

# IARU Monitoring System Region 1



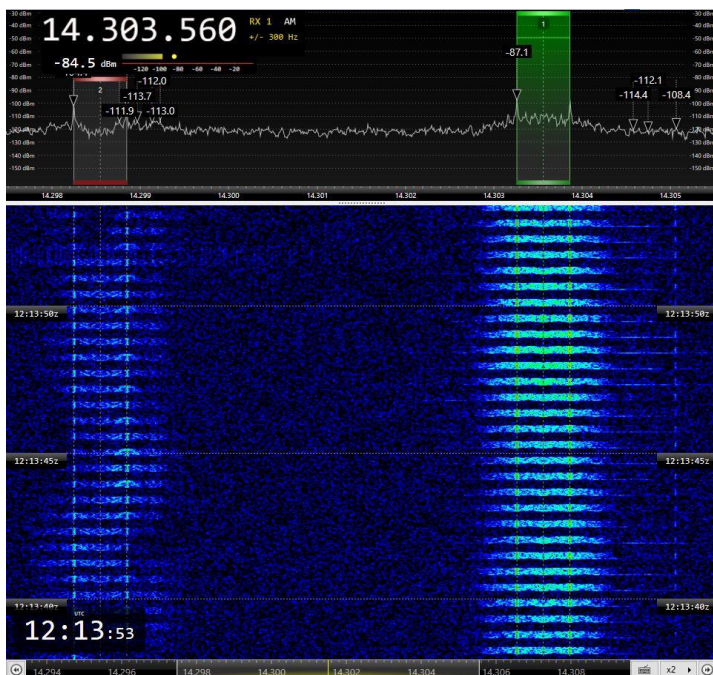
Monthly Newsletter - May 2023

## News and info

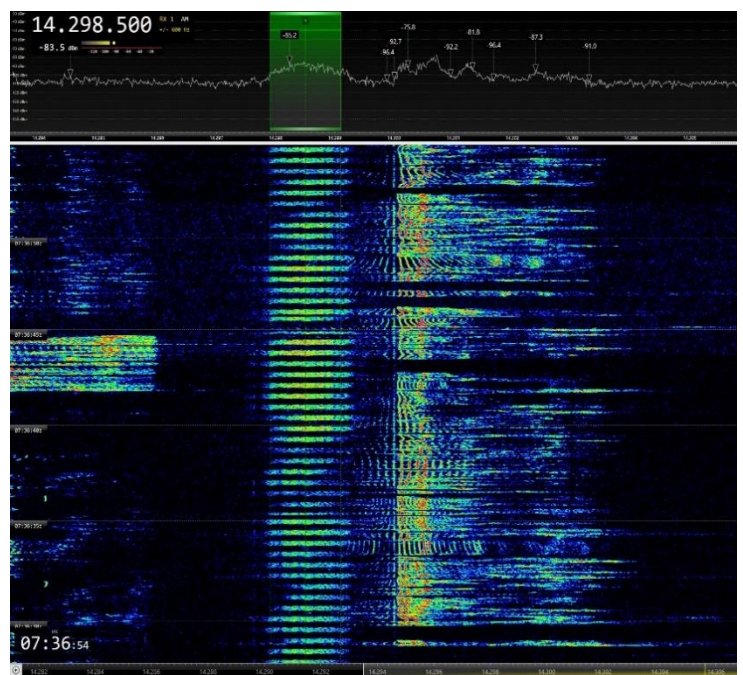
Among the usual annoying intrusions we have been receiving almost daily for years in our amateur bands, some have a "seasonal" behaviour, surely due to propagation, schedules and other reasons: well-known, they come back every year, around the same time.

Examples of such intrusions are, for instance, those using A1A (CW) on 14108 kHz CF, transmitted by RUS MIL stations, which we have been receiving for years at this season, sending encrypted QTC almost daily on this frequency, which suddenly disappear until another season, or until the next year.

The same seems to be true for other modes, such as the DPRK-FSK 600 ARQ (F1B. SH = 600 Hz. 600 Bd) and DPRK-PSK 1200 ARQ (PSK. BW = 1K20E), both from KRE, which we already started receiving last month, and which have been found transmitting almost daily on 20 m, on 14098.5 kHz, 14198.5 kHz CF and 14298.5 kHz CF, as well as sporadically on other frequencies and bands (mostly on 15 m) during May.



2 x DPRK-FSK 600 ARQ (SH = 600 Hz. Bd = 600) on 20 m.



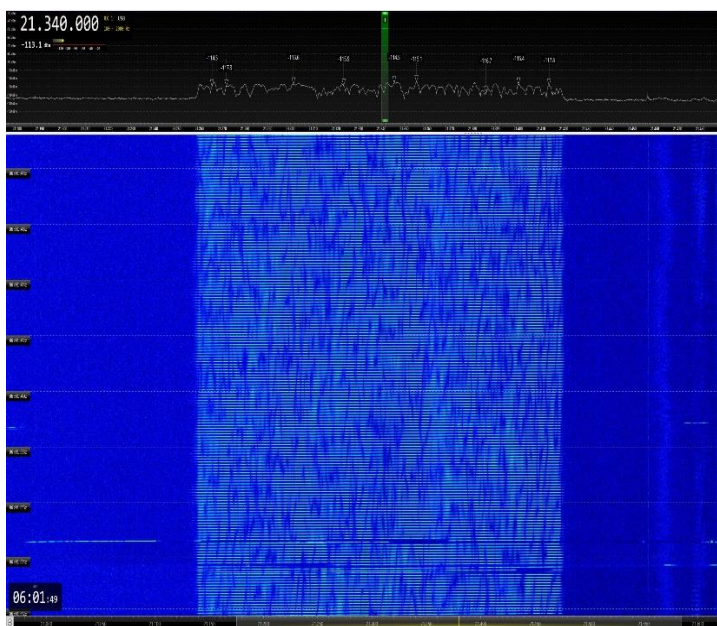
DPRK-PSK 1200 ARQ (PSK: BW = 1K20E) on 20 m

Another clear example of this "seasonal" type of intrusion is that of a large number of illegal fishing buoys, which mostly transmit using A1A (CW), but also F1B (FSK) in the 10m band, from 28000 to 28500 kHz. They are usually best received during the summer months, although we have already started copying some of them this month.

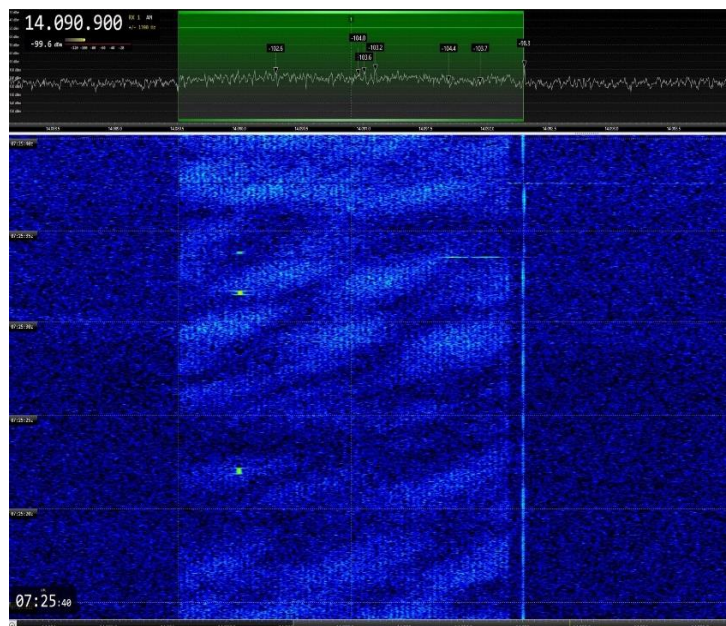
As for the intrusions that damage our bands on a daily basis every year, the most numerous are OTH radar transmissions and those in MIL modes, and that was true also during May. Amongst them, together with the DPR-FSK 600 ARQ and



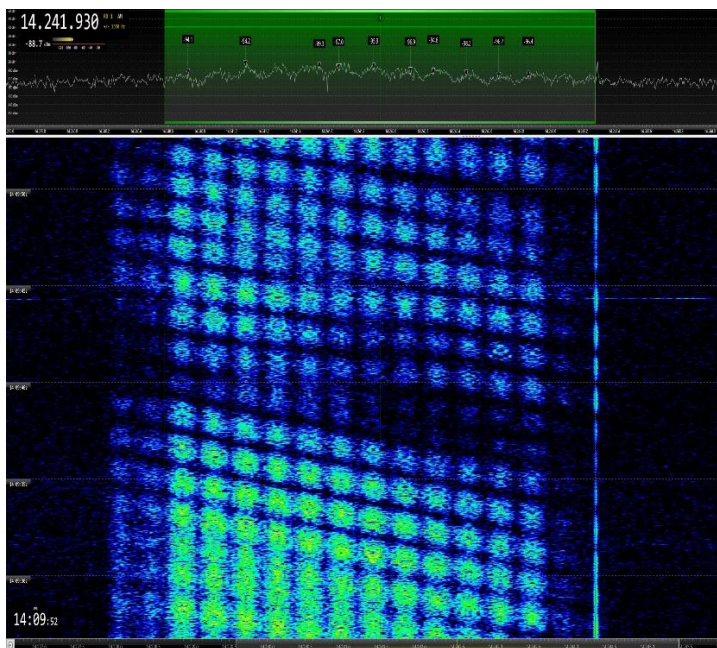
DPRK-PSK 1200 ARQ transmissions, we can highlight long-lasting CIS-12 transmissions (J7D. BW = 2K70E. 12 x 120 Bd + pilot line) on 40 and 20m as well as the almost daily reception of a LINK-11 CLEW DSB (B7D. BW = 6K0E. 75 Bd) on 7159 kHz CF.



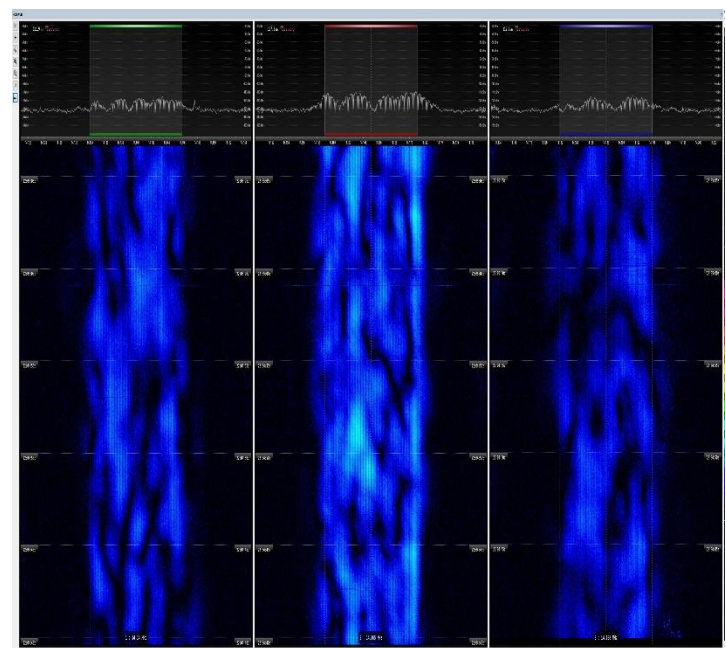
CHN wideband OTHR on 15 m. BW 160K0E. 10 sps



OFDM on 20 m. CIS-60. Aka Hig Data Rate modem. RUS. BW = 2K80E



CIS-12 on 20 m. J7D. BW = 2K70E. 12 x 120 Bd



OTHR Contayner. RUS. BW = 12K0E. 40 sps..3 simultaneous TX on 20m

But these were not the only modes we received during May (find other screenshots at the end of this Newsletter).

The transmissions sent on J3E-U (USB) by Spanish fishermen on 21000 kHz – male voices, always the same operators, Spanish language with strong Southern accent -, lately received almost daily, operating on this frequency for years despite the fact that the Spanish PTT has been informed several times about these illegal transmissions, are clear and excessively recurrent examples of intrusions and abuse of the amateur radio bands other than OTH radars and MIL transmissions.

Like on April, we received a SuperDARN radar transmitting bursts (BW ca 5K0E) from 14200 kHz CF to 14335 kHz CF, which was often reported until May the 14<sup>th</sup>. Unfortunately, these transmissions reappeared on May the 28<sup>th</sup> and the 29<sup>th</sup>.

## Detailed reports of national coordinators

**Abbreviations used** (as per IARUMS definitions)

**aka** = also known as | **BC** = Broadcast | **BD** = Baud, (or also Burst duration) | **BRI** = Burst repetition interval | **BW** = Bandwidth | **ca** = approximate | **CHN** = **PRC** = People’s Republic of China | **CF** = Center frequency | **DF** = Direction finding (radio location; see also TDoA) | **FMCW** = frequency modulated continuous wave | **FMOP** = frequency modulated on pulse | **OTHR** = over the horizon radar | **Radar** = if exact mode unknown | **SH** = Shift (Hz) | **sps** = sweeps per second | **TDoA** = Time difference of arrival | **ui** = unidentified.

**DARC; Daniel, DL3RTL. Credit to monitors: DB3TA, Alex; DL2SCH, Jürgen; DL2LAQ, Norbert; DB4UP, Christoph; DO1LR, Christian; DD1HV, Viktor; DB9EV, Frank; DO4BY, Tobias; DB1TH, Tobias; DJ3AS, Harald; DC9LJ, Jens; DL4MGD, Michael; DL1MKK, Veit; DF5JL, Tom; DK4ZZ, Timo; OE5RBO, Roland; F4FPR, Benjamin; DO2ITH, Michael; DL5BCT, Peter; DJ9UN, Alain**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
6999,8	2225	08	05			PSK		2k6	CIS-12 NOR
6999,8	1900	09	05			PSK2		2k6	CIS-12 NOR
6999,8	2012	17	05	RUS		PSK2		2k6	CIS-12 NOR
7000,0	2149	19	05	RUS		PSK2		2k6	CIS-12 NOR
7002,0	1856	24	05	RUS		FMOP	40	12k	OTHR Contayner
7024,8	2012	17	05	RUS		PSK		2k6	CIS-12
7032,0	1928	03	05			J3E-U		3k5	russian music loop
7047,0	0006	23	05	RUS		FMOP	40	12k	OTHR Contayner
7059,8	1710	08	05	RUS		PSK		2k6	CIS-12
7059,8	1855	09	05	RUS		PSK		2k6	CIS-12
7059,8	2100	15	05	RUS		PSK		2k6	CIS-12
7059,8	2013	17	05	RUS		PSK		2k6	CIS-12
7070,0	1838	17	05			J3E-L		3k	UKR/RUS radio war
7089,8	1946	26	05			PSK		2k5	LINK11 SLEW
7095,0	2030	03	05			J3E-L		3k	UKR/RUS radio war
7123,0	2102	10	05	RUS		FMOP	40	12k	OTHR Contayner
7146,8	1945	02	05	RUS		PSK		2k6	CIS-12
7159,0	2014	17	05			PSK		6k	LINK11 CLEW DSB
7159,0	2116	23	05			PSK		6k	LINK11 CLEW DSB
7159,0	1856	24	05			PSK		6k	LINK11 CLEW DSB
7177,0	2102	10	05	RUS		FMOP	40	12k	OTHR Contayner
7182,0	1744	23	05	RUS		PSK		2k6	CIS-12
7187,0	2348	22	05	RUS		FMOP	40	12k	OTHR Contayner
14005,0	0925	10	05			PSK		2k6	CIS-12 NOR
14008,0	0955	10	05			F1B	50	250	CIS-36-50
14117,8	0941	06	05	RUS		PSK		2k6	CIS-12
14117,8	0955	06	05	RUS		PSK		2k6	CIS-12
14178,0	2008	03	05	RUS		FMOP	40	12k	OTHR Contayner
14182,0	0546	24	05	RUS		FMOP	40sps	12 KHz	OTHR Typ Contayner RUS
14183,0	1418	01	05	RUS		FMOP	40	12k	OTHR Contayner
14184,0	1022	17	05	RUS		FMOP	40sps	14 KHz	OTHR Typ Contayner RUS
14196,0	1900	01	05	RUS		FMOP	40	12k	OTHR Contayner



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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14196,0	1930	01	05	RUS		FMOP	40	12k	OTHR Contayner
14196,0	0544	06	05	RUS		FMOP	40sps	12 KHz	OTHR Typ Contayner RUS
14196,0	0750	29	05	RUS		FMOP	40	12k	OTHR Contayner
14236,0	0652	21	05	RUS		PSK		2k6	CIS-12
14236,0	1740	23	05	RUS		PSK		2k6	CIS-12
14291,0	1950	26	05	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
14340,0	1740	23	05	RUS		FMOP	40	12k	OTHR Contayner
15116,8	0930	28	05	RUS		F1B	50	250	CIS-50-50
18107,0	1524	01	05	RUS		F1B	50	200	CIS-50-50
18117,0	1130	28	05	RUS		FMOP	40	12k	OTHR Contayner
18176,0	0700	29	05	RUS		FMOP	40	12k	OTHR Contayner, splattering into 17m band
21000,0	1625	02	05			J3E-U		ca. 3 KHz	spanish speaking fisher
21000,0	1511	03	05			J3E-U		ca. 3 KHz	spanish speaking fisher
21000,0	1515	04	05			J3E-U		ca. 3 KHz	spanish speaking fisher
21000,0	0925	09	05			J3E-U		3k	fishermen, spanish language
21000,0	1648	24	05			J3E-U		3k	spanish speaking pirates
21105,0	0702	29	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21125,0	0937	03	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21125,0	0748	20	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21133,0	0653	28	05	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21164,0	0849	31	05	RUS		FMOP	40sps	ca. 16 KHz	OTHR Typ Contayner RUS
21173,0	1758	05	05	RUS		FMOP	40	12k	OTHR Contayner
21173,0	1030	07	05	RUS		FMOP	40	12k	OTHR Contayner
21174,0	0805	20	05	RUS		FMOP	40	12k	OTHR Contayner
21174,0	0917	31	05	RUS		FMOP	40sps	12 Khz	OTHR Typ Contayner RUS
21175,0	0650	21	05	RUS		FMOP	40	12k	OTHR Contayner
21180,0	1710	03	05	G		FMCW	50sps	20 KHz	OTHR Typ Pluto from Zypern
21186,0	1116	21	05	CHN		FMCW	50	10k	OTHR 5,1s bursts
21271,0	1236	19	05	CHN		FMCW	50	10k	OTHR 5,1s bursts
21293,0	0705	07	05	CHN		FMCW	50	10k	OTHR continous mode
21306,0	0807	28	05	CHN		FMCW	50	10k	OTHR 5,1s bursts
21330,0	0959	07	05	G		FMCW	50sps	20 KHz	OTHR Typ Pluto from Zypern
21330,0	0954	07	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21370,0	1556	02	05	G		FMCW	50sps	20 KHz	OTHR Typ Pluto from Zypern
21380,0	1235	07	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21380,0	1214	07	05	G		FMCW	50sps	20 KHz	OTHR Typ Pluto from Zypern
21380,0	0742	19	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21385,0	0650	21	05	G		FMCW	25	20k	OTHR Pluto Cyprus
21390,0	1211	10	05	G		FMCW	50sps	20 KHz	OTHR Typ Pluto from Zypern
21390,0	0954	29	05	G		FMCW	50	20k	OTHR Pluto Cyprus
21393,0	0652	28	05	CHN		FMCW	66,67	10k	OTHR 3,8s bursts
21405,0	0652	28	05	CHN		FMCW	50	10k	OTHR 5,1s bursts
21438,0	0932	18	05	RUS		A1A			RUS NVY Sevastopol
21438,0	1002	21	05	RUS		A1A			RUS NVY Sevastopol

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kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21438,0	0948	29	05	RUS		A1A			RUS Nvy Sevastopol
28100,0	1430	06	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28100,0	1740	17	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28100,0	0702	18	05	IRN		AMCW	307/870	ca.45 KHz	OTHR Typ Ghadir from Iran
28370,0	1406	10	05				12,5	40k	OTHR
28370,0	0935	19	05	G		FMCW	25	20k	OTHR Pluto Cyprus
28500,0	1526	01	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
28500,0	1520	10	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28500,0	1600	10	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28860,0	1230	19	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28860,0	1040	21	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
28860,0	0650	28	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
28960,0	0702	07	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29000,0	0910	02	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
29000,0	0702	07	05	IRN			307/870	45k	Iranian OTHR 5,84/3,26s bursts
29170,0	1230	19	05	G		FMCW	25	20k	OTHR Pluto Cyprus
29350,0	0859	18	05	IRN		AMCW	150/313	ca. 40 KHz	OTHR Typ Ghadir from Iran
29400,0	0936	19	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29450,0	0650	28	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts
29500,0	0942	29	05	IRN			150/313	45k	Iranian OTHR 9,98/7,19s bursts

**IRTS; Michael, EI3GYB**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3672	800	13	5	F or MM		USB			French Fishermen chatting. Strong signals.
7000	2035	10	5			PSK			Huge and persistent signal. Heard also 12.5 at 2130z and 18.5 at 2145z.
7050	1755	20	5	UKR/RUS		LSB			Ukrainian-Russian radio war. Strong and persistent.
7055	1920	10	5	UKR/RUS		LSB			Ukrainian-Russian radio war. Every day, strong and persistent.
7060	2145	11	5			PSK			Huge and persistent signals. Still on 12.5. at 2145z. Also heard 18.5 at 2140z.
7085	2140	18	5			LSB			Loud pop music and Spanish voices.
7101	450	30	5			F1B			Strong and persistent signal.
7110	1750	12	5	ERI		AM			Radio Eritrea. Weak signals. Heard nearly daily.
7160.5	1530	16	5			PSK			Strong and persistent signal. Heard daily until the 25 <sup>th</sup> all day long.
7183	2145	18	5			PSK			Huge and persistent signals. Still on 20 <sup>th</sup> at 1745z.
14000	1130	8	5			USB			Male voices low in the background. Ends at 1245z.
14002	805	13	5			USB			Male voices. Unknown language. Weak signals.
14100	1545	24	5			RADAR			Radar from 14100 to 14113 kHz. Strong and persistent.

<b>IRTS; Michael, EI3GYB</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14126	445	30	5			RADAR			Radar from 14126 to 14152 kHz. Strong and persistent.
14160	2030	10	5	CHN		RADAR			14160 to 14173 kHz.Chinese Foghorn. Strong.
14170	1115	4	5			RADAR			Radar from 14170 to 14195 kHz.Very strong and persistent.
14175	1050	29	5			RADAR			Radar from 14175 to 14190 kHz.Strong and persistent.
14191	1750	21	5			F1B			Strong and persistent. Heard on many days.
14200	1540	14	5	CAN		RADAR			Super DARN. Medium signal.
14220.5	1000	10	5			F1B			Weak signals. Heard until the 19 <sup>th</sup> at various times during the day.
14235	1700	21	5			PSK			Strong and persistent signals.
14267	1405	30	5	CHN		RADAR			Chinese Foghorn. 14267 to 14277 kHz. Persistent.
14280	1535	2	5	CHN		RADAR			14280 to 14290 kHz.Chinese Foghorn.Medium signal.
14295	105	10	5	TJK		AM			Tadjik Radio. 3 <sup>rd</sup> harmonic. Weakish.
14343	1400	30	5			RADAR			14343 to 14365 kHz. Medium and persistent signals.
18080	715	29	5	TWN		AM			Sound of Hope. Weak but persistent signal.
18140	730	30	5	G		RADAR			18140 to 18192 kHz. Radar. Huge and persistent. "Pluto". UK SBA, Cyprus.
18145	2130	18	5	CHN		RADAR			18145 to 18155 kHz. Chinese Foghorn. Medium signal.
21000	1015	8	5	E or MM		USB			Spanish fishermen. Medium signals. Loads of chat, laughter. Music being played. Ends 1150z. Heard on other days at various times.
21276	845	13	5	G		RADAR			21276 to 21292 kHz. Strong and persistent. "Pluto". UK SBA, Cyprus.
21302	1045	29	5	G		RADAR			21302 to 21325 kHz. Huge and persistent signals. "Pluto". UK SBA, Cyprus.
21347	1330	8	5	G		RADAR			21347 to 21370 kHz. Huge and persistent signals. "Pluto". UK SBA, Cyprus.
21400	1140	30	5	G		RADAR			21400 to 21415 kHz. Persistent. Medium signal. "Pluto". UK SBA, Cyprus.
21438	1415	2	5	UKR		CW			Russian navy Sevastopol. Heard daily with good signals.
28840	855	18	5	IRN		RADAR			28840 to 28880 kHz. AM. Persistent. Weak to medium signals. Heard daily.
29325	1740	18	5	IRN		RADAR			29325 to 29370 kHz. Medium signals. AM. Persistent.

<b>OEVSU; Christoph, OE1VMC</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14150.0	14:24	20	05			RADAR		20K0E	QTF 60 RUS?
14190.0	14:27	20	05			RADAR		20K0E	QTF 60, signal drifting a bit
14195.0	09:19	29	05			RADAR		10K0E	
14236.0	15:16	20	05			J7D		2K6E	best sig QTF 150
14236.0	06:33	21	05			J7D		2K6E	QTF 150
14317.5	09:54	29	05			XXX		CA1K20E	QTF 105

**OEVSU; Christoph, OE1VMC**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
18153.0	09:44	29	05			RADAR		10K0E	QTF 60 short pings
21172.0	10:30	07	05	RUS		RADAR		16K0E	
21240.0	08:18	23	05	G		RADAR		20K0E	
21258.0	11:39	07	05	RUS		RADAR		20K0E	
21260.0	09:33	29	05			RADAR		10K0E	QTF 60 short pings
21285.0	07:29	01	05			RADAR		20K0E	
21293.0	08:26	07	05	CHN		RADAR		10K0E	
21325.0	13:07	18	05	CHN		RADAR		10K0E	
21328.0	09:41	01	05	CHN		RADAR		10K0E	
21330.0	11:42	07	05	G		RADAR		20K0E	
21384.0	07:11	21	05			RADAR		10K0E	QTF 110 seems not RUS?
21390.0	08:15	23	05	G		RADAR		20K0E	
21410.0	09:25	29	05			RADAR		20K0E	QTF 60 (CHN, RUS?)
21435.0	08:31	23	05	G		RADAR		20K0E	
21438.0	14:27	14	05	RUS		A1A			
21438.0	08:32	23	05	RUS		A1A			oblast QTCs
21438.0	09:28	29	05	RUS		A1A			RUS QTCs
24954.0	13:16	18	05			A3E			QTF S/E Asia, fisherman ?
28100.0	15:11	06	05	IRN		RADAR		46K0E	
28168.0	09:14	19	05	INS		A3E			fishing man in AM with russian Taxi driver in FM a little below
28375.0	09:20	19	05	G		RADAR		10K0E	
28585.0	09:37	19	05	INS		A3E			fishing man
28615.0	15:38	07	05	INS		A3E			fisher East Asia
28635.0	15:40	07	05	INS		A3E			
28860.0	07:56 vt	18 vd	05	IRN		RADAR		45K0E	
28950.0	15:41	07	05	IRN		RADAR		20K0E	
28960.0	15:12	06	05	IRN		RADAR		45K0E	
28980.0	11:00	21	05			F3E		5	good carrier with low voice and music QTF 60
29340.0	08:00	18	05	IRN		RADAR		45K0E	
29400.0	09:33	19	05	IRN		RADAR		45K0E	

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7060.0	vt	vd	05			CIS		2K7	S9++
7087.0	1647	31	05			UI		3K4E	S9
7167.0	2042	01	05			RADAR		10K0E	burst
14091.0	0844	25	05			CIS		2K7	S9 later short communication in Russian, USB
14118.0	1014	06	05			PSK	120	3K0E	S99++
14153.0	1245	26	05			RADAR		12K0E	
14162.0	0844	25	05			CIS		2K7	S9
14168.0	1100	23	05			RADAR		2x16K0E	2 close emissions, lower ended 11:03
14190.0	0835	08	05			Radar	40	12K0E	
14199.0	0943	03	05			RADAR		16K0E	S9+

**PZK; SP3AMO, SP5GNI**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14245.0	1215	23	05			RADAR		20K0E	S9+
14253.0	0820	01	05			F1B		250	S9
14300.0	1940	12	05			RADAR		10K	short bursts and at 14310.0
18083.0	0943	25	05	G		RADAR		12K0E	S9+
18165.0	0735	30	05			RADAR		20K0E	S9
21000.0	1055	23	05			J3E-U		3K0	Fishermen?
21110.0	0656	10	05			Radar	25	20K0E	
21125.0	vt	vd	05			RADAR		20K	S5-9
21155.0	0840	08	05			Radar	40	10K0E	
21170.0	1220	02	05			RADAR		10K	short bursts
21180.0	1131	05	05			Radar	50	20K0E	
21367.0	0947	03	05			RADAR		10K	short bursts
21375.0	0810	26	05	G		RADAR		12K0E	S8
21380.0	1353	07	05			Radar	50	20K0E	S9+++
21418.0	0810	26	05	G		RADAR		12K0E	S8
28040.0	0820	16	05			RADAR		20K0E	S5
28370.0	0950	19	05			RADAR		20K0E	S6
28590.0	1217	02	05			RADAR		20K	S7
28860.0	0724	31	05	IRN		Radar	150/300	46K0E	
28960.0	vt	vd	05	IRN		Radar	150/300	46K0E	
29000.0	1406	07	05			Radar	900	400K0E	
29350.0	0645	18	05	IRN		RADAR		46K0E	
29450.0	0700	31	05	IRN		RADAR		46K0E	S8
29550.0	1215	02	05	IRN		RADAR		60K0E	
29600.0	1018	06	05	IRN		Radar	150/300	46K0E	
29655.0	0733	30	05			RADAR		20K0E	S7

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
3756.0	2001	22	05			J3E		2K20E	USB 'The Pip'. Daily.
7000.0	2108	10	05			J7D		2K70E	USB 6998.0 / CIS-12. Also heard 212027z
7006.5	2113	10	05					7K00E	Unidentified bursts
7008.0	0708	24	05			F1B		250	FSK
7018.9	1842	23	05			N0N			Probably idling F1B. Also heard 240710z
7060.0	1847	07	05			J7D		2K70E	USB 7058.0 / CIS-12. Also heard 102109z
7064.0	2159	01	05	RUS		P0N	40	14K0E	Container pulse radar
7123.0	2110	10	05	RUS		P0N	40	14K0E	Container pulse radar
7159.0	0645	18	05			B7D		6K00E	DSB / Link 11 CLEW. Also heard 190706z, 200843z, 212015z, 220738z, 230748z, 240706z, 251601z, 260902z
7177.0	2111	10	05	RUS		P0N	40	14K0E	Container pulse radar
7184.0	2200	01	05	RUS		P0N	40	14K0E	Container pulse radar
14043.0	2041	11	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14158.0	1837	23	05	RUS		P0N	40	14K0E	Container pulse radar
14160.0	1330	22	05	RUS		P0N	40	14K0E	Container pulse radar
14184.0	0843	31	05	RUS		P0N	40	14K0E	Container pulse radar



**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14189.0	1405	12	05	RUS		P0N	40	14K0E	Container pulse radar
14200.0	1842	07	05			P0N	10.4	4K00E	Unknown pulsed bursts 10.4 pps
14236.0	2023	21	05			J7D		2K70E	USB 14234.0 / CIS-12. Also heard 221954z, 231836z
14248.0	0848	20	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14258.0	0845	31	05			F1B		500	FSK
14285.0	1610	25	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14301.0	1831	07	05	RUS		P0N	40	14K0E	Container pulse radar
14320.0	1833	07	05	CHN		F3N	50	10K0E	FMCW radar bursts
14320.0	1838	07	05			P0N	10.4	4K00E	Unknown pulsed bursts 10.4 pps
14325.0	1844	07	05			P0N	10.4	4K00E	Unknown pulsed bursts 10.4 pps
14341.0	1839	23	05	RUS		P0N	40	14K0E	Container pulse radar
14343.0	1608	25	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
14355.0	1453	30	05	RUS		P0N	40	14K0E	Container pulse radar
18080.0	0710	02	05			A3E			BC. Also heard 120753z, 270728z
18107.0	0859	01	05	RUS		F1B		200	FSK. Also heard 020710z, 050825z
21048.0	0715	02	05	CHN		F3N	50	10K0E	FMCW radar bursts
21055.0	0834	31	05	RUS		P0N	40	14K0E	Container pulse radar
21099.0	0748	12	05	CHN		F3N	50	10K0E	FMCW radar bursts
21156.0	0747	12	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21164.0	0836	31	05	RUS		P0N	40	14K0E	Container pulse radar
21176.0	1010	27	05	RUS		P0N	40	14K0E	Container pulse radar
21240.0	0744	23	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21260.0	0650	18	05	CHN		F3N	47.6	10K0E	FMCW radar bursts
21263.0	0745	23	05	CHN		F3N	50	10K0E	FMCW radar bursts
21286.0	0826	23	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21287.0	0806	01	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21288.0	0926	30	05	CHN		F3N	50	10K0E	FMCW radar bursts
21290.0	0811	05	05	CHN		F3N	62.5	10K0E	FMCW radar bursts
21293.0	0758	07	05	CHN		F3N	50	10K0E	FMCW radar
21303.0	0810	05	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21304.0	0927	30	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21316.0	0725	27	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21320.0	0653	18	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21322.0	0827	23	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21338.0	0747	27	05	CHN		F3N	41.7	10K0E	FMCW radar
21343.0	0750	12	05	CHN		F3N	50	10K0E	FMCW radar
21345.0	0839	31	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21355.0	0801	07	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21375.0	0859	26	05	RUS		P0N	40	14K0E	Container pulse radar
21381.0	0751	12	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21390.0	0819	23	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21396.0	0808	05	05	CHN		F3N	66.7	10K0E	FMCW radar bursts
21397.0	1928	26	05	CHN		F3N	50	10K0E	FMCW radar bursts
21409.0	0922	30	05	CHN		F3N	47.6	10K0E	FMCW radar bursts
21411.0	1009	27	05	RUS		P0N	40	14K0E	Container pulse radar
21418.0	0900	26	05	RUS		P0N	40	14K0E	Container pulse radar

**RSGB; Richard, G4DYA**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21424.0	0815	05	05			F1B		400	2nd harmonic 10712 kHz
21425.0	1053	05	05	RUS		P0N	40	14K0E	Container pulse radar. Also heard 310836z
21435.0	0821	23	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
21438.0	1057	05	05	RUS	RCV	A1A			Also heard 260901z, 280855z, 300923z, 310839z
28180.0	1049	05	05	G		F3N	50	20K0E	FMCW radar, UK SBA, Cyprus
28500.0	0954	12	05	IRN		P0N		45K0E	Pulse radar 307.1 / 869.5 pps
28650.0	0754	07	05	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps
29000.0	1235	01	05	IRN		P0N		45K0E	Pulse radar 307.1 / 869.5 pps. Also heard 051051z
29270.0	0752	07	05	G		F3N	12.5	40K0E	FMCW radar, UK SBA, Cyprus
29400.0	0701	19	05	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps
29450.0	0935	30	05	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps
29500.0	0757	07	05	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps. Also heard 300714z
29600.0	0749	07	05	IRN		P0N		45K0E	Pulse radar 150.2 / 313.0 pps

**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7 MHz	2100-0530	24	5	RUS		RADAR	40 sps	13k0E	(WebSDR 24d)
7000.0	0430-1800	*	5	RUS		J7D	120	2k60E	*)Days: 8. - 15. 17. - 21.
7006.5	0750	14	5	RUS		F1B/ N0N		200H	
7008.0	0720-1400	24 31	5	RUS		F1B		250H	
7008.5	0630-0730	05 12	5	RUS		J7D	120	2k60E	
7014.0	1800-1810	19	5	RUS		F1A		200H	QRJ?
7019.0	0400-1830	*	5	RUS		F1A/ N0N	18 wpm	200H	*)Days: 2. 7. 8. 9. 22. - 26. 5BL
7016.0	0710-1925	26 27	5	RUS		F1B		250H	
7020.0	1145-1500/	*	5	RUS		F1B		250H	*)Days: 4. 9. 17.
7022.0	0615-1005	08 14	5	RUS		J7D	120	2k60E	
7025.0	0455-0720	*	5	RUS		F1B		200H	*)Days: 6. 7. 8. 10.
7025.0	1130-1820	15- 17	5	RUS		J7D	120	2k60E	
7030.0	0700-1345	01 04	5	RUS		F1B/ N0N		250H	
7032.0	0455-0600	01 - 31	5	RUS		J3E-u		3k50	Non-stop Russian anthem / mx
7032.0	1630-1800	04 30	5	RUS		J3E-u		3k50	Non-stop Russian anthem / mx
7038.0	0615-0620	04	5	RUS	RBC4	A1A	22 wpm	40H	Unstable fq, 5F
7048.0	0500-1100	01- 05	5	RUS		A1A	20 wpm	60H	5BL, mainly key failure

SRAL; Pekka, OH2BLU									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7054.0	1515-1815	*	5	RUS		F1B		200H	*) Days: 3. - 5. 7. 9. 11. - 15.
7057.5	0500-1600	01 - 05	5	RUS	JX45 etc	A1A	16-23 wpm	40H	5BL, 5F
7060.0	0000-2400	06-19	5	RUS		J7D	120	2k60E	
7065.75	0500-1800	13 14	5	RUS		F1A/ NON		200H	“vvv”
7068.0	1120	13	5	RUS		J7D	120	2k60E	
7110.0	1600-1810/	01 - 31	5	ETH	R. Ethiopia	A3E		9k0	
7137.0	1555-1615	02 04	5	RUS		F1B		200H	
7147.0	1100-1800	02 13	5	RUS		J7D	120	2k60E	
7159.0	0430-0800	*	5	IW		B8D		6k0E	LINK usb / dsb, ship
7160.0	0800-0930	16	5	RUS	RBL88	A1A	14 wpm	40H	5F
7060.0	0650-0735	23 31	5	RUS	RBL88	R3E-u		3k0E	
7162.0	0645-1345	01 04	5	RUS		F1B		250H	
7170.5	1355	21	5	RUS	B1FN	A1A		40H	5BL
7182.0	1200-1700	*	5	RUS		J7D	120	2k60E	*)Days: 18. 20. 21. 28. 29.
7196.0	0800-1200	*	5	RUS		A1A/ NON	20 wpm	40H	*) Days: 1. 3. 4. 5L
7197.0	1200-1600	14	5	RUS		J7D	120	2k60E	
7200.0	1200-1500/	01 - 31	5	TWN	NUR	A3E		9k0	National unity radio to KRE. Frequency offset – 7 Hz
7200.0	1255-1258/	23	5	RUS		F1B		1k0	
7200.0	0745-1615	26 29	5	RUS		J7D	120	2k60E	
10 MHz			5	G		RADAR	50sps	20k0	(WebSDR 0d)
10 MHz			5	RUS		RADAR	40sps	13k0E	(WebSDR 6d)
10125A	1500-1600/	01 - 22	5	GUM	TWR	A3E?		4k0E	Spurious from 9900 kHz
14 MHz	0000-2400	*	5	RUS		RADAR	40sps	13k0E	*) Days: 1. 3. - 7. 9. - 11. 13. 20. - 25. 2. 29. 30. (WebSDR 30d)
14 MHz	1030-1900	*	5	CHN		RADAR	50/67sps	10k0E	*) Days: 2. 3. 6. 8. 11. 12. 14. - 17. 20. 25. 30. 'foghorn'
14000.0	1357-1500/	01 - 31	5	CHN	RCI	A3E		9k0	TX intermod. // 13710 & 13855 kHz
14004.0	0750-1100	26	5	RUS		F1B		500H	
14008.0	0500-1215	*	5	RUS		F1B		250H	*) Days: 3. 4. 17. 18. 27. 28. 29.
14013.0	0700-1800	19 27	5	RUS		J7D	120	2k60E	
14052.0	0720-0800	29	5	RUS		J7D	120	2k60E	
14108.0	0610-	*	5	RUS	XQLD etc	A1A	15 wpm	40H	*)Days: 9. 11. 13. 15. 16. 17. 23. 26. 27. 30.



**SRAL; Pekka, OH2BLU**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
	1210								31. 5BL
14116.0	0840-0920	28	5	RUS		F1B		250H	
14171.0	0850-1230	04 20	5	RUS		J7D	120	2k60E	
14192.0	0800-1300	*	5	RUS		F1B		250H	*)Days: 21. 27. 28. 29.
14200.0	0400-1800	*	5	FIN	Cutlass	RADAR	10.4 sps	4k5E	*)Days: 1. 2. 6. 7. 8. 11. - 14. 28. 29. up to 14335 kHz
14221.0	0400-0600/	01 - 31	5	KAZ		F1B		200H	
14240.0	0610-0950	*	5	RUS		F1B		200/ 250H	*) Days: 10. 15. 18.
18 MHz	0645-1545	*	5	G		RADAR	50 sps	20k0	*) Days: 4. 5. 8. 14. 17. 21. 30. (WebSDR 8d)
18 MHz	0830-1600	27- 31	5	RUS		RADAR	40 sps	13k0E	(WebSDR 17d)
18091.0	0435-1535	*	5	CHN		RADAR	20 sps	10k0E	*)Days: 2. 4. 25. 29.
21 MHz	0500-1700	*	5	G		RADAR	25/50sp s	20k0	*) Days: 2. 3. 7. 10. - 12. 14. 16. 17. 19. 20. 23. 26. 27.29. - 31. (WebSDR 21d)
21 MHz	0500-1630	*	5	RUS		RADAR	40 sps	13k0E	*) Days: 5. 7. 8. 11. 20. 24. 26. 27. 29. - 31. (WebSDR 10d)
21 MHz	0500-1500	*	5	CHN		RADAR	50/67sp s	10k0E	*) Days: 1. 3. - 7. 9. 10. 12. - 19. 21. 23. 24. 26. - 31. 'foghorn'
21 MHz	0500-1000	*	5	CHN		RADAR	50 sps	10k0E	*) Days: 6. 7. 9.
21438.0	/0830-1600	01 - 31	5	RUS	RCV	A1A	24 wpm	40H	navip
24 MHz	1000-1500	26 30	5	RUS		RADAR	40 sps	13k0E	(WebSDR 1d)
28 MHz	0820-1500	*	5	G		RADAR	25/50sp s	20k0	*) Days: 2. 5. 7. 9. 19. 24. 30. (WebSDR 6d)
28 MHz	0500-1800	*	5	IRN		RADAR	150/ 313	60k0E	*) Days: 2. - 10. 18. - 21. 23. 24. 25. 28. - 31. (WebSDR 17d)
28 MHz	0500-1800	*	5	IRN		RADAR	310/ 870	120k0E	*) Days: 2. 5. 7. - 11. 15. - 18. (WebSDR 16d)
28860.0	0500-1900	12- 31	5	IRN		RADAR	150/ 313	60k0E	(WebSDR 18d)
28960.0	0500-1900	01- 11	5	IRN		RADAR	150/ 313	60k0E	(WebSDR 11d)
28 MHz	1230	27	5	RUS	Taxi disp.	F3E		3k0E	2 reports

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000.0	19:28 vt*	12 vd*	05			J7D		Ca2K45E	CIS-12 . * Also on 13, 14, 15, 16, 17, 18/05; VT. Long-lasting
7023.0	18:53	31	05			J7D			CIS-12
7025.0	18:04	15	05			J7D	120	2K70E	CIS-12. *Also on 16 & 17/05; VT. Long-lasting
7055.0	18:51 vt*	13 vd*	05			J3E-L		2K80E	UKR-RUS "radiowar". Speech. male voice. *Often
7060.0	18:11 vt*	11 vd*	05			J7D	120	2K70E	CIS-12. *Also on 14, 15, 16, 17 & 18/05. VT. Long-lasting

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7159.0	20:16 vt*	15 vd*	05			B7D		6K0E	LINK-11 CLEW DSB. *Often
7174.0	20:53	13	05	RUS		RADAR	40	12K0E	OTHR Contayner
7182.0	18:56	18	05			J7D		2K70E	CIS-12. Submode idle.
7201.0	21:33	13	05	RUS		RADAR	40	12K0E	OTHR Contayner
14000.0	19:56	19	05			J3E-U		3K0E	USB. Unid station sending letters and numbers. English language. Male voice.
14001.8	07:18 vt*	11 vd*	05			XXX		3K0E	Unknown digital bursts. *Often
14004.0	08:09	26	05	RUS		F1B	75	500H	
14007.9	08:24	24	05			N0N			N0N. From RUS F1B 14008 kHz CF
14008.0	10:01 vt*	01 vd*	05	RUS		F1B	50	250H	*Often
14010.0	13:43	14	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14013.0	15:33 vt*	19 vd*	05			J7D	120	2K70E	CIS-12. Long-lasting *Also on 31/05, 1820 UTC
14026.0	10:46 vt*	19 vd*	05			J7D	120	2K70E	CIS-12. *Also on 22 and 24/05. Long-lasting
14046.0	17:34	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14090.9	07:24	18	05			W7D		2K80E	CIS-60
14091.0	07:52	13	05	RUS		RADAR	40	12K0E	OTHR Contayner
14091.0	08:00	25	05			J7D		2K70E	CIS-12
14098.5	07:36 vt*	19 vd*	05			F1B	600	600H	DPRK-FSK 600 ARQ. *Often
14103.0	16:30	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14108.0	09:55 vt*	12 vd*	05		4Y8V V39P SV9I DVMV I3SQ LDDC N6YX LLYN HLNM ...	A1A			Encrypted QTC. 5 characters groups. Cyrillic CW alphabet used . RUS MIL. Split traffic with other (out of band) sts. "RK" *Almost daily since 12/05. Morning UTC time.
14109.0	15:51	24	05	RUS		RADAR	40	12K0E	OTHR Contayner
14109.0	17:08	25	05			A1A			UI st sending numbers and letters. English language. Male voice
14110.0	13:46	14	05	CHN		RADAR	66.7	10K0E	Short bursts
14112.0	07:29	22	05	RUS		RADAR	40	12K0E	OTHR Contayner
14113.0	04:32	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14115.0	19:45	15	05	CHN		RADAR	50	10K0E	OTHR short bursts
14116.0	12:41	25	05	RUS		RADAR	40	12K0E	OTHR Contayner
14127.0	07:27	11	05			J3E-U		3K0E	Broadcast relaying (male speakers; speech, religious content, music; RUS language). Long-lasting
14140.0	19:11	15	05	RUS		RADAR	40	14K0E	OTHR Contayner
14140.0	22:00	20	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14165 and 14188 kHz CF. (3 simultaneous TX on 20 m)
14145.0	20:57	21	05	RUS		RADAR	40	12K0E	OTHR Contayner
14150.0	15:48 vt*	20 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 23/05, 1521 UTC

<b>URE; Gaspar, EA6AMM</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
14151.0	11:33	22	05	RUS		RADAR	40	12K0E	OTHR Contayner
14155.0	12:40	26	05	RUS		RADAR	40	14K0E	OTHR Contayner
14158.0	10:17	15	05	RUS		RADAR	40	12K0E	OTHR Contayner
14158.0	18:20	23	05	RUS		RADAR	40	14K0E	OTHR Contayner. Also on 14341 kHz CF. (2 simultaneous TX on 20)
14160.0	12:23 vt*	22 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 23/05, 0509 UTC
14161.0	11:25	26	05	RUS		RADAR	40	14K0E	OTHR Contayner
14165.0	22:06	20	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14140 and 14188 kHz CF (3 simultaneous TX on 20 m)
14171.0	07:12	25	05			J7D	120	2K70E	CIS-12
14175.0	11:32	22	05			J3E-U			USB. Music
14176.0	10:35	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14178.0	16:51 vt*	23 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 25/05, 1227 UTC
14182.0	08:46	11	05	RUS		RADAR	40	12K0E	OTHR Contayner
14183.0	14:32 vt*	01 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 25/04, 0654 UTC
14184.0	10:27 vt*	17 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 23/05, 1720 UTC and 31/05, 0855 UTC
14186.0	11:07	17	05	RUS		RADAR	40	12K0E	OTHR Contayner
14187.0	08:44	24	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14292 kHz CF ( 2 simultaneous TX on 20 m)
14188.0	15:50	20	05	RUS		RADAR	40	12K0E	OTHR Contayner
14189.0	14:07	12	05	RUS		RADAR	40	12K0E	OTHR Contayner
14190.0	18:21	19	05	CHN		RADAR	50	10K0E	OTHR short bursts
14191.0	13:33	14	05	RUS		RADAR	40	12K0E	OTHR Contayner
14191.0	13:34	16	05	RUS		RADAR	40	12K0E	OTHR Contayner
14192.0	07:38 *vt*	19 vt*	05			F1B	50	200H	*Often
14193.0	09:59	11	05	RUS		RADAR	40	12K0E	OTHR Contayner
14193.0	18:48	15	05	CHN		RADAR	50	10K0E	OTHR short bursts
14196.0	18:00	01	05	RUS		RADAR	40	12K0E	OTHR Contayner
14197.0	08:49	19	05	RUS		RADAR	40	12K0E	OTHR Contayner
14198.5	12:07 vt*	15 vd*	05			F1B	600	600H	DPRK-FSK 600 ARQ *Very often
14200.0	18:05	01	05			RADAR		Ca 4K50E	SuperDARN. Burst from 14200 kHz CF to 14335 kHz CF. Burst on 14220, 14305, 14320 and 14335 kHz CF 11. *Also on 11, 12, 12, 13 and 14/05, afternoon & evening UTC time
14200.0	07:30	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14201.7	19:10 vt*	12 vd*	05					CA50H	PRC-16 channel marker. Long lasting. *Often
14216.0	06:31	23	05	RUS		RADAR	40	12K0E	OTHR Contayner
14221.0	20:19 vt*	12 vd*	05	KAZ		F1B	50	200H	*Very often
14230.0	11:01	31	05	RUS		RADAR	40	14K0E	OTHR Contayner
14235.0	20:29	21	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14236.0	15:52 vt*	20 vd*	05			J7D	120	2K70E	CIS-12. *Also on 21, 22 & 23/05. Long-lasting



**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
14242.0	19:16	15	05	CHN		RADAR	50	10K0E	OTHR short bursts
14243.0	18:40	31	05			J3E-U			Music
14248.5	12:30	15	05			F1B	600	600H	DPRK-FSK 600 ARQ
14249.0	17:00	14	05	CHN		RADAR	50	10K0E	OTHR short bursts
14253.0	06:21	01	05			F1B	75	250H	
14255.0	21:39	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14258.0	07:21	15	05			F1B	50	500H	FSK. SH = 500 Hz
14265.0	17:21	17	05	CHN		RADAR	50	10K0E	OTHR short bursts
14268.0	17:56	19	05	CHN		RADAR	50	10K0E	OTHR short bursts
14285.0	17:16	25	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14291.0	15:49	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14291.0	18:44	16	05	CHN		RADAR	50	10K0E	OTHR short bursts
14292.0	16:47	21	05			F1B	50	200H	SH = 200 Hz. Bd = 50
14292.0	08:45	24	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 14187 kHz CF (2 simultaneous TX on 20m)
14293.0	15:48	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14294.0	06:57	25	05			J7D	120	2K70E	CIS-12
14295.0	06:46	11	05			J3E-U			Music
14295.0	12:42	13	05	RUS		RADAR	40	14K0E	OTHR Contayner
14298.0	12:39	17	05			OTHER		1K20E	DPRK-1200
14298.5	06:43 vt*	11 vd*	05			F1B	600	600H	DPRK-FSK 600 ARQ *Very often
14301.0	17:58	19	05	CHN		RADAR	41.7	10K0E	OTHR short bursts
14303.5	12:14	17	05			F1B	600	600H	DPRK-FSK 600 ARQ
14311.0	14:37	14	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14313.0	17:42	25	05	CHN	10k0e	RADAR	66.7		OTHR short bursts
14317.0	09:53 vt*	12 vd*	05		6XC9	A1A	17		Encrypted QTC. Cyrillic CW characters used. RUS MIL. Also on 13/05 0754 UTC & 15/05, 0729 UTC. Split traffic with other (out of band) sts. "RK"
14341.0	16:03	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14341.0	17:35	23	05	RUS		RADAR	40	14K0E	OTHR Contayner
14342.0	19:53	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
14343.0	18:55	19	05	CHN		J7D	125	1K75E	USB QRG. MIL-188-141A 2G ALE. 8 x 125Bd
14347.0	20:34	16	05	CHN		RADAR	50	10K0E	OTHR short bursts
14348.5	08:16	22	05			F1B	600	600H	DPRK-FSK 600 ARQ
14353.0	17:24	25	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
18065.0	06:03	13	05	G		RADAR	50	20K0E	UK SBA, Cyprus
18080.0	06:09 vt*	11 vd*	05			A3E			BC. "Sound fo Hope" *Often
18107.0	06:49	01	05	RUS	RDL	F1B	50	200H	
18114.0	12:07	31	05	RUS		RADAR	40	12K0E	OTHR Contayner
18149.3	06:38	25	05			F1B	600	600H	DPRK-FSK 600 ARQ
18165.0	13:18	14	05	G		RADAR	50	20K0E	UK SBA, Cyprus
18170.0	09:50 vt*	01 vd*	05	G		RADAR	50	20K0E	UK SBA, Cyprus. *Also on 17/05, 1558 UTC and 21/05, 1456 UTC
18173.0	07:32	25	05	RUS		RADAR	40	140E	OTHR Contayner
21000.0	11:32 vt*	16 vd*	05	E/M M		J3E-U		2K40E	Spanish fishers. Spanish language. Strong Southern accent. Same male ops as always.

URE; Gaspar, EA6AMM									
kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
									For years. Spanish PTT alerted since 2019. *Often
21000.0	11:10	19	05			J3E-U			Unid st transmitting looped recordings of the Spanish fishers' messages
21020.0	06:17	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21029.0	06:41	25	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21040.0	10:53	25	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21047.0	06:57	16	05	CHN		RADAR	50	10K0E	OTHR short bursts
21055.0	08:51	31	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21058.0	08:00	18	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21058.5	07:17	22	05			F1B	600	600H	DPRK-FSK 600 ARQ
21074.7	11:22	01	05			A1N			Continuous dots. Long-lasting
21083.3	07:59	24	05				75	CA3K0E	PRC 4+4
21090.0	10:00	01	05	CHN		RADAR	50	10K0E	OTHR short bursts
21099.0	06:32	12	05	CHN		RADAR	50	10K0E	OTHR short bursts
21108.0	08:25	23	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21109.0	11:51	16	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21112.0	09:51	14	05	CHN		RADAR	50	10K0E	OTHR short bursts
21121.2	06:56	11	05			J3E-U			Unid sts. Male voices. Arabic language. Engine sound. Most probably fishers.
21121.5	06:49	22	05	E/M M		J3E-L			J3E-L. Spanish fishermen. Not the same ops as on 21000 kHz USB
21125.0	07:47	20	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21127.0	05:42	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21149.4	10:51	25	05			F1B	600	600H	DPRK-FSK 600 ARQ
21156.0	08:34	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21158.0	05:43	13	05	CHN		RADAR	50	10K0E	OTHR short bursts
21163.0	11:52	31	05	RUS		RADAR	40	14K0E	OTHR Contayner
21164.0	10:28 vt*	20 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner *Also on 31/05, 0852 UTC
21165.0*	09:11	31	05	RUS		RADAR	40	14K0E	OTHR Contayner: 2 systems side by side: 21165 kHz CF + *21174 kHz CF
21174.0	08:04	20	05	RUS		RADAR	40	12K0E	OTHR Contayner
21174.0*	09:11	31	05	RUS		RADAR	40	14K0E	OTHR Contayner: 2 systems side by side: 21174 kHz CF + *21165 kHz CF (4 simultaneous TX on 15m)
21181.0	11:38	16	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21181.0	11:52	16	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21185.0	12:49	14	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21190.0	07:21	11	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21193.0	08:23	23	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21200.0	08:00	19	05	CHN		RADAR	41.7	10K0E	OTHR short bursts
21203.0	11:52	12	05	CHN		RADAR	50	10K0E	OTHR short bursts
21216.5	06:38	11	05			F1B	600	600H	DPRK-FSK 600 ARQ
21240.0	07:50	23	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21248.4	06:34	11	05			F1B	600	600H	DPRK-FSK 600 ARQ
21260.0	06:28	18	05	CHN		RADAR	47.5	10K0E	OTHR short bursts
21263.0	07:01	23	05	CHN		RADAR	50	10K0E	OTHR short bursts
21267.0	07:07	15	05	CHN		RADAR	50	10K0E	OTHR short bursts

**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21270.0	06:45	16	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21270.0	12:20	17	05	CHN		RADAR	41.7	10K0E	OTHR short bursts
21272.0	07:21	22	05	CHN		RADAR	41.7	10K0E	OTHR short bursts
21285.0	08:05	14	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21286.0	08:26	23	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21287.0	06:23	01	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21299.0	06:13	13	05	CHN		RADAR	40	10K0E	OTHR short bursts
21309.0	09:57 *vt*	01 vd*	05	CHN		RADAR	66.7	10K0E	OTHR short bursts *Also on 16/05, 1154 UTC
21312.0	08:34	14	05	CHN		RADAR	50	10K0E	OTHR short bursts
21313.0	09:02	31	05	RUS		RADAR	40	14K0E	OTHR Contayner. Also on 21164 kHz CF (2 simultaneous TX on 15 m)
21317.0	06:20	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21320.0	06:26	18	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21321.0	06:06	11	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21322.0	08:23	23	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21323.5	08:13	19	05	CHN		OTHER	75	CA3K0E	PRC 4+4. CHN. 8 x FSK 75 Bd
21325.0	08:30	12	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21326.0	06:24	01	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21328.0	13:49	18	05	CHN		RADAR	41.7	10K0E	OTHR short bursts
21329.0	06:19	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21340.0	06:05	16	05	CHN		RADAR	10	160K0E	CHN wideband OTHR
21343.0	06:34	12	05	CHN		RADAR	50	10K0E	OTHR short bursts
21352.0	07:52	18	05	CHN		RADAR	50	10K0E	OTHR
21353.0	05:41	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21355.0	07:09	18	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21358.0	06:42	25	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21359.0	06:52	22	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21360.0	09:57	11	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21360.0	06:10	16	05	CHN		RADAR	10	160K0E	Wideband OTHR
21369.0	11:10	16	05	CHN		RADAR	66.7	10K0E	OTHR Short bursts
21370.0	07:17	18	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21372.0	06:17	11	05	CHN		RADAR	50	10K0E	OTHR short bursts
21372.0	07:10	15	05	CHN		RADAR	50	10K0E	OTHR
21375.0	09:46	20	05	RUS		RADAR	40	12K0E	OTHR Contayner
21375.0	08:12	26	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 21418 kHz CF (2 simultaneous TX on 15m)
21375.0	09:22	31	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21380.0	07:43	19	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21381.0	08:35	12	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21384.0	07:12	13	05	CHN		RADAR	50	10K0E	OTHR short bursts
21390.0	07:03	23	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21390.0	08:16	23	05	G		RADAR	50	20K0E	UK SBA. Cyprus. Also on 21240 kHz CF
21395.0	07:36	14	05	G		RADAR	50	20K0E	UK SBA, Cyprus
21396.0	07:12	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21396.0	08:41	14	05	CHN		RADAR	50	10K0E	OTHR short bursts
21403.0	07:13	13	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21403.0	06:57	22	05	CHN		RADAR	41.7	10K0E	OTHR short bursts



**URE; Gaspar, EA6AMM**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
21405.0	06:34	22	05			J3E-U		2K40E	Unid sts. Male voices. Arabic language. Engine sound. Probably, fishermen
21410.0	09:48	14	05	CHN		RADAR	50	10K0E	Short bursts
21415.0	08:02	18	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21417.0	10:11	20	05	RUS		RADAR	40	12K0E	OTHR Contayner. Also on 21375 kHz CF
21418.0	09:00	24	05	RUS		RADAR	40	12K0E	OTHR Contayner
21418.0	06:44	25	05	CHN		RADAR	66.7	10K0E	OTHR short bursts
21418.0	08:13	26	05	RUS		RADAR	40	14K0E	OTHR Contayner. Also on 21375 kHz CF
21420.0	10:38	22	05	RUS		RADAR	40	12K0E	OTHR Contayner
21421.0	10:01	11	05	RUS		RADAR	40	12K0E	OTHR Contayner
21425.0	07:56 vt*	24 vd*	05	RUS		RADAR	40	12K0E	OTHR Contayner. *Also on 31/05, 0940 UTC
21437.0	05:45	13	05	CHN		RADAR	50	10K0E	OTHR short bursts
21438.0	08:30 vt*	01 vd*	05	RUS	RCV	A1A			RUS navy QTC. *Almost daily
28049.6	17:52	18	05		ML	A1A			Fishing buoy
28085.0	18:11	19	05			F1B		300H	Fishing buoy
28100.0	16:00	17	05	IRN		RADAR	307	45K0E	Alternating 307 and 870 sps bursts
28100.0	06:33	18	05	IRN		RADAR	307	45K0E	Alternating 307 and 870 sps bursts
28100.9	18:03	18	05			F1B		300H	Fishing buoy. SH = 300Hz
28109.7	17:57	18	05		WL	A1A			Fishing buoy
28195.0	06:32	18	05	G		RADAR	25	20K0E	UK SBA, Cyprus
28261.6	17:41	18	05		AL	A1A			Fishing buoy
28280.0	17:39	18	05		DL	A1A			Fishing buoy
28284.9	18:21	18	05		EE	A1A			Fishing buoy
28370.0	09:38	19	05	G		RADAR	25	20K0E	UK SBA, Cyprus
28441.1	18:33	18	05		BP	A1A			Fishing buoy
28500.0	06:03 vt*	11 vd*	05	IRN		RADAR	307/ 870	45K0E	Alternating 307 and 870 sps bursts *also on 12/05, 0643 UTC
28860.0	17:32 vt*	11 vd*	05	IRN		RADAR	150/ 313	45K0E	Alternating 150 and 313 sps bursts *Very often
28960.0	06:25 vt*	01 vd*	05	IRN		RADAR	150/ 313	45K0E	Alternating 150 and 313 sps bursts *Often
29000.0	06:27 vt*	01 vd*	05	IRN		RADAR	307/ 870	45K0E	Alternating 307 and 870 sps bursts *Very often
29330.0	08:11	24	05	G		RADAR	50	20K0E	UK SBA, Cyprus
29340.0	08:06	18	05	IRN		RADAR	150/313	45K0E	Alternating 150 and 313 sps bursts
29400.0	15:56 vt*	14 vd*	05	IRN		RADAR	150/ 313	45K0E	Alternating 150 and 313 sps bursts *Often
29450.0	07:56 vt*	23 vd*	05	IRN		RADAR	150/ 313	45K0E	Alternating 150 and 313 sps *Often
29550.0	06:56	01	05	IRN		RADAR	150/313	45K0E	Alternating 150 and 313 sps bursts

**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7000.0	2145	18	05			J7D	12x120 Bd	2k70E	CIS12; idling
7054.0	1655 1513	02 31	05			F1B	50 Bd	200H	FSK, daily since very long time

**USKA; Peter, HB9CET**

kHz	UTC	DD	MM	ITU	IDENT	MODE	BD /sps	SH / BW	DETAILS
7055.0 LSB	1651	02	05			J3E-L		ca 3k0E	RUS-UKR Radio War; Music daily
7060.0	1246 1415	08	05			J7D	12x120 Bd	2k70E	CIS12 often
7080.0	1702	02	05			F1B	50 Bd	200H	FSK; almost daily
7085.0 USB	2221	31	05			G1D PSK	X	ca 3k0E	USB; unid signal; long lasting, fading
7147.0	1701	02	05			J7D	12x120 Bd	2k70E	CIS12
7159.0 DSB	2148	18	05			B7D DQPSK	75 Bd	ca 6k0E	LINK11 CLEW DSB/ISB mode often
7182.0	2151	18	05			J7D	12x120 Bd	2k70E	CIS12; idling
7199.0	0903	23	05			J7D	12x120 Bd	2k70E	CIS12; idling
14008.0	0835 1007	04 11	05			F1B	50 Bd	250H	FSK; almost daily
14182.0	0817	11	05			FMOP	40 sps	12K0E	OTHR; Contayner
14192.0	0907	23	05			F1B	50 Bd	200H	FSK; often
14193.0	1006	11	05			FMOP	40 sps	12K0E	OTHR; Contayner
14221.0	2231	31	05			F1B	50 Bd	200H	FSK; often
14298.63	0737	12	05			ARQ PSK	600 Bd	600H	DPRK PSK ARQ system often
14355.0	1450	30	05			FMOP	40 sps	12K0E	OTHR; Contayner
18060.0	0721	02	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus; partially in 17m band
18107.0	1006	02	05			F1B	36+50 Bd	200H	CIS36-50 almost daily
21000.0	1033	18	05			J3E-U		ca 2k70E	Spanish, Fishermen almost daily
21099.0	0752	12	05			FMCW	50 sps	10k0E	OTHR; bursts
21110.0	0719	10	05	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
21132.0	0726	05	05			FMCW	62 sps	10k0E	OTHR; bursts
21156.0	0758	12	05			FMCW	66.66 sps	10k0E	OTHR; bursts
21169.0	1010	02	05			FMCW	62 sps	10k0E	OTHR; bursts
21285.0	0824	14	05	G		FMCW	25 sps	20k0E	OTHR; UK base Cyprus
21343.0	0756	12	05			FMCW	50 sps	10k0E	OTHR; bursts
21370.0	0749	18	05	G		FMCW	50 sps	20k0E	OTHR; UK base Cyprus
21386.0	0800	12	05			FMCW	66.66 sps	10k0E	OTHR; bursts
21422.0	1003	11	05			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
21424.0	1635	02	05			F1B	50 Bd	400H	FSK, weak; 2nd of 10712.0 kHz
21425.0	1249	05	05			FMOP	40 sps	12k0E	OTHR; continuos: Contayner
21438.0	1420	31	05	RUS	RCV	A1A		10H	Area of Sevastopol; since years daily
28500.0	0828	11	05	IRN		Radar	307 + 870 sps	ca 45k	OTHR; Bursts; long lasting, sweeprate alternating
28960.0	0730	05	05	IRN		Radar	150 + 313 sps	ca 50k	OTHR; Bursts; long lasting, sweep rate alternating almost daily
29000.0	1239	01	05	IRN		Radar	307 + 870 sps	ca 45k	OTHR; Bursts; long lasting, sweep rate alternating often
29350.0	0748	18	05	IRN		Radar	150+ 313 sps	ca 45k0	OTHR; Bursts: sweep rate alternating

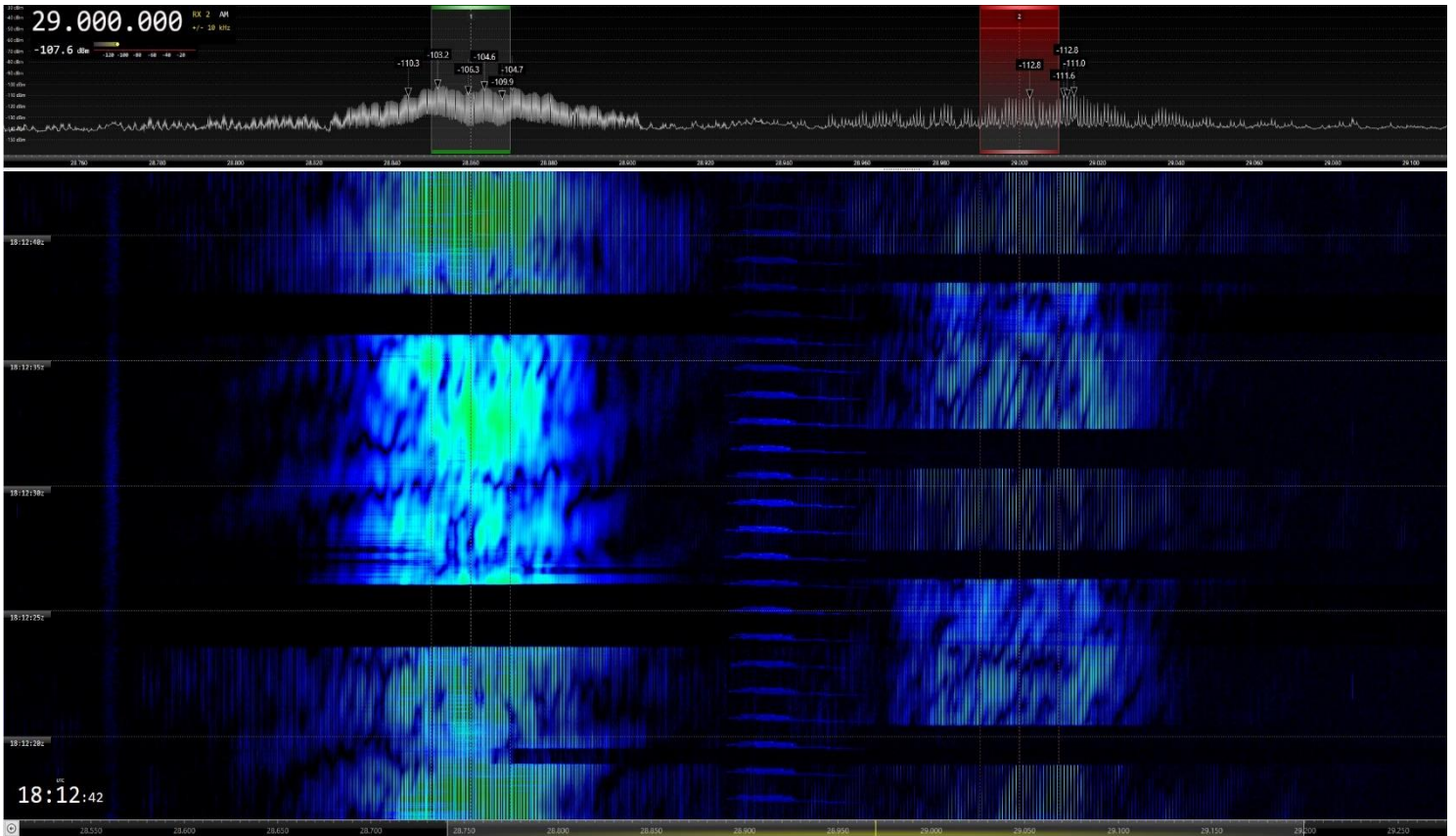
<b>VERON; Ruud, PG1R. Credits to observers: Dick PA0GRU, Arie PA3CNK</b>									
<b>kHz</b>	<b>UTC</b>	<b>DD</b>	<b>MM</b>	<b>ITU</b>	<b>IDENT</b>	<b>MODE</b>	<b>BD /sps</b>	<b>SH / BW</b>	<b>DETAILS</b>
7050.0	1900	20	05	UKR/ RUS		J3E-L		2K70E	UKR-RUS radiowar; comments; S4
7055.0	1909	13	05	UKR/ RUS		J3E-L		3K0E	UKR-RUS radiowar; comments; S6
7055.0	1811	20	05	UKR/ RUS		J3E-L		2k70E	UKR-RUS radiowar; slogans; S6
7060.0	1736	12	05	RUS		J7D		7K65E	CIS-12; S8-9
14008.0	0918	03	05			F1B		250H	UiPtr
14008.0	0911	04	05	RUS		F1B		200H	UiPtr
14025.0	1051	19	05	RUS		RADAR		12K0E	TDoA 50E
14108.0	0820	16	05	RUS	SVGI	A1A			TXEI de SVGI QRV; also on 15/05, 20/05 and 25/05
14115.0	1240	25	05	RUS		RADAR	40	12K0E	CF; OTHR Contayner
14159.0	1351	20	05	RUS		RADAR	40	12K0E	CF; OTHR Contayner
14162.0	1001	25	05	RUS		J7D		2K8E	CIS-12 MPSK; TDoA RUS
14181.0	0818	11	05	RUS		RADAR	40	12K0E	CF; OTHR Contayner
14192.0	1016	19	05			NON			Carrier; 1018utc QRT
14200.0	1531	29	05			RADAR	10	5K0E	SuperDARN; maybe Finland
14253.0	1529	05	05	RUS		F1B		200H	UiPtr; TdoA 54N 29E
14285.0	0730 - 0815	19	05			A3E			UiBC; Music & male speech; Int. football tune; TDoA 37N-40N; Spain?
14287.0	0737	23	05	RUS		XXX			Pulses 2/sec; TDoA RUS
21125.0	0937	03	05	G		RADAR		20K0E	TDoA Cyprus; UK AB
21438.0	0929	03	05	RUS	RCV	A1A			RIP90 de RCV qtc 433-47-12-5L 5F tfc
21438.0	0910	19	05	RUS	RCV	A1A			RIP() DE RCV QTC RCV 327 = NAWIP 033 542 Karta 31020

Contact: Gaspar Miró, EA6AMM, [ea6amm@iaru-r1.org](mailto:ea6amm@iaru-r1.org)

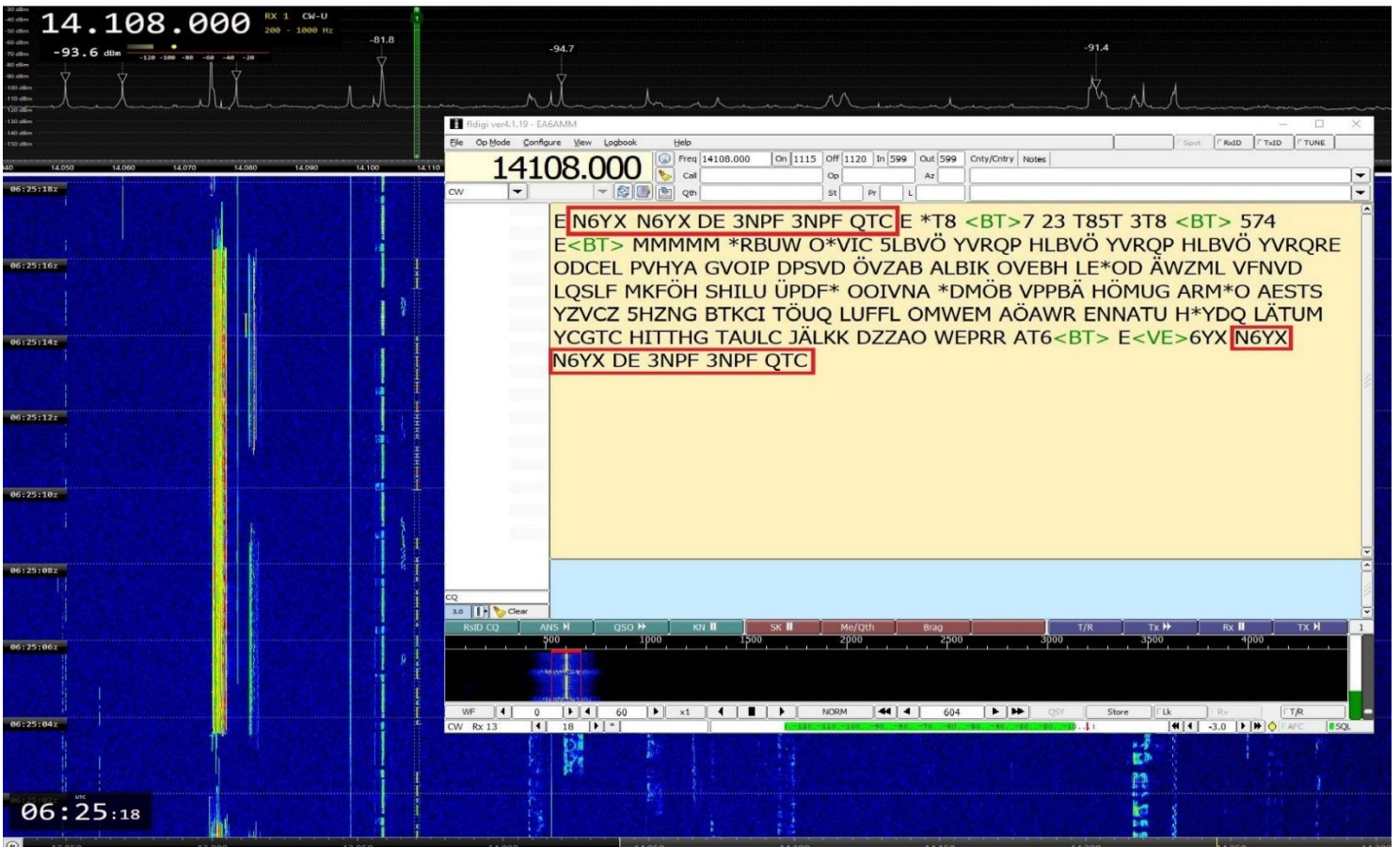
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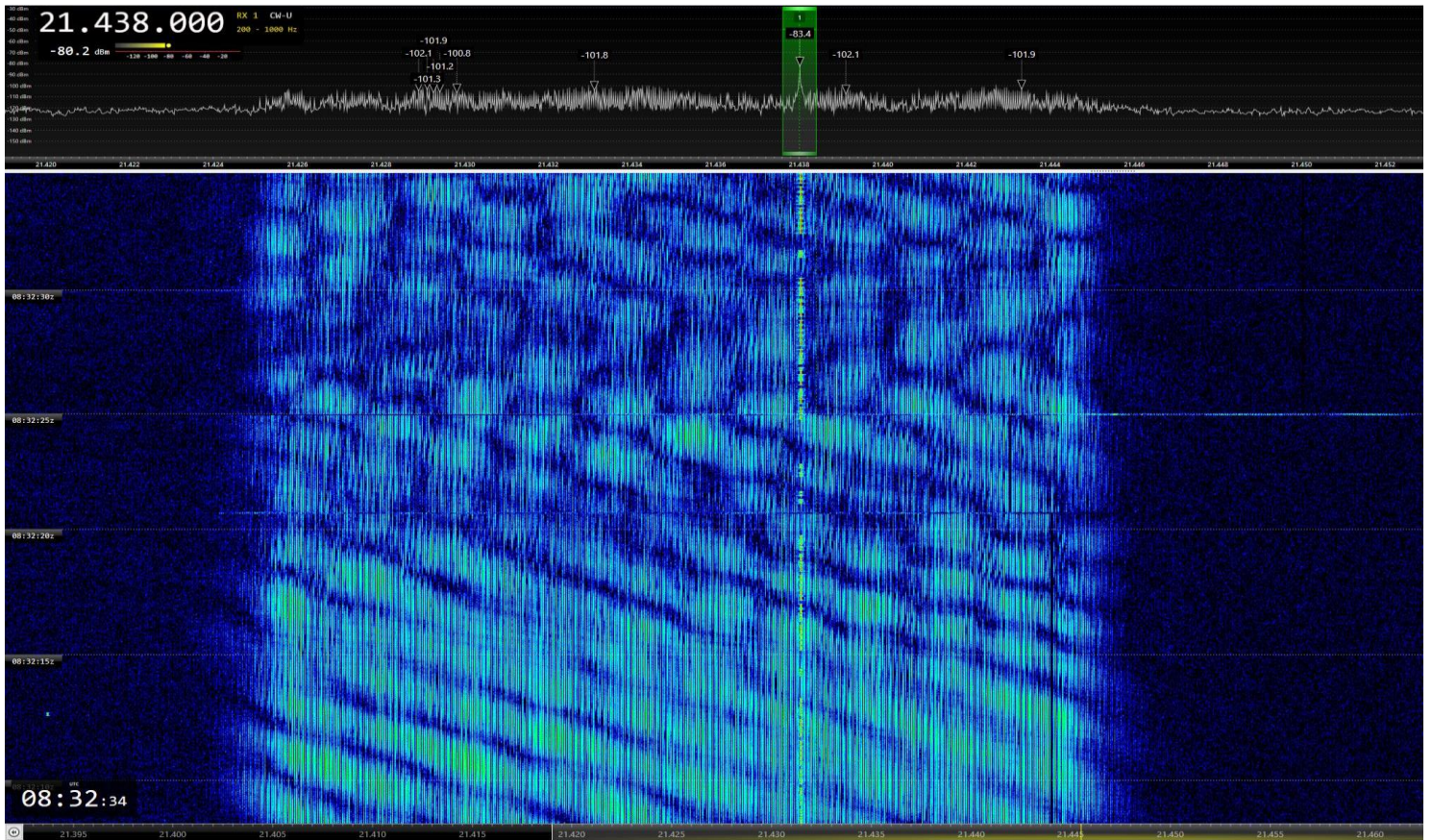


2 X OTHR IRN on 10 m: 28860 kHz CF (BW ca 45K0E (alternating 150 and 313 sps bursts) + 29000 kHz CF (BW ca 45K0E. Alternating 307 and 870 sps bursts)

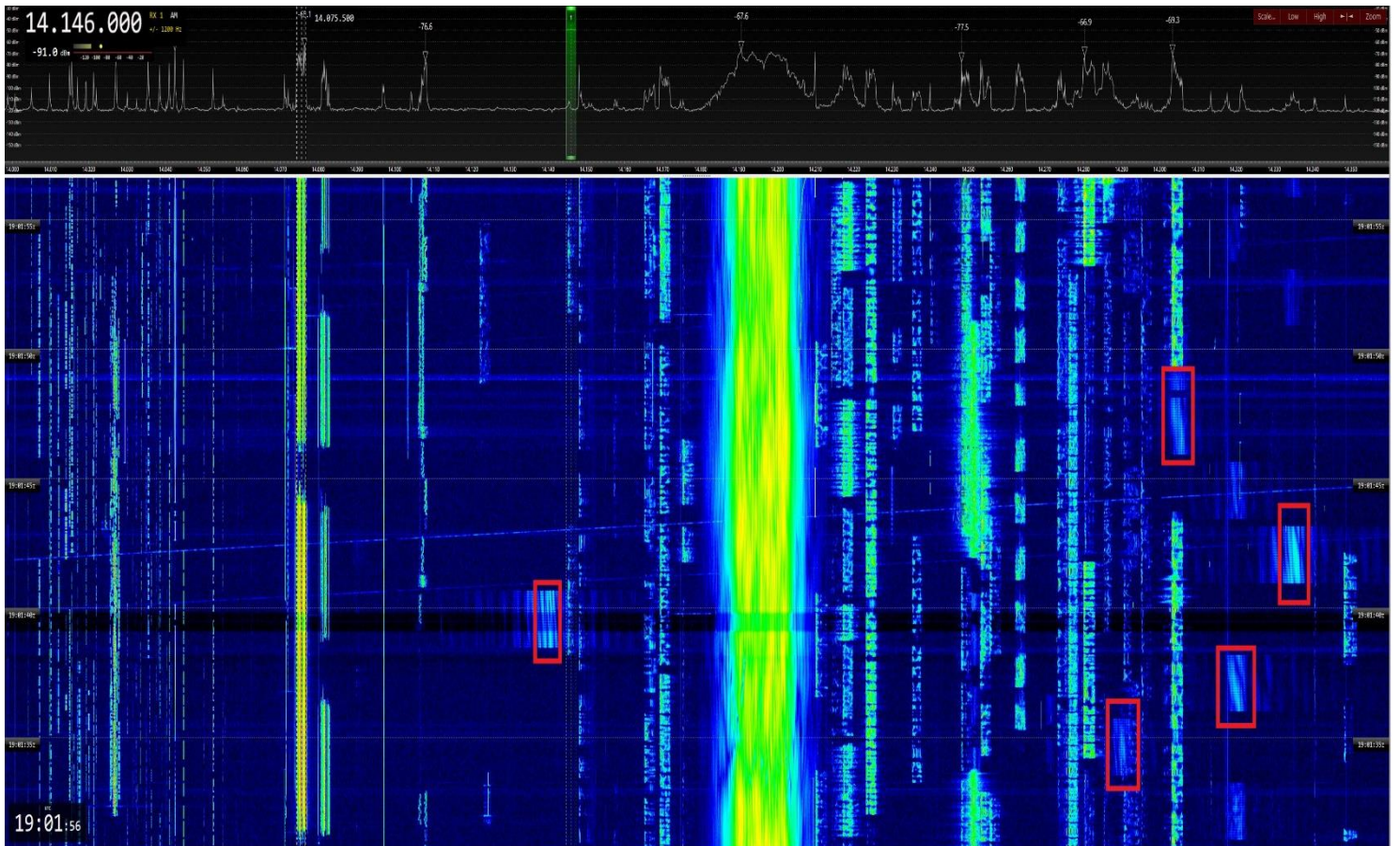


RUS MIL QTC. 14108 kHz A1A (CW). Almost daily since May the 12th





21435 kHz CF: OTHR Pluto. G (UK SBA, Cyprus). BW = 20K0E. 50 sps. / 21438 kHz A1A: RUS navy daily QTC. St ID = „RCV“



20 m spectrum. Highlighted in red, SuperDARN radar bursts (BW ca 5K0) / Center of the image: OTHR Contayner (RUS). 14196 kHz CF. BW = 14K0E. 40 sps