

EME a MW Seminář 2019

EME from 4U1ITU

OK1DFC - ZDENĚK SAMEK



Plan of activity and license 4U1ITU

- Activity plan:
- OFCOM license

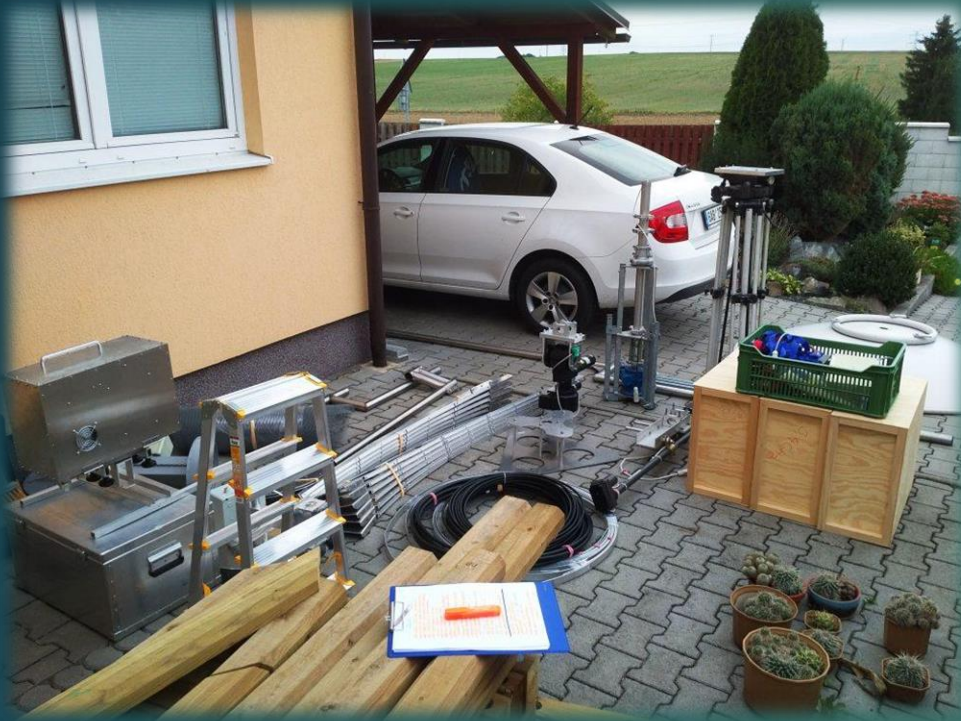
Frequency Band (MHz)	Antenna	Antenna Gain (dBi)	PA (W)
432 - 433	3,2m mesh dish effic.50%	20.2	1K
1296 - 1297	3,2m mesh dish effic.50%	29.7	1K
2300 - 2308	3,2m mesh dish effic.50%	34.6	100
2320 - 2400	3,2m mesh dish effic.50%	34.6	100
3400 – 3475	1,8m solid dish Andrew	35.4	100
5740 – 5780	1,8m solid dish Andrew	39.7	100
10368 - 10369	1,8m solid dish Andrew	44.8	50
24000 - 24050	1,8m solid dish Andrew	67	10

Team

- Braňo OM3YFT
- Attila OM1AM
- Zdeněk OK1DFC



Trip to Geneva – 4U1ITU HQ



- 180cm dish + accessories
- 320cm dish + accessories
- Bands 432 – 24048 MHz

Trip to Geneva – 4U1ITU HQ



- Loaded car
- 1296 MHz 19" and 19" controll box



Trip to Geneva – 4U1ITU HQ

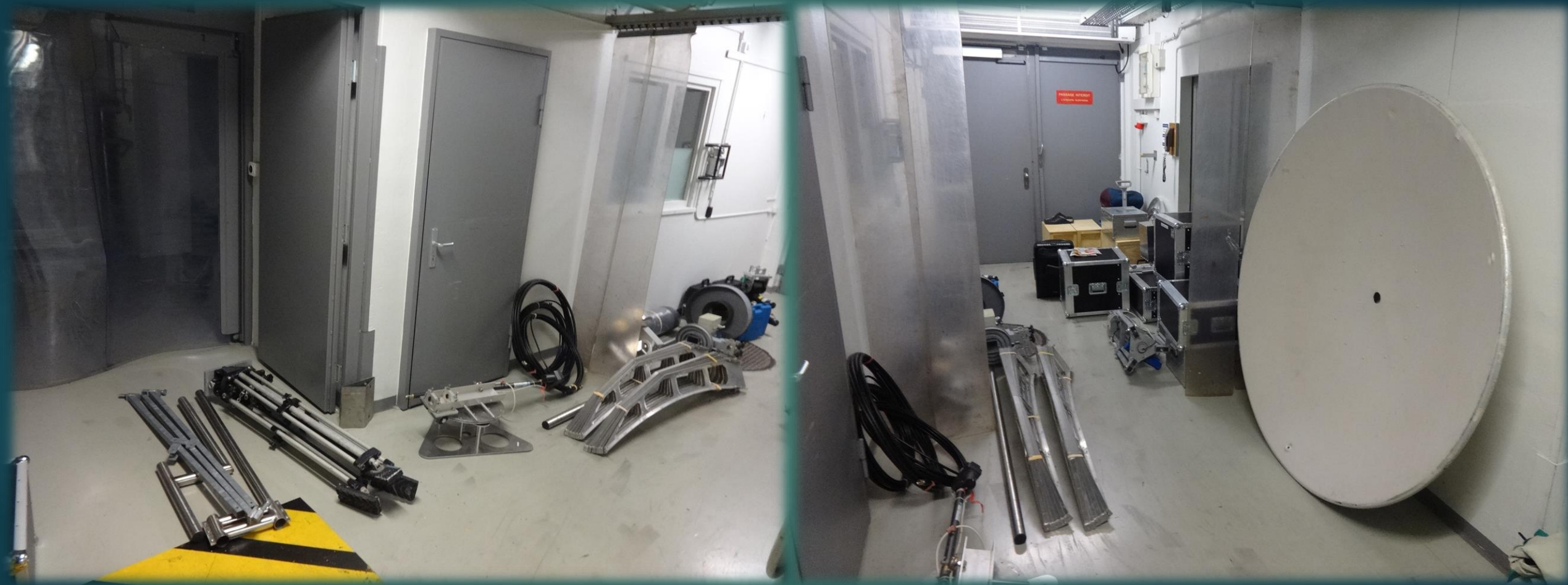


Build of station



- 16:30 Geneva 4U1TU
- Material for expedition

Build of station



- All material unloaded from car to 4U1TU HQ corridor

Build of station

- Build technology part



Build of station



- Material moved to the roof

Build of station



- 320cm dish and tripod – 432 MHz – 2320 MHz
- 180cm dish and tripod – 3400 MHz – 24048 MHz

Build of station



- 320cm dish and tripod – 432 MHz – 2320 MHz
- 180cm dish and tripod – 3400 MHz – 24048 MHz



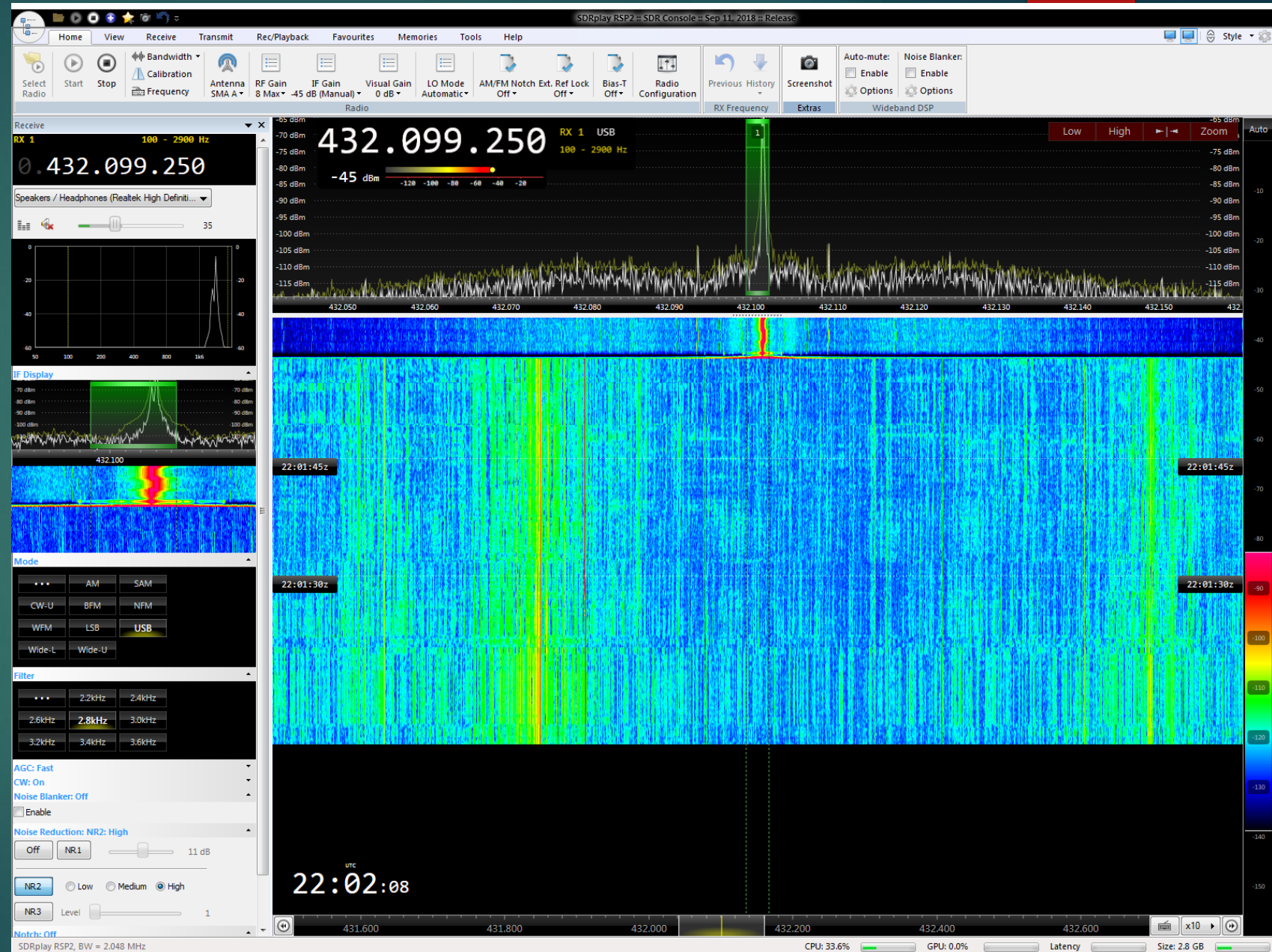
EME traffic

Band	QSO
432 MHz	35
1296 MHz	79
2320 MHz	41
3400 MHz	12
5760 MHz	17
10368 MHz	19
24048 MHz	4 – 1CW LX1DB
Total :	207 QSO

- For many stations new DXCC
- From 2320 MHz up to 24048 MHz first time QRV 4U1ITU
- 4U1ITU record on 10 GHz with VK7MO
- 23cm WAC award

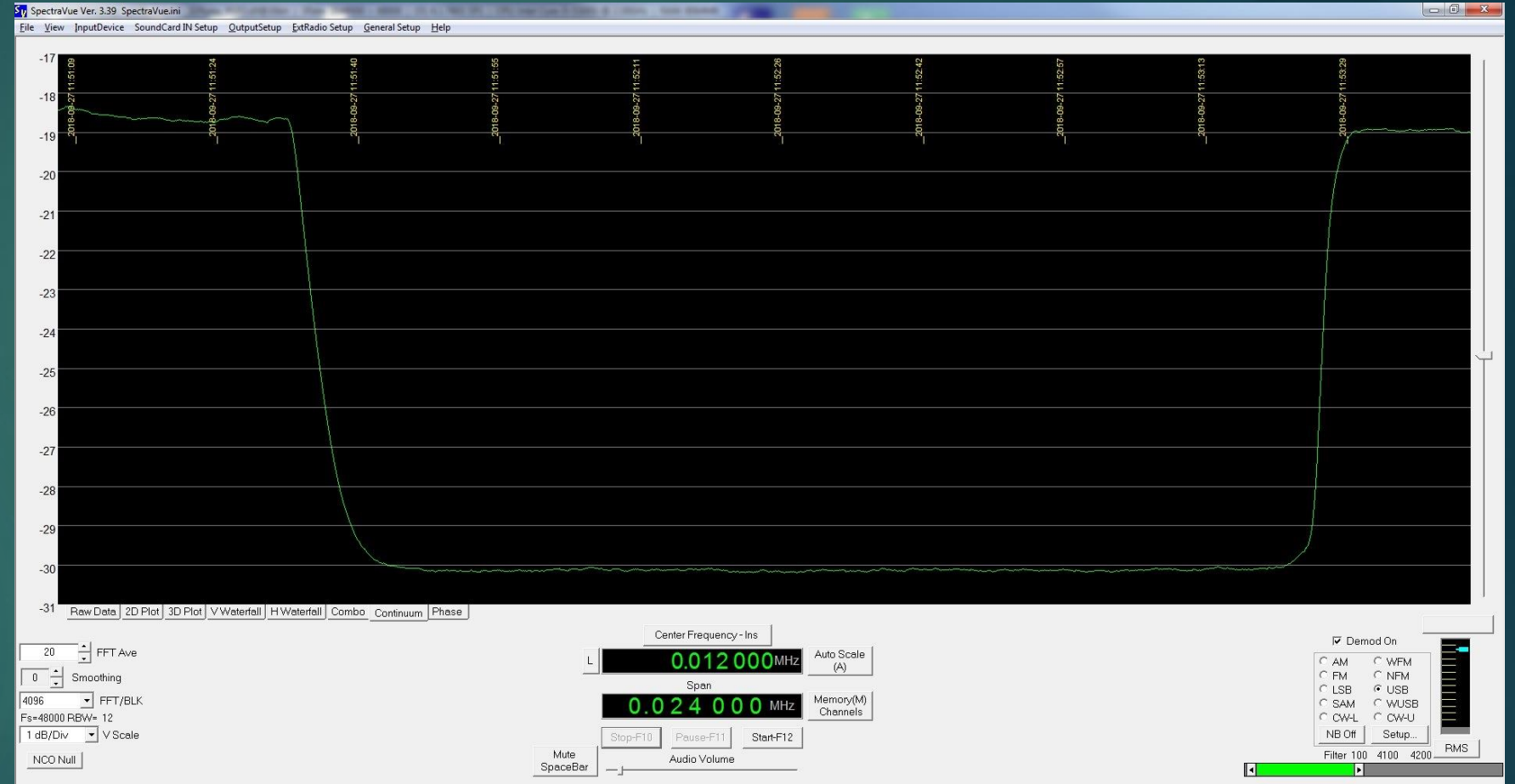
Interferency

- LAN everywhere
- LAN switch every corner
- UTP cables only
- Very old fashion 380V system with 4 weir only
- On 432 MHz 3 times damaged LNA



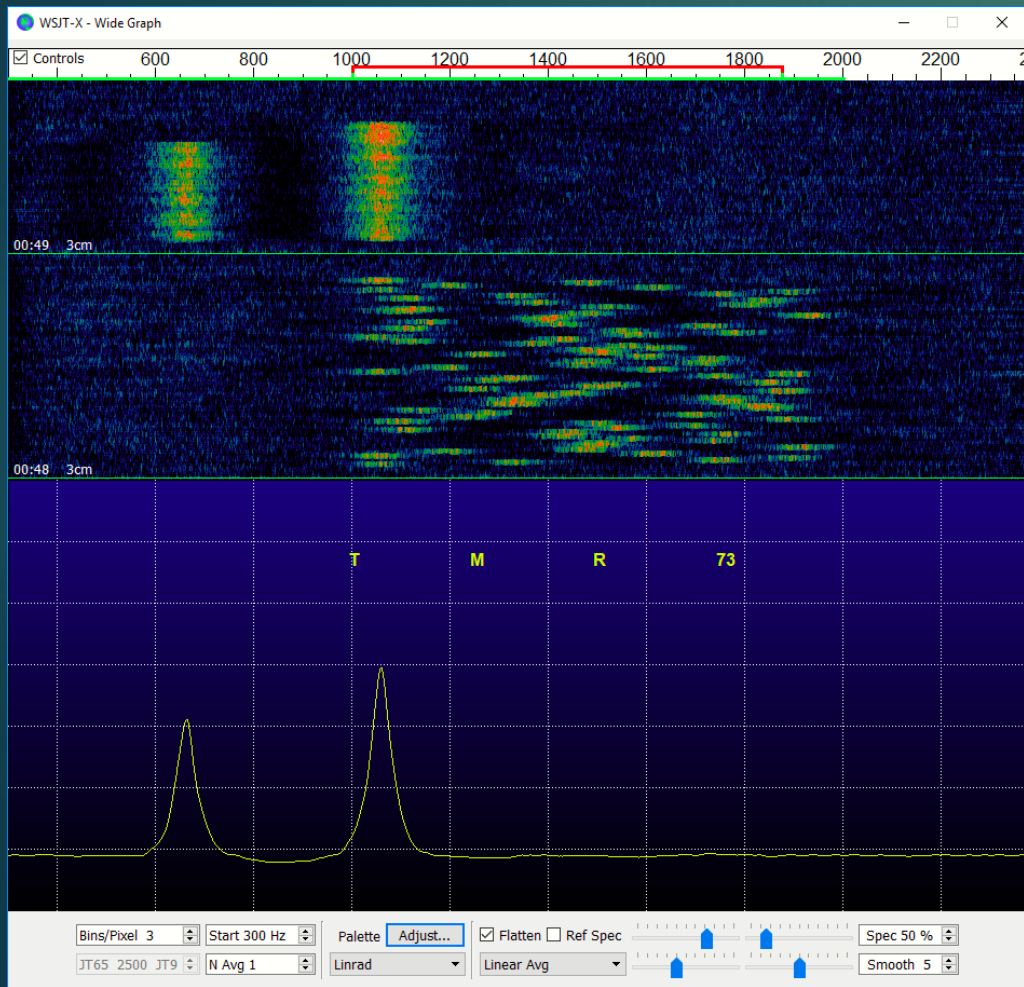
10 GHz traffic

- Sun noise 12,6dB



10 GHz traffic

- DLOSHF
- 10 GHz traffic



WSJT-X v1.9.1 by K1JT

File Configurations View Mode Decode Save Tools Help

Single-Period Decodes						Average Decodes					
UTC	dB	DT	Freq	Message		UTC	dB	DT	Freq	Message	
2337	-8	2.5	1050	:* 4U1ITU OK1KIR JN79	0	2338	Tx		1000	@ OK1KIR 4U1ITU -08	
2339	-7	3.0	1043	:* 4U1ITU OK1KIR R-13	0	2339	-7	3.0	1043	:* 4U1ITU OK1KIR R-13	0
2341	-8	2.4	1049	:* 4U1ITU OK1KIR 73	0	2340	Tx		1000	@ OK1KIR 4U1ITU RRR	
2343	-9	2.8	986	:* 4U1ITU OZ1FF J045	0	2341	-8	2.4	1049	:* 4U1ITU OK1KIR 73	0
2345	-8	2.7	969	:* 4U1ITU OZ1FF J045	0	2342	Tx		1000	@ CQ 4U1ITU JN36	
2347	-9	2.6	961	:* 4U1ITU OZ1FF R-12	0	2344	Tx		1000	@ OZ1FF 4U1ITU -09	
2349	-9	2.6	972	:* 4U1ITU OZ1FF R-12	0	2346	Tx		1000	@ OZ1FF 4U1ITU -09	
2351	-8	2.7	969	:* 4U1ITU OZ1FF 73	0	2348	Tx		1000	@ OZ1FF 4U1ITU -09	
2353	-15	2.8	992	:* 4U1ITU OK2AQ -16	0	2348	Tx		1000	@ OZ1FF 4U1ITU RRR	
2355	-15	2.9	991	:* 4U1ITU OK2AQ RRR	0	2350	Tx		1000	@ OZ1FF 4U1ITU RRR	
2357	-10	3.0	1015	:* 4U1ITU OK1CA J070	0	2352	Tx		1000	@ OK2AQ 4U1ITU JN36	
2359	-10	2.8	1000	:* 4U1ITU OK1CA R-10	0	2353	-15	2.8	992	:* 4U1ITU OK2AQ -16	0
0001	-10	2.9	1013	:* 4U1ITU OK1CA 73	0	2354	Tx		1000	@ OK2AQ 4U1ITU R-15	
0003	-25	4.0	1100	:*		2355	-15	2.9	991	:* 4U1ITU OK2AQ RRR	0
0005	-8	2.2	1021	:* 4U1ITU DF1OI -14	0	2356	Tx		1000	@ OK2AQ 4U1ITU 73	
0007	-6	2.3	1021	:* 4U1ITU DF1OI R-14	0	2358	Tx		1000	@ OK1CA 4U1ITU -10	
0009	-6	2.3	1019	:* 4U1ITU DF1OI RRR	0	0000	Tx		1000	@ OK1CA 4U1ITU RRR	
						0002	Tx		1000	@ CQ 4U1ITU JN36	
						0004	Tx		1000	@ CQ 4U1ITU JN36	
						0006	Tx		1000	@ DF1OI 4U1ITU -08	
						0007	-6	2.3	1021	:* 4U1ITU DF1OI R-14	0
						0008	Tx		1000	@ DF1OI 4U1ITU RRR	
						0009	-6	2.3	1019	:* 4U1ITU DF1OI RRR	0
						0010	Tx		1000	@ CQ 4U1ITU JN36	

Log QSO Stop Monitor Erase Decode **Enable Tx** Halt Tx Tune Menu

3cm 10 368,094 353 Tx even/1st

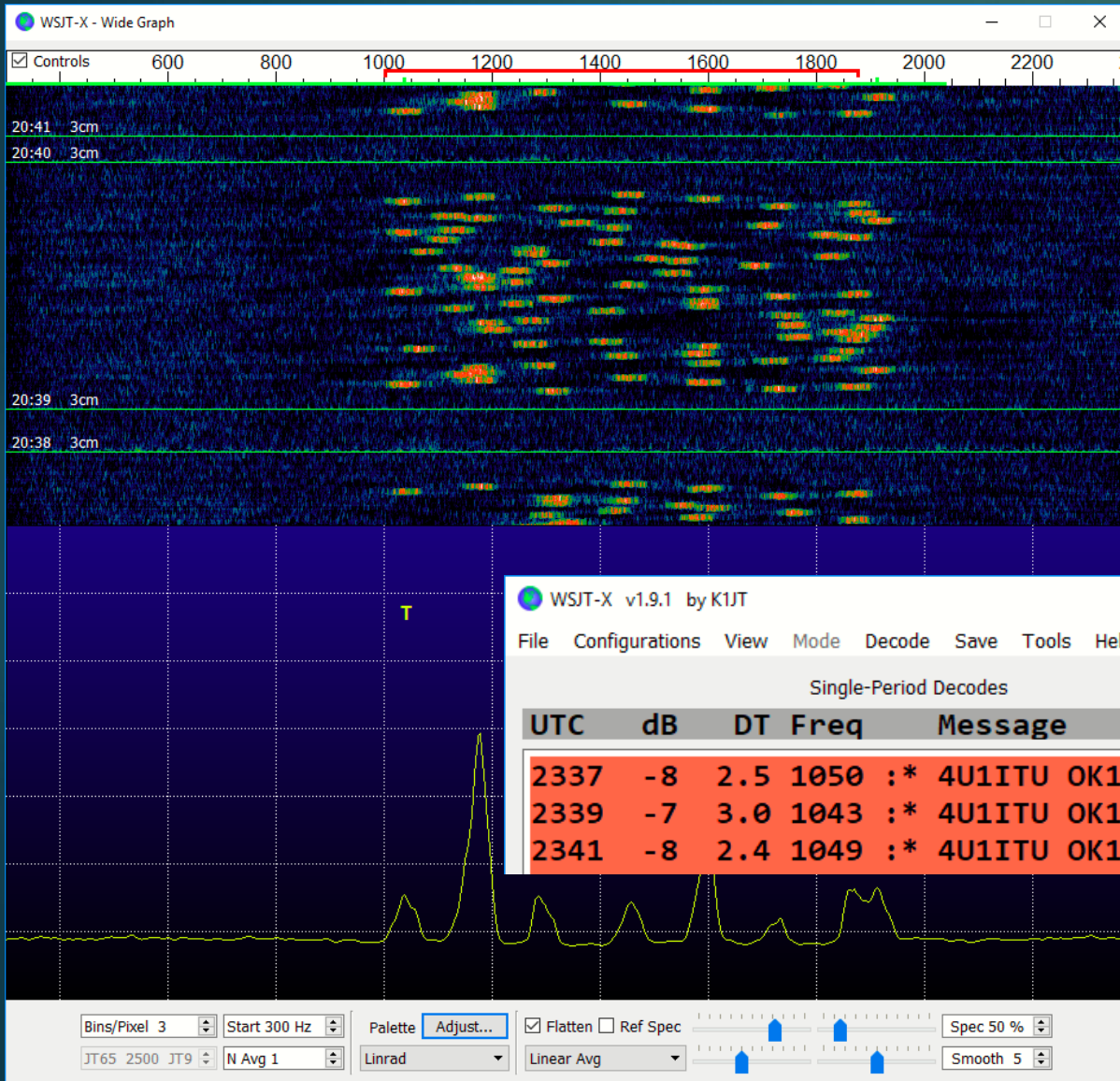
DX Call DF1OI DX Grid

Rx 1021 Hz Rx ← Tx F Tol 1000 Hold Tx Freq Report -8 Submode D Sync -1

2018 zář 28 00:10:07

Tx: CQ 4U1ITU JN36 QRA64 D Last Tx: DF1OI 4U1ITU RRR 7/60 WD:20m

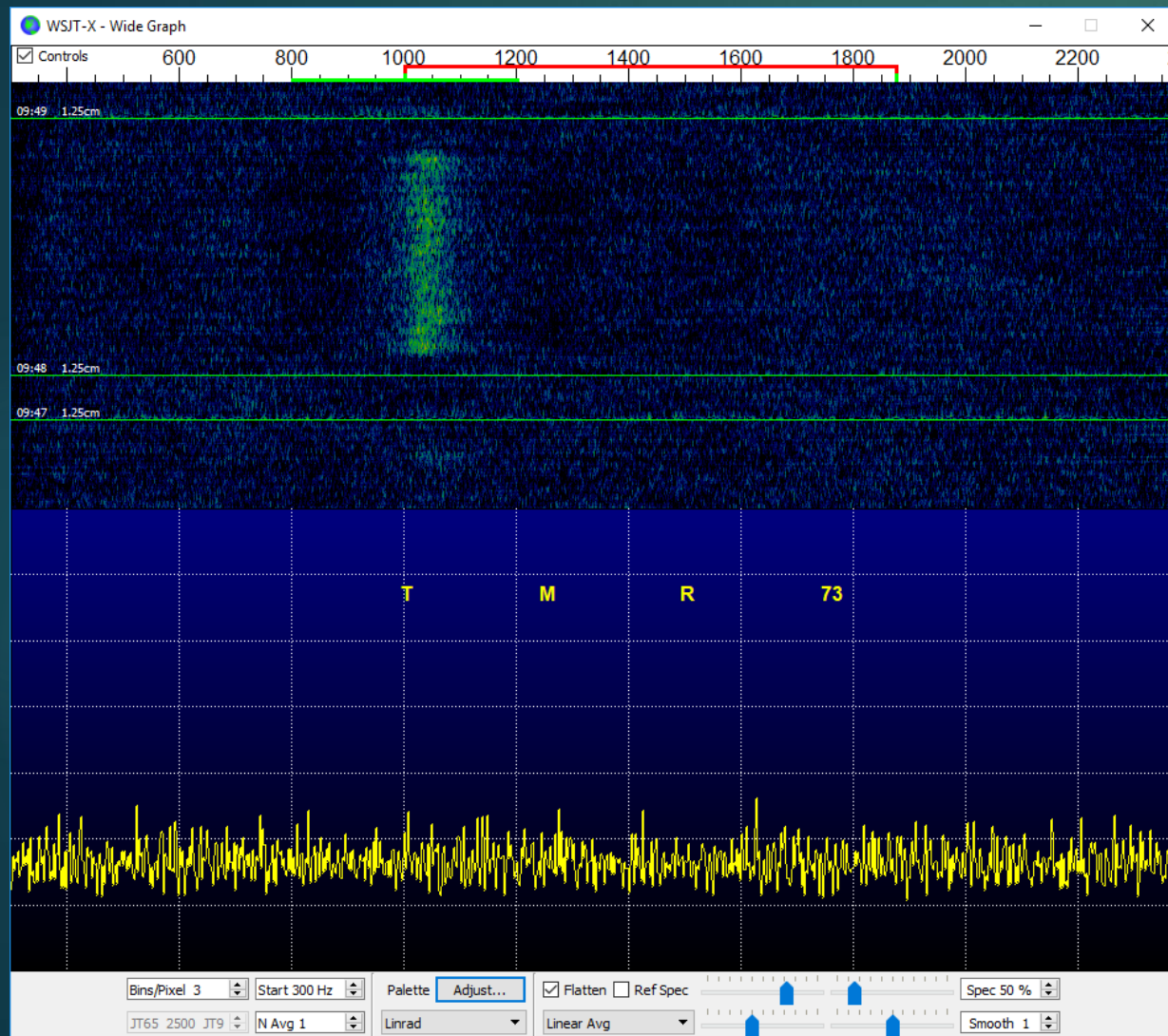
10 GHz traffic



- OK1KIR – very low spread
- OK1KIR QSO -7/-13dB – QRA64
- OK1KIR CW 559/559

24 GHz traffic

- OK1KIR 1000 Hz tuning tone
- 24 GHz QSO QRA 64 -14/-22dB



WSJT-X v1.9.1 by K1JT

File Configurations View Mode Decode Save Tools Help

Single-Period Decodes

UTC	dB	DT	Freq	Message
1946	-25	6.4	693	:*
1947	-19	2.6	1032	:* 4U1ITU OK1KIR JN79 3
1949	-17	2.6	1046	:* 4U1ITU OK1KIR JN79 0
1951	-17	2.7	1045	:* 4U1ITU OK1KIR JN79 0
1953	-16	2.8	1047	:* 4U1ITU OK1KIR JN79 0
1955	-17	2.6	1049	:* 4U1ITU OK1KIR JN79 0
1957	-18	1.9	1061	:* 4U1ITU OK1KIR JN79 3
1959	-14	2.7	1049	:* 4U1ITU OK1KIR JN79 0
2001	-14	2.7	1051	:* 4U1ITU OK1KIR JN79 0
2003	-14	2.8	1045	:* 4U1ITU OK1KIR R-22 0
2005	-13	2.7	1053	:* 4U1ITU OK1KIR R-22 0
2007	-15	2.6	1051	:* 4U1ITU OK1KIR R-22 0
2009	-14	2.7	1060	:* 4U1ITU OK1KIR R-22 0
2011	-14	2.4	1060	:* 4U1ITU OK1KIR R-22 0
2013	-14	2.8	1055	:* 4U1ITU OK1KIR 73 0

Average Decodes

UTC	dB	DT	Freq	Message
1948	Tx		1000	@ OK1KIR 4U1ITU -19
1950	Tx		1000	@ OK1KIR 4U1ITU -19
1950	Tx		1000	@ 1000 Hz
1952	Tx		1000	@ 1000 Hz
1954	Tx		1000	@ 1000 Hz
1956	Tx		1000	@ 1000 Hz
1958	Tx		1000	@ 1000 Hz
2000	Tx		1000	@ 1000 Hz
2001	-14	2.7	1051	:* 4U1ITU OK1KIR JN79 0
2002	Tx		1000	@ OK1KIR 4U1ITU -14
2003	-14	2.8	1045	:* 4U1ITU OK1KIR R-22 0
2004	Tx		1000	@ OK1KIR 4U1ITU -14
2004	Tx		1000	@ 1500 Hz
2005	-13	2.7	1053	:* 4U1ITU OK1KIR R-22 0
2006	Tx		1000	@ OK1KIR 4U1ITU RRR
2007	-15	2.6	1051	:* 4U1ITU OK1KIR R-22 0
2008	Tx		1000	@ OK1KIR 4U1ITU RRR
2010	Tx		1000	@ OK1KIR 4U1ITU RRR
2012	Tx		1000	@ OK1KIR 4U1ITU RRR
2013	-14	2.8	1055	:* 4U1ITU OK1KIR 73 0
2014	Tx		1000	@ OK1KIR 4U1ITU RRR
2014	Tx		1000	@ CQ 4U1ITU JN36
2014	Tx		1000	@ 1000 Hz

Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune Menu

1.25cm 24 048,127 732 Tx even/1st Tx 1000 Hz Tx ← Rx Tx ← Rx

Rx 1049 Hz Rx ← Tx F Tol 1000 Hold Tx Freq Report -14 Submode D Sync -1

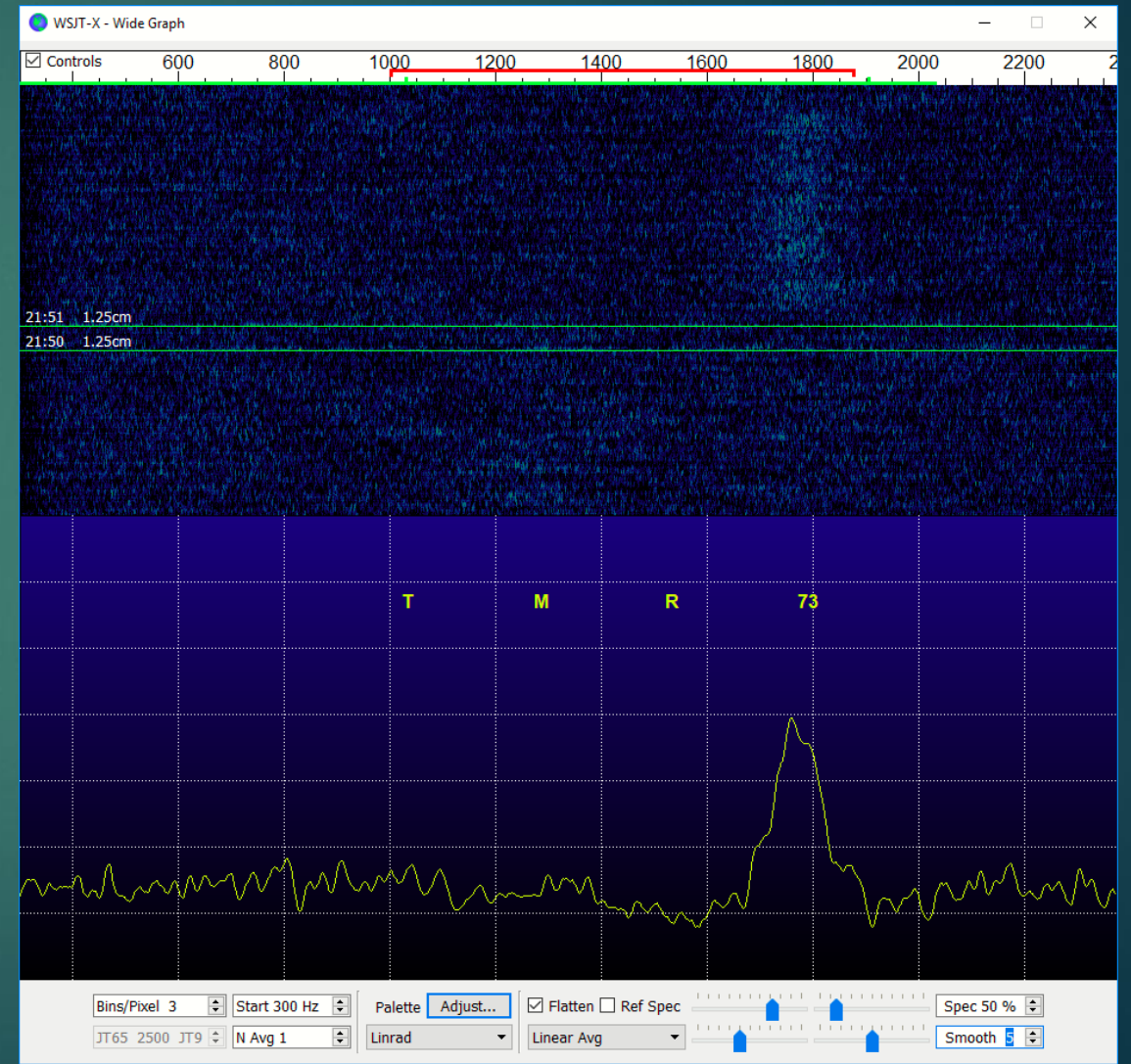
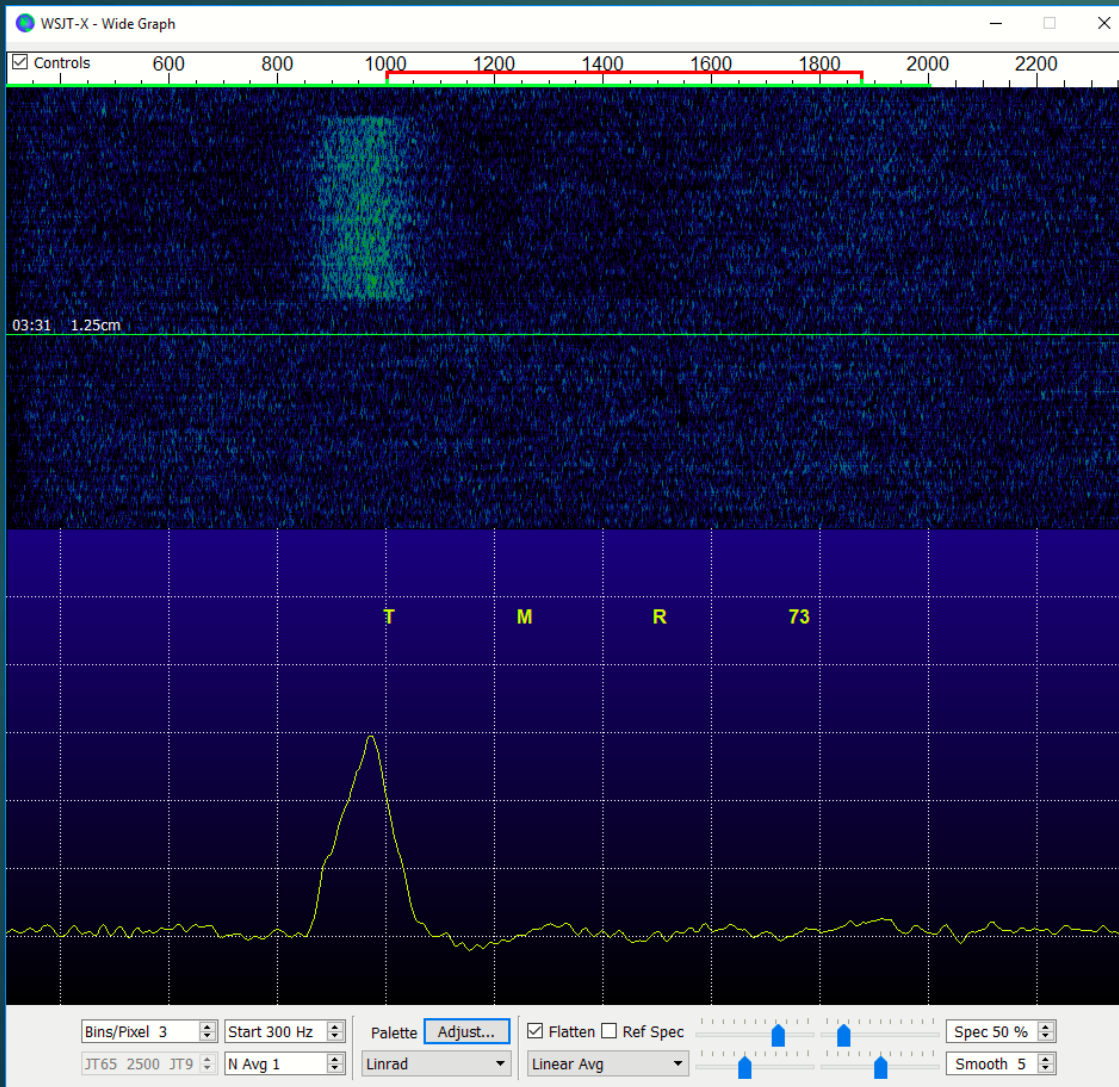
DX Call OK1KIR DX Grid JN79 Az: 58 760 km Lookup Add

2018 zář 27 20:15:11

Receiving QRA64 D Last Tx: 1000 Hz 11/60 WD:20m

24 GHz

- W5LUA tuning tone 1000 Hz
- OZ1LPR 73 tone short cut



24 GHz

- JA1WQF 23W n.c.
- G3WDG QSO -15/-24dB QRA64

WSJT-X v1.9.1 by K1JT

File Configurations View Mode Decode Save Tools Help

Single-Period Decodes					Average Decodes				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
2033	-25	4.9	1104	:	2034	Tx	1000	@	1000 Hz
2035	-25	4.9	831	:	2036	Tx	1000	@	1000 Hz
2037	-25	1.6	1045	:*	2038	Tx	1000	@	1000 Hz
2039	-15	2.6	995	:* 4U1ITU JA1WQF QM05 0	2040	Tx	1000	@	JA1WQF 4U1ITU -15
2041	-16	2.6	1001	:* 4U1ITU JA1WQF QM05 0	2041	-16	2.6	1001	:* 4U1ITU JA1WQF QM05 0
2043	-20	2.5	999	*\$ 4U1ITU JA1WQF QM05 f	2042	Tx	1000	@	JA1WQF 4U1ITU -15
2045	-19	2.5	981	*\$ 4U1ITU JA1WQF QM05 f	2042	Tx	1000	\$	JA1WQF 4U1ITU -15
2047	-17	2.5	994	*\$ 4U1ITU JA1WQF QM05 f	2043	-20	2.5	999	*\$ 4U1ITU JA1WQF QM05 f
2049	-19	2.6	994	*\$ 4U1ITU JA1WQF QM05 d1	2044	Tx	1000	\$	JA1WQF 4U1ITU -15
2051	-19	2.6	1172	##	2046	Tx	1000	\$	JA1WQF 4U1ITU -15
2051	-19	2.6	1176	##	2047	-17	2.5	994	*\$ 4U1ITU JA1WQF QM05 f
2051	-19	2.6	1176	##	2048	Tx	1000	\$	JA1WQF 4U1ITU -15
2053	-18	2.5	1014	*\$ 4U1ITU JA1WQF QM05 f	2049	-19	2.6	994	*\$ 4U1ITU JA1WQF QM05 d1
2055	-22	2.5	1937	*\$	2050	Tx	1000	\$	JA1WQF 4U1ITU -15
2057	-23	-0.4	1946	##	2052	Tx	1000	\$	JA1WQF 4U1ITU -15
2059	-21	2.5	1014	*\$ 4U1ITU JA1WQF QM05 d1	2054	Tx	1000	\$	JA1WQF 4U1ITU -15
2101	-19	2.6	1010	*\$ 4U1ITU JA1WQF QM05 f	2056	Tx	1000	\$	JA1WQF 4U1ITU -15
2103	-22	-1.3	1686	##	2058	Tx	1000	\$	@1000 (TUNE)
2105	-22	-1.3	1633	##	2100	Tx	1000	\$	@1000 (TUNE)
2106	-22	4.6	1872	*\$	2101	-19	2.6	1010	*\$ 4U1ITU JA1WQF QM05 f
					2102	Tx	1000	\$	JA1WQF 4U1ITU -19
					2104	Tx	1000	\$	JA1WQF 4U1ITU -19

Log QSO Stop Monitor Erase Clear Avg Decode Enable Tx Halt Tx Tune Menus

1.25cm 24 048,149 932 Tx even/1st Tx 1000 Hz Tx ← Rx PA0BAT JO31fx Az: 2 640 km F Tol 1000 Hold Tx Freq Report -19 Submode F Sync -1 Sh Auto Seq Tx6

2018 zář 27 21:07:28

Receiving JT4 F Last Tx: JA1WQF 4U1ITU -19 28/60 WD:20m

WSJT-X v1.9.1 by K1JT

File Configurations View Mode Decode Save Tools Help

Single-Period Decodes					Average Decodes				
UTC	dB	DT	Freq	Message	UTC	dB	DT	Freq	Message
2017	-25	5.4	967	:	2018	Tx	1000	@	1000 Hz
2019	-24	2.9	1008	:*	2020	Tx	1000	@	1000 Hz
2021	-17	2.8	1008	:* 4U1ITU G3WDG IO92 0	2022	Tx	1000	@	G3WDG 4U1ITU -17
2023	-15	2.8	1006	:* 4U1ITU G3WDG R-24 0	2023	-15	2.8	1006	:* 4U1ITU G3WDG R-24 0
2025	-17	2.8	1013	:* 4U1ITU G3WDG R-24 0	2024	Tx	1000	@	G3WDG 4U1ITU -17
2027	-15	2.8	1001	:* 4U1ITU G3WDG R-24 0	2024	Tx	1000	@	G3WDG 4U1ITU RRR
2029	-15	2.8	1011	:* 4U1ITU G3WDG R-24 0	2025	-17	2.8	1013	:* 4U1ITU G3WDG R-24 0
2031	-15	2.8	1005	:* 4U1ITU G3WDG 73 0	2026	Tx	1000	@	G3WDG 4U1ITU RRR
					2027	-15	2.8	1001	:* 4U1ITU G3WDG R-24 0
					2028	Tx	1000	@	G3WDG 4U1ITU RRR
					2029	-15	2.8	1011	:* 4U1ITU G3WDG R-24 0
					2030	Tx	1000	@	G3WDG 4U1ITU RRR
					2031	-15	2.8	1005	:* 4U1ITU G3WDG 73 0
					2032	Tx	1000	@	G3WDG 4U1ITU RRR
					2032	Tx	1000	@	CQ 4U1ITU JN36
					2032	Tx	1000	@	1000 Hz

Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune Menus

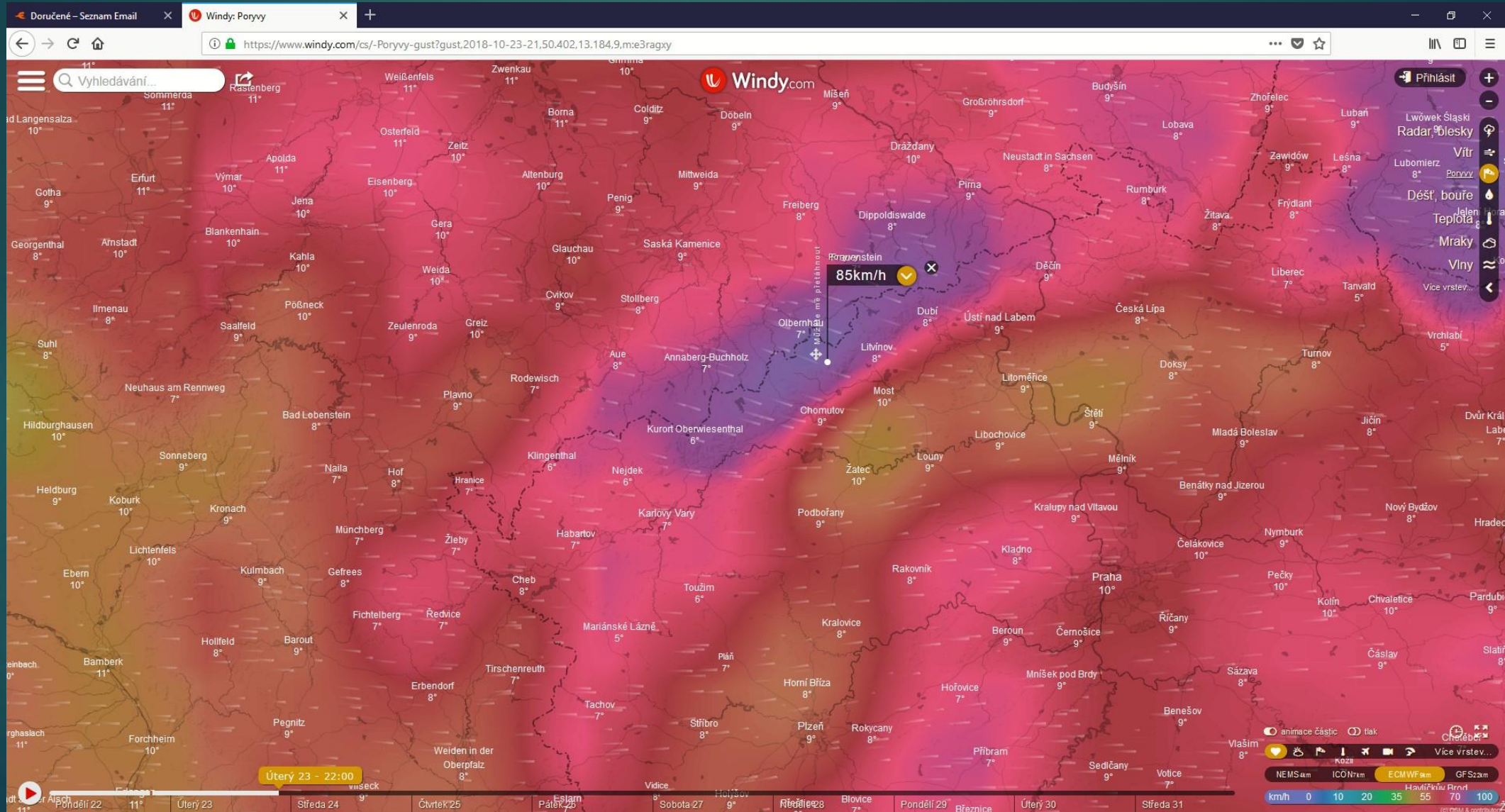
1.25cm 24 048,127 348 Tx even/1st Tx 1000 Hz Tx ← Rx G3WDG IO92 Rx 1006 Hz Rx ← Tx Az: 326 868 km F Tol 1000 Hold Tx Freq Report -15 Submode D Sync -1 Sh Auto Seq Tx6

2018 zář 27 20:33:04

Receiving QRA64 D Last Tx: 1000 Hz 4/60 WD:20m

Weather

- WX problems
- Strong wind
- Closing station



Go home..... See you soon
from next expedition.....





Thank you for attention !!!

Questions ?????

