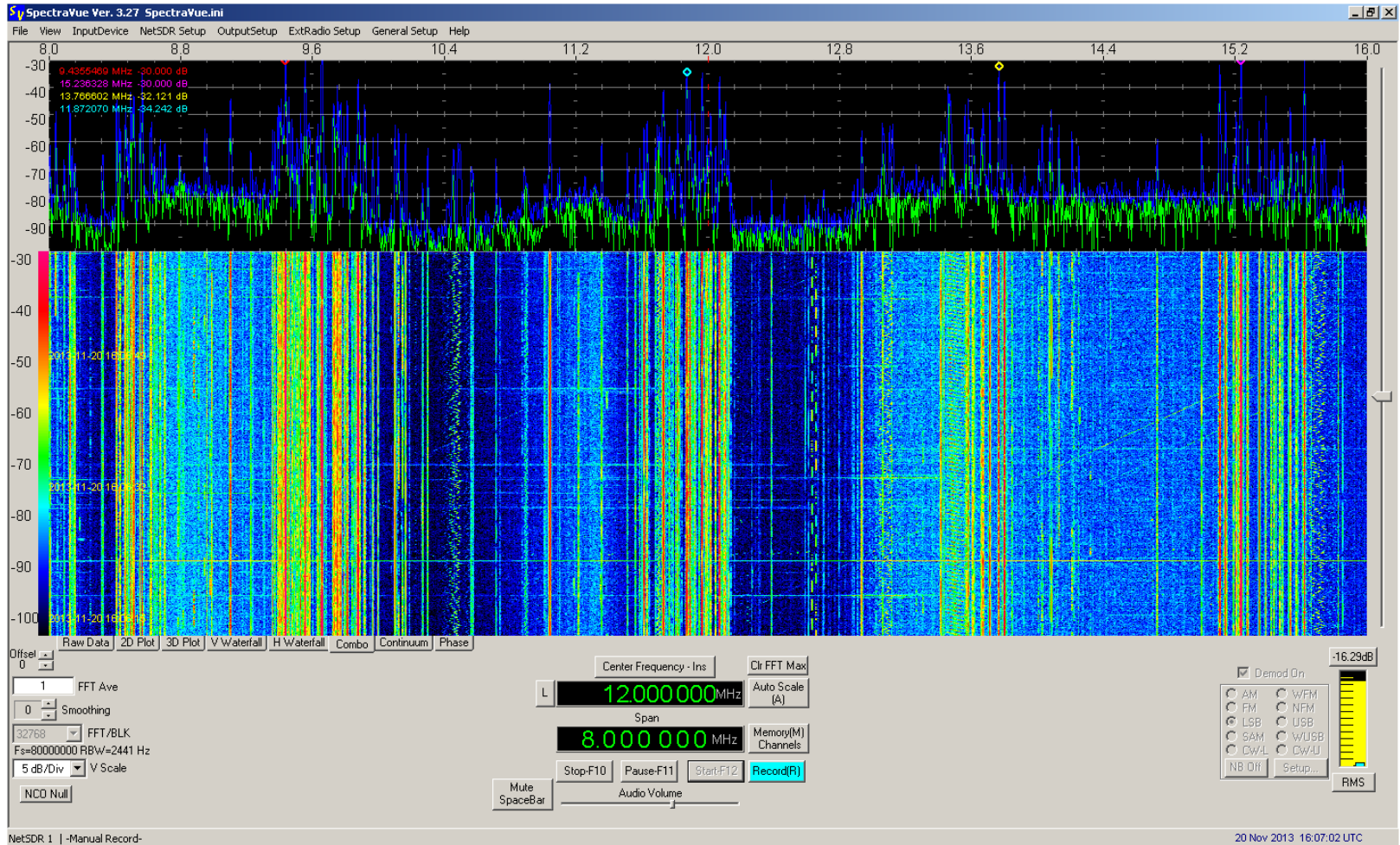
Ionosonden

- KW Sender
- Senden innerhalb von Minuten den „gesamten KW Bereich“
- Standorte weltweit
- Beobachten mit breitbandigem SDR Empfänger
- FA 9/08

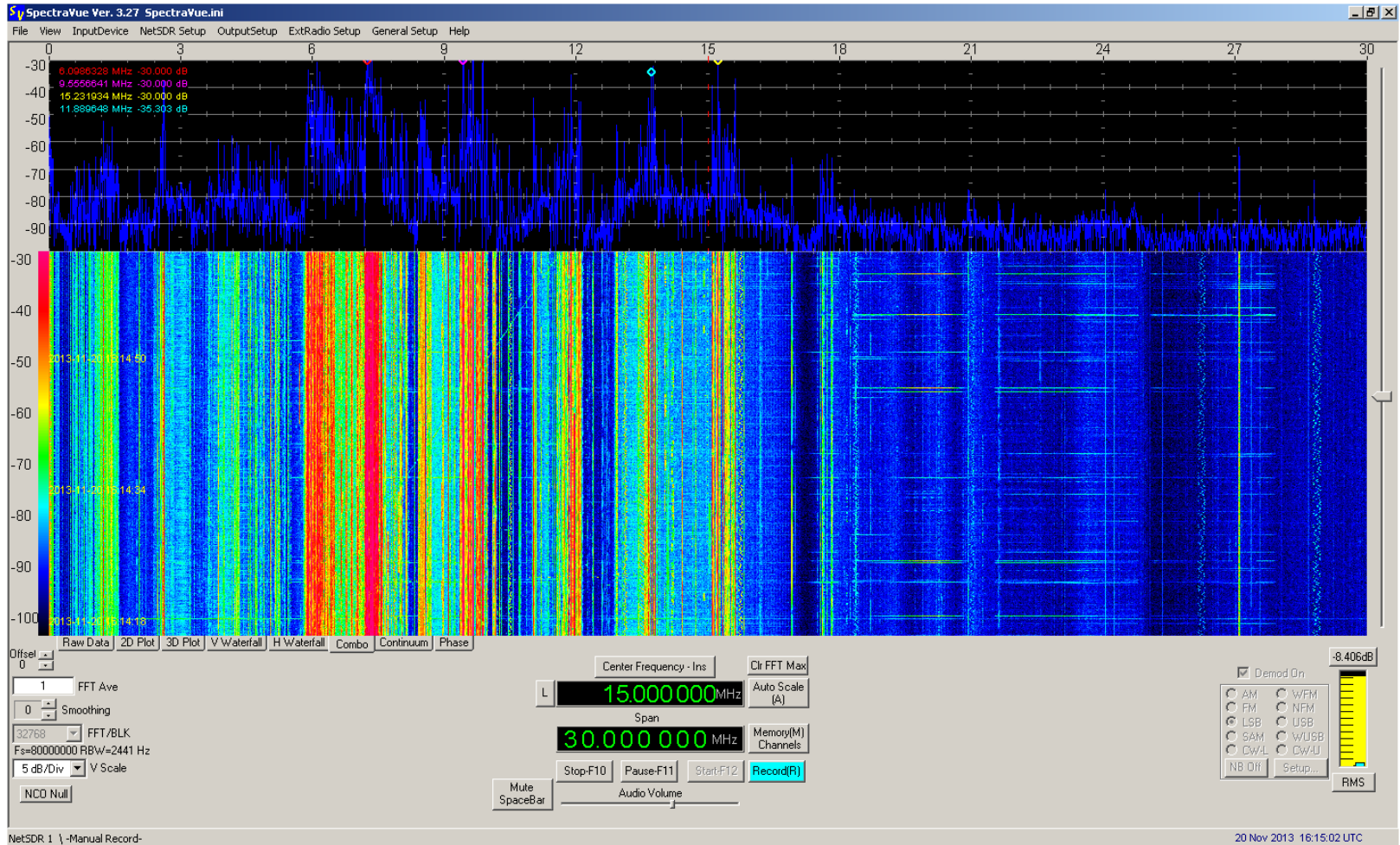
Ionosonden



Ionosonden

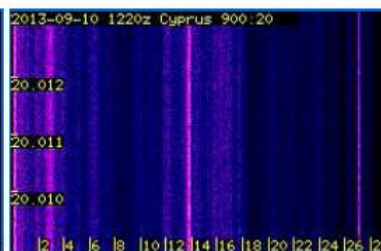
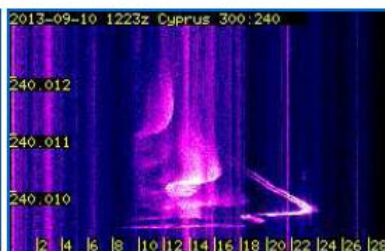
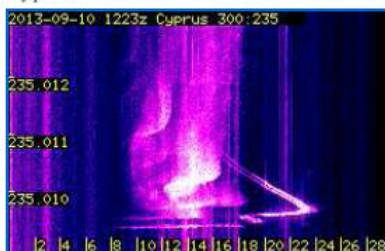


Ionosonden

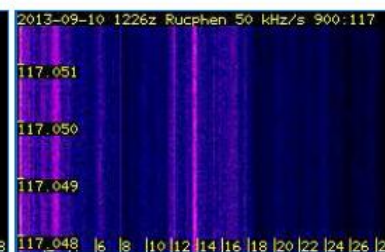
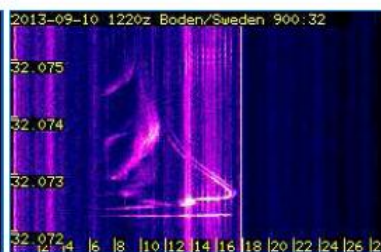
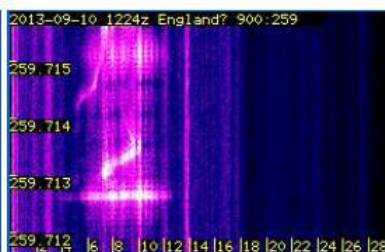
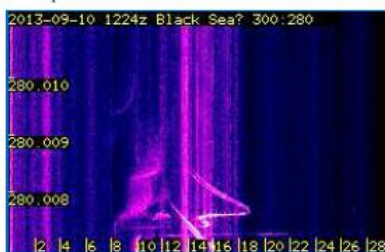


Ionosonden

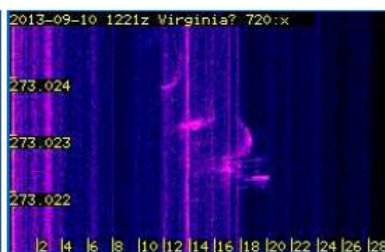
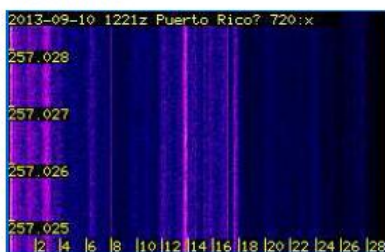
Cyprus:



Europe:

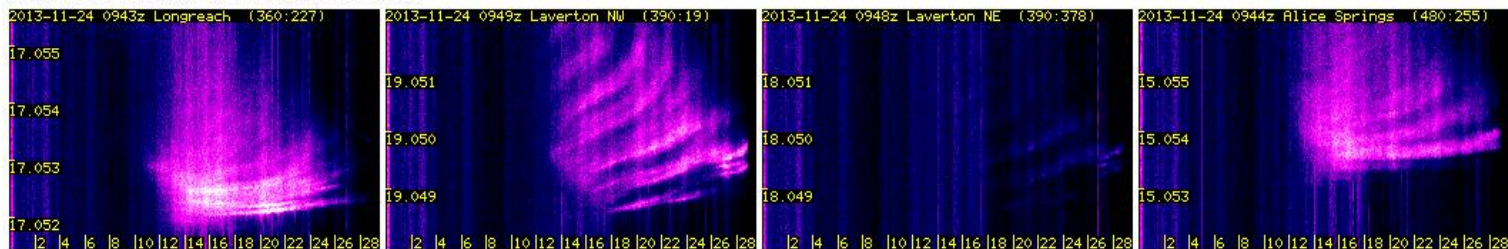


Transatlantic:

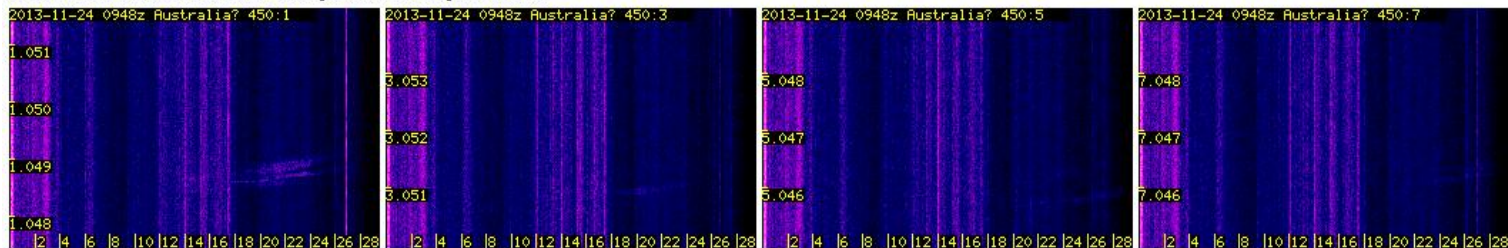


Ionosonden

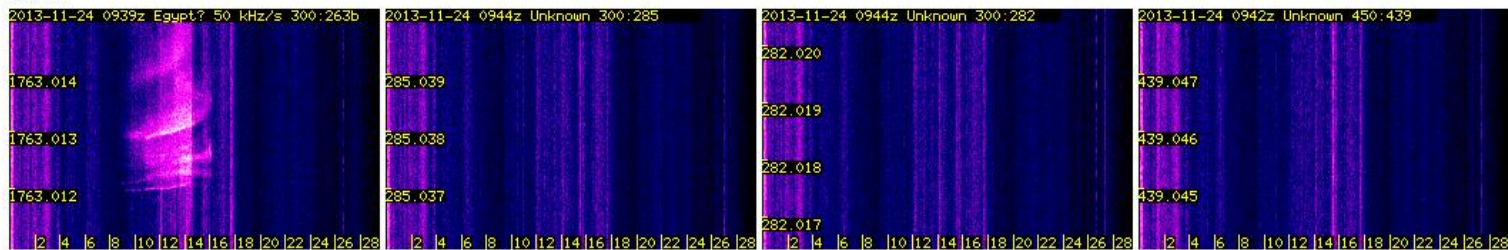
Australian radars: (about 0.5 MW each)



Australian ionosounders: (very much less powerful)

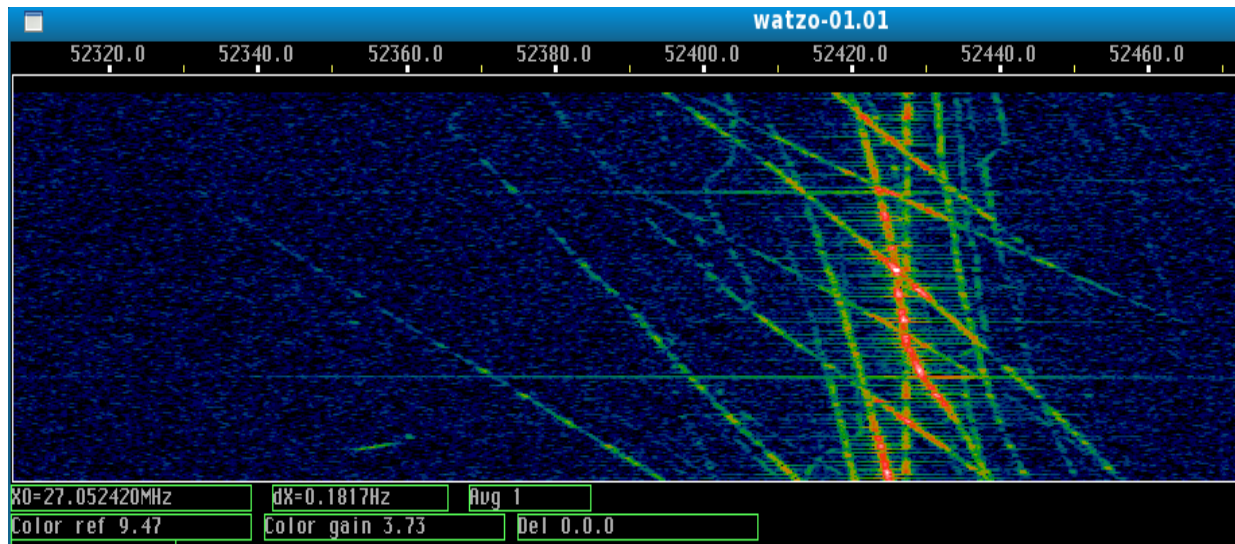


Other:



GRAVES Radar 143.050 MHz

<http://www.itr-datanet.com/~pe1itr/graves/>



Sender bei Dijon, Empfänger bei Apt ca. 80km N Marseille

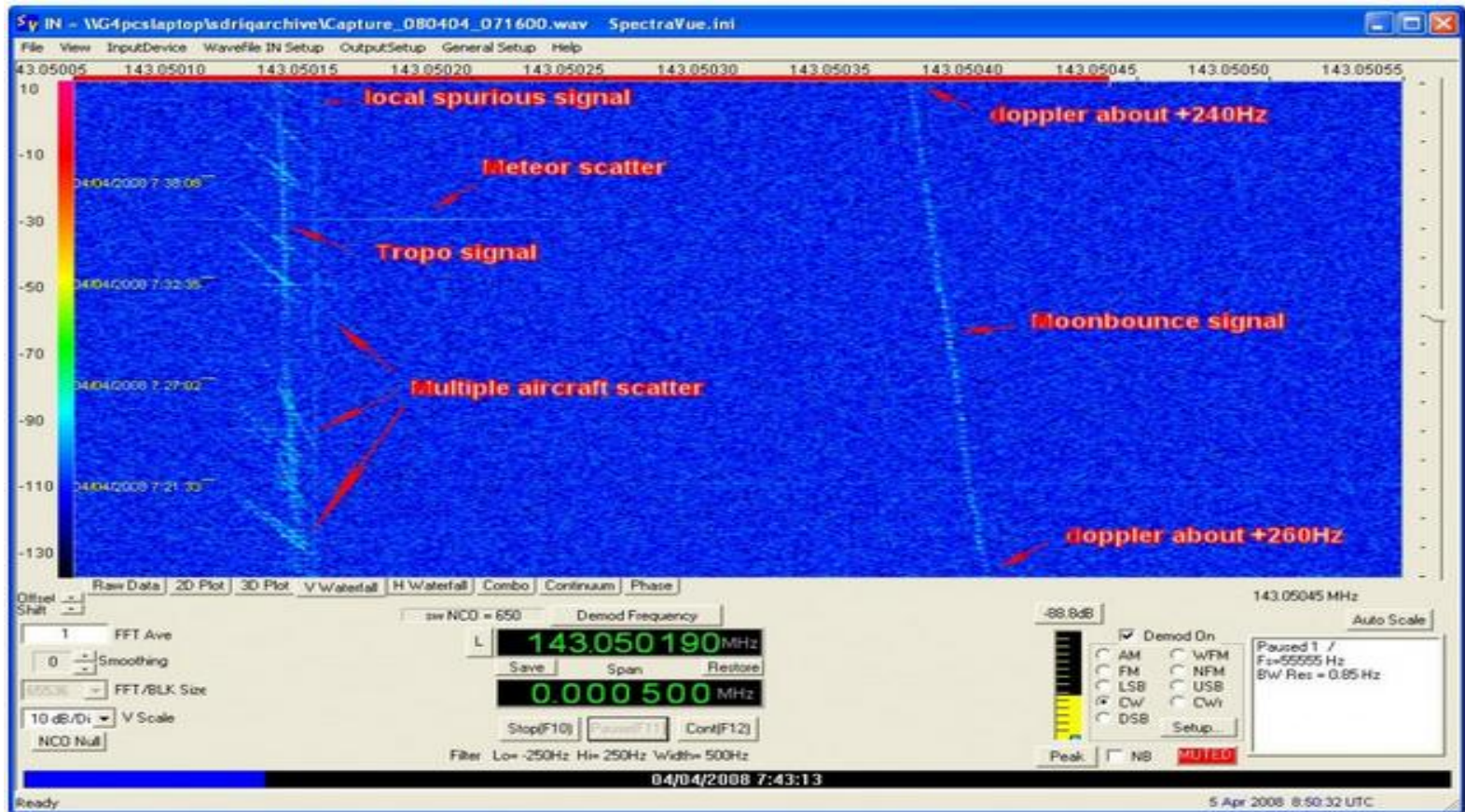
Doppler Effekte Flugzeuge und Satelliten

EME mit sehr geringen Aufwand

Antennentests


GRAVES Radar 143.050 MHz




<http://www.itr-datanet.com/~pe1itr/graves/>



Australische Regierung

http://www.ips.gov.au/HF_Systems


Australian Government
Bureau of Meteorology
Radio and Space Weather Services

Home | [Space Weather](#) | Satellite | Geophysical | Solar | [HF Systems](#) | Products and Services | Educational
FORECAST SOL: Moderate  MAG: Normal  ION: Normal 

HF Systems

Home > HF Systems

- ▶ **Australasia**
 - HAP Charts
 - HF Conditions
 - Ionogram Viewer
 - Ionospheric Map
 - LAMP Charts
 - T Index
- ▶ **High Latitude and IPY**
 - High Latitude Conditions
 - International Polar Year
 - High Latitude Links
- ▶ **Global HF**
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 - Recent foF2 Plots
 - T Index Map
- ▶ **Online Tools**
 - Prediction Tools
 - Index Plots
 - Cullgoora HF Spectrum
- ▶ **Section Information**
 - HF Systems Help Page
 - HF Communications Problem Page
 - Latest News



Note: Certain pages within the "HF Systems" category are updated frequently. Excluding what will be specified where applicable.

To refresh the page, hold down the "SHIFT" key and click the "Refresh" or "Reload" button on obtain latest data.

HF Propagation Conditions

HF Comms Warning	Current HF Fadeout	HF Fadeout Warning
No Event	No Event	No Event

Ionospheric Conditions

Australasia	World
	

These pages provide general propagation advice for HF communicators. Information available conditions, real time HF fadeout coverage charts, regional ionospheric vertical MUF maps and I

Also available:

- [derived TEC Maps](#)

FUB – HF Funkprognose

Browser: http://www.vtg.admin.ch/internet/vtg/de/home/dienstleistung/funk/akt

Navigation: Weisungen FUB, Aktuelle Prognosen

Bundesverwaltung admin.ch
Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz und Sport
Schweizer Armee

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Startseite | Übersicht | Webarchiv | Kontakt | Suche | Français | Italiano | English

Aktuell | Themen | Dokumentation | Dienstleistungen | Mein Militärdienst | Verbände | Die Schweizer Armee

Schnellsuche: Suchen

[Seite drucken](#) [Erweiterte Suche](#)

Startseite > Dienstleistungen > Funk > Aktuelle Prognosen

HF Frequenzprognose Schweiz: Aktuelle Prognosen

- [Januar/Janvier/Gennaio/January 2013](#)
Publiziert am: 05.11.2012 | Grösse: 108 Kb | Typ: PDF
- [Februar/Février/Febraio/February 2013](#)
Publiziert am: 05.11.2012 | Grösse: 108 Kb | Typ: PDF
- [März/Mars/Marzo/March 2013](#)
Publiziert am: 05.11.2012 | Grösse: 112 Kb | Typ: PDF
- [April/Avril/Aprile/April 2013](#)
Publiziert am: 05.11.2012 | Grösse: 116 Kb | Typ: PDF
- [Mai/Mai/Maggio/May 2013](#)
Publiziert am: 05.11.2012 | Grösse: 120 Kb | Typ: PDF
- [Juni/Juin/Giugno/June 2013](#)
Publiziert am: 05.11.2012 | Grösse: 124 Kb | Typ: PDF
- [Juli/Juillet/Luglio/July 2013](#)
Publiziert am: 08.01.2013 | Grösse: 114 Kb | Typ: PDF

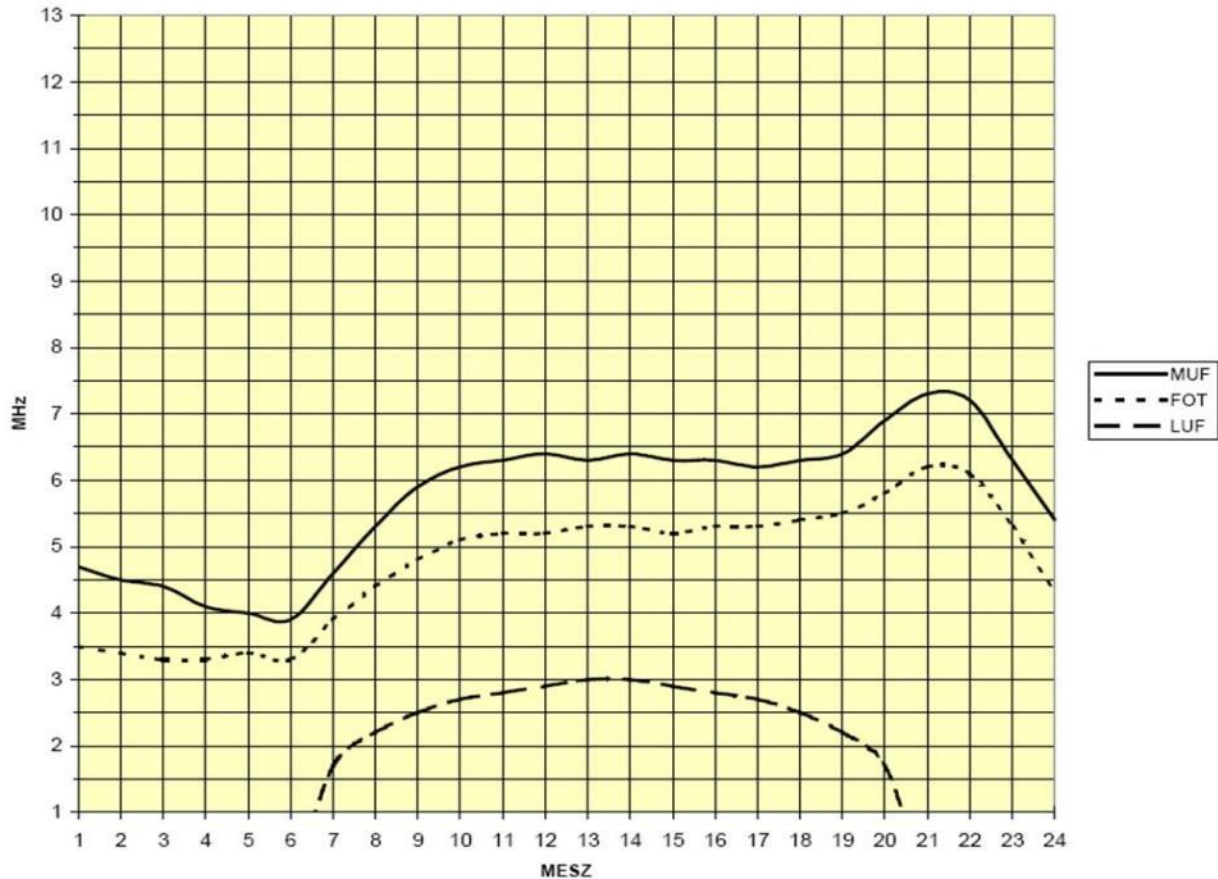
FUB – HF Funkprognose

Frequenzprognose Schweiz

Prévisions suisse

Previsioni svizzera

Frequency Prediction Switzerland



FUB – HF Funkprognose



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Departement für Verteidigung, Bevölkerungsschutz
und Sport VBS

Schweizer Armee
Führungsunterstützungsbasis FUB

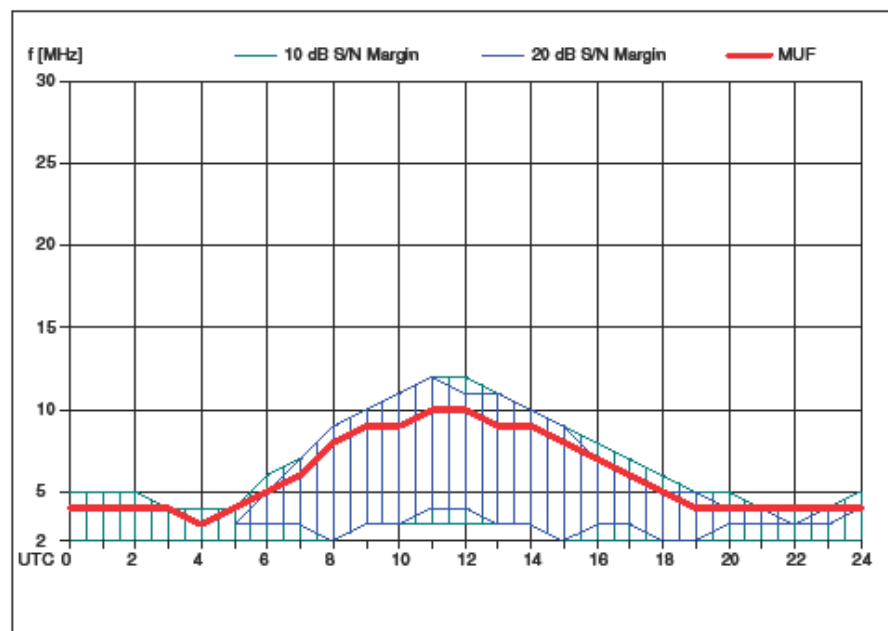
Frequenzprognose Schweiz

Prévisions suisse
Previsioni svizzera
Frequency Prediction Switzerland

Dezember 2013 R = 81

Distanz 100 km
TX Power 100 W
Signalbandbreite 2 kHz
Antenne Dipol mit Steilstrahlung

10 dB S/N Margin Frequenzbereich mit 10 dB
Signal-Rauschabstand
20 dB S/N Margin Frequenzbereich mit
mindestens 20 dB
Signal-Rauschabstand
MUF Maximum Usable Frequency
höchste brauchbare Frequenz

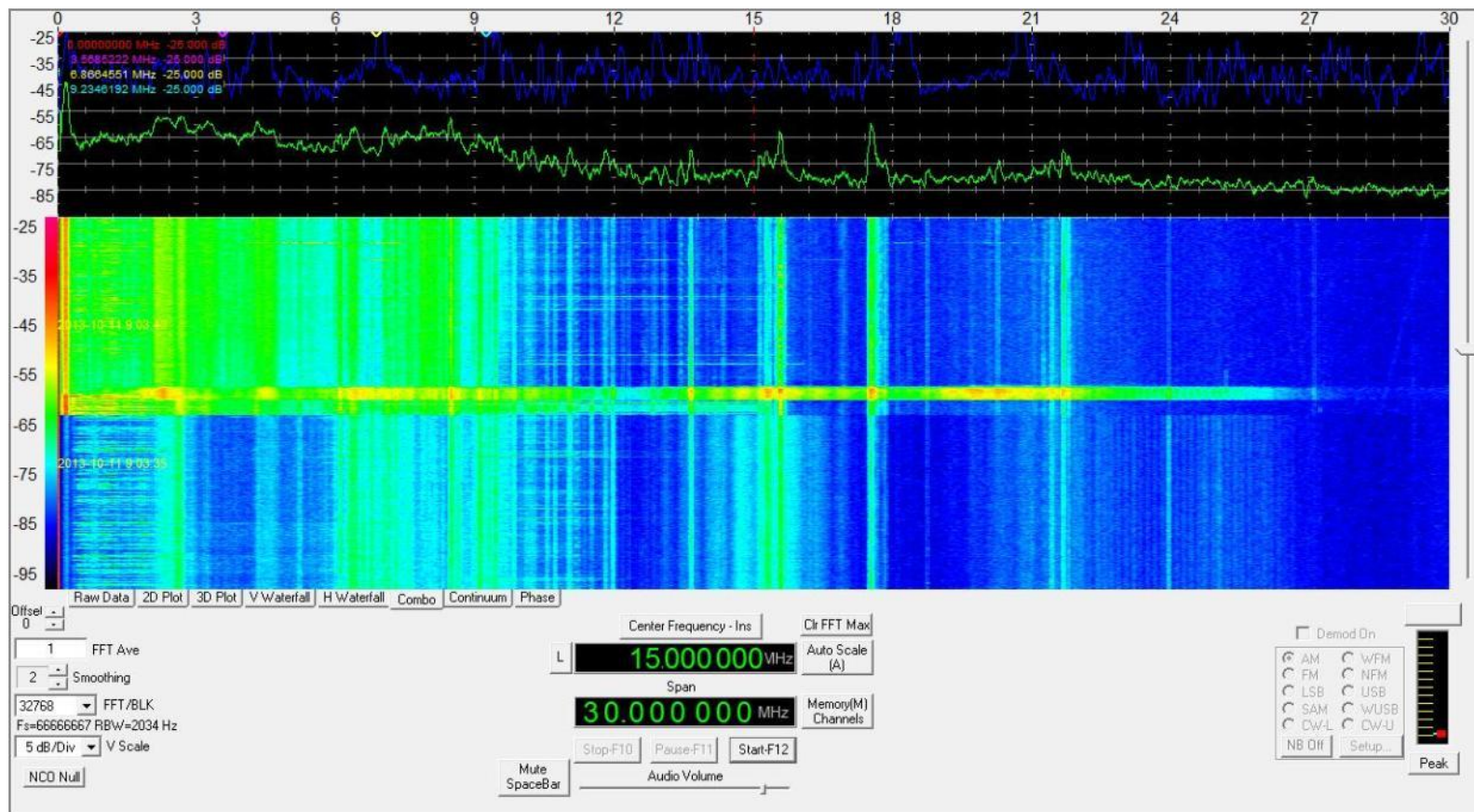


Zur Erstellung der Prognosen wurde die Sonnenfleckenanzahl der "Australian Government IPS Radio and Space Services" verwendet.
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Erstelldatum: 08.01.2013

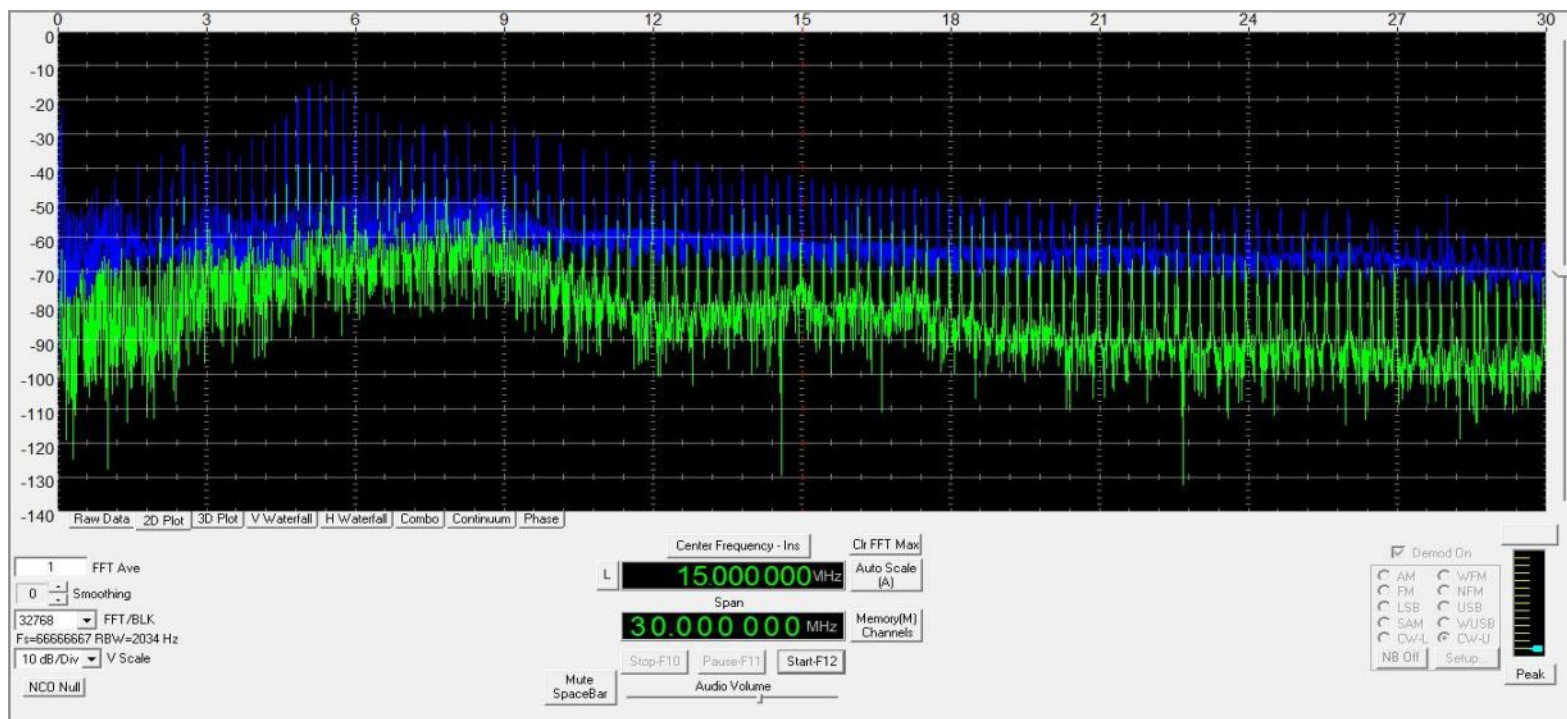
Verschiedene Antennenrichtungen

Empfangsloop um 90 Grad gedreht

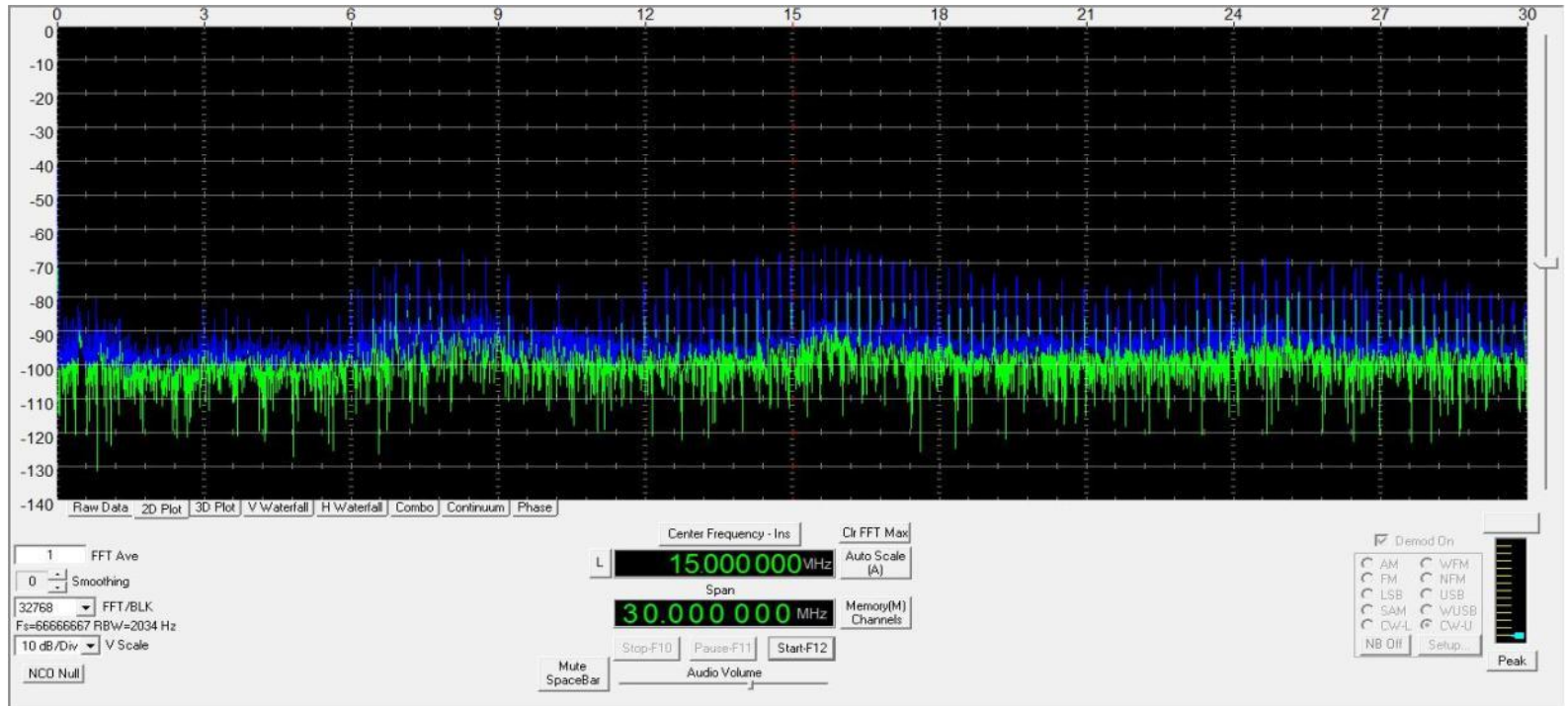


Erfahrungen Störungen

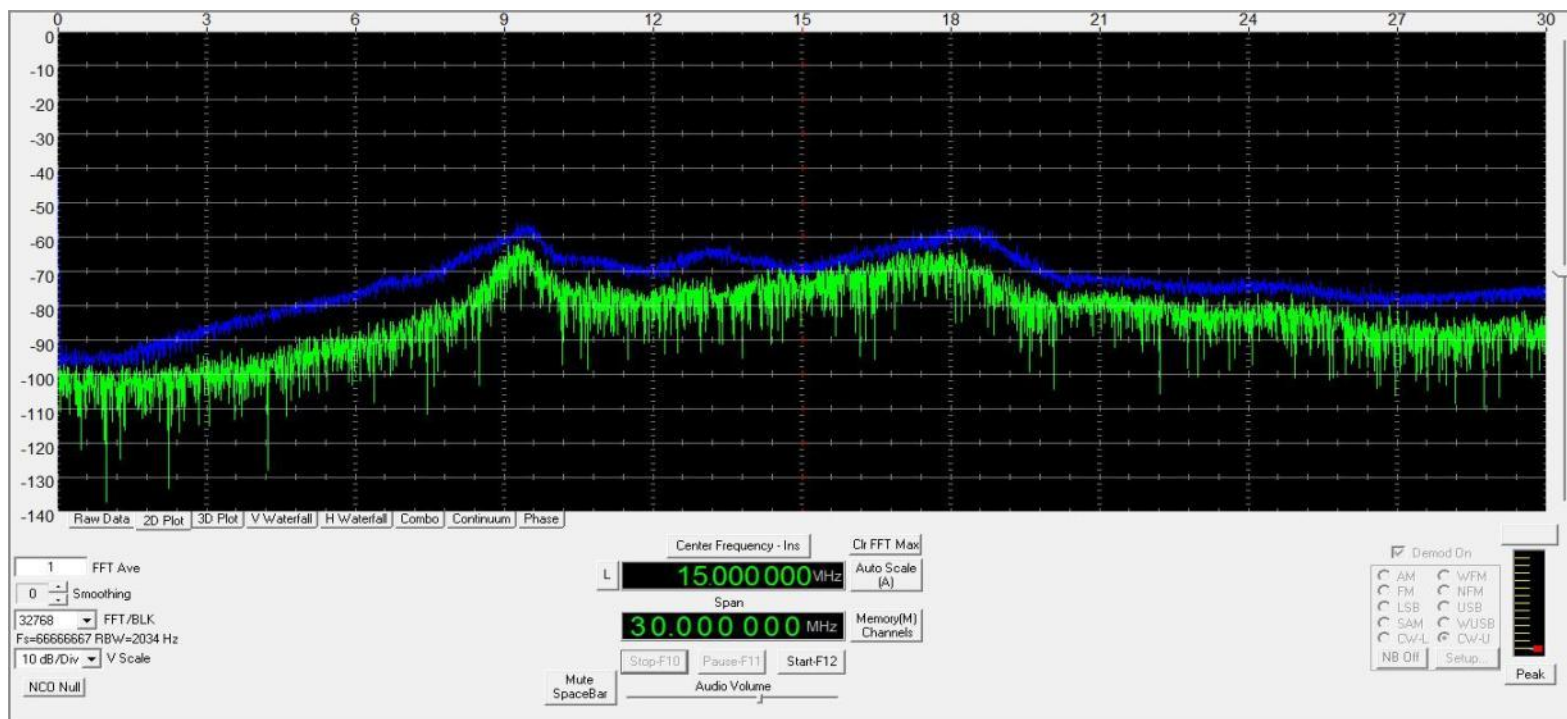
Datenkabel aufgerollt



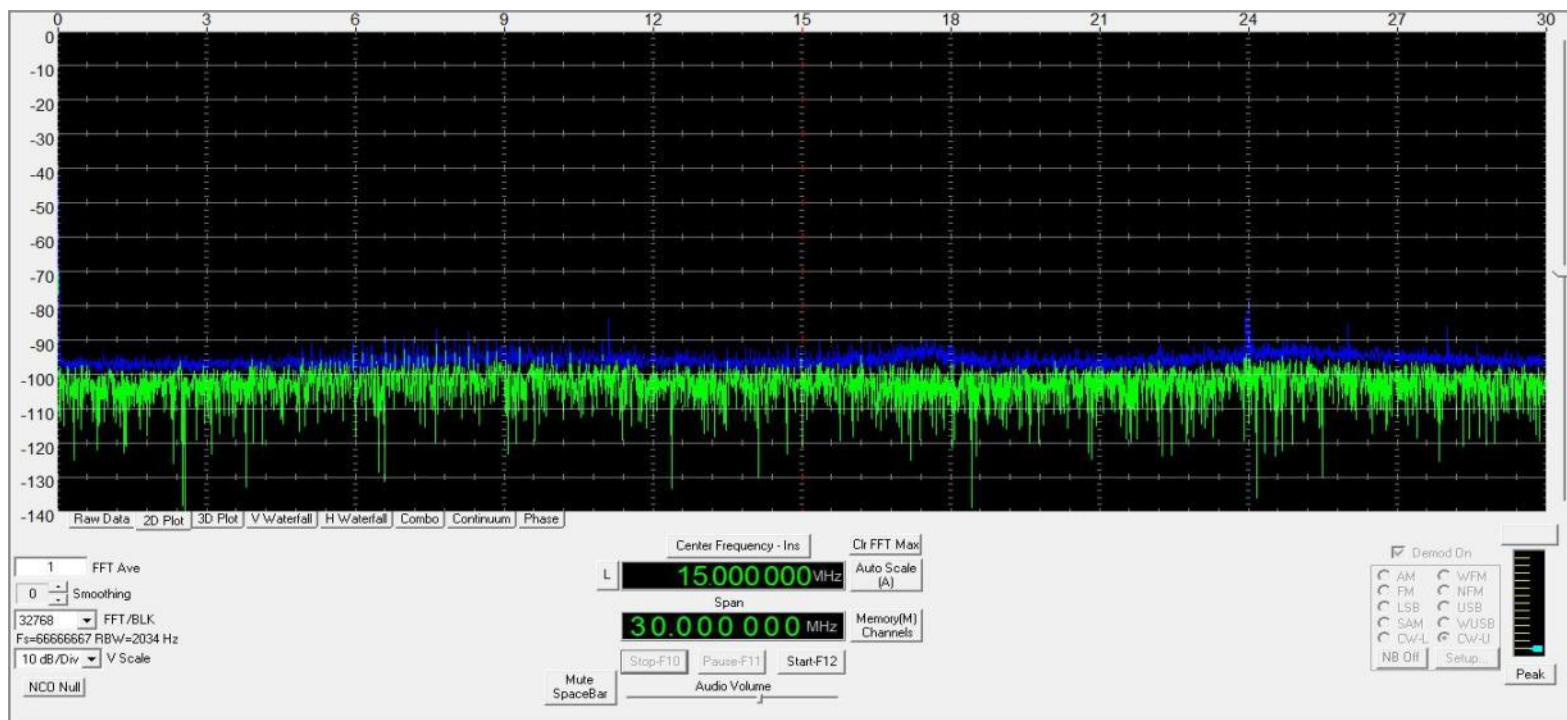
Datenkabel wie eine 8 gewickelt



IT Rack – Türe offen



IT Rack – Lochblech Türe geschlossen



***„Es ist nicht genug zu wissen,
man muss auch anwenden;***

***es ist nicht genug zu wollen,
man muss auch tun.“***

Goethe