

October 2008: VK9DWX - Willis Island by the Bavarian Contest Club.

Analysis by Luis IV3PRK

In the year 2008 we were at the bottom between solar cycle 23 and 24 – the best expected propagation conditions on Topband – and thus, following their big VP6DX DXpedition in February, the Bavarian Contest Club organized, for the month of October, another one in the south Pacific, VK9DWX on Willis Is. The synthetic numbers of the operation are given in this screenshot taken from a DL3DXX presentation at the OHDXF Meeting in 2017.

Willis Island lies a few hundred kilometres south of Misina Island, making its path from my QTH similar to that of P29VXX but slightly longer (14,791 km vs. 14,484 km), likely with two extra lossy ground reflections over New Guinea and the Philippines.

So, we must refer here to the P29VXX 1997 DXpedition analysis, available on the same specific. At that time, conditions were almost the same – at the minimum solar cycle with a quiet geomagnetic field – just a different month: February instead of October. In 11 days of operations, the four German friends made 18k QSO's, with 450 on 160 meters, and only sixty of them with Europe.

I was surprised for being the only Italian on the log and the westernmost station in Europe to have worked them, so I contacted Professor Robert Brown, NM7M, who was recognized for his expertise in low-band propagation and had published articles on this subject in various magazines. He responded promptly, expressing interest in the topic and then, after examined P29VXX logs, wrote a long article: “Reflections on 160 Meters: The Joys of Salt Water and the Sorrows of Ground – Robert R. Brown, NM7M” which I uploaded on my web page.

He concluded that, while all North America could have been reached by the signals of P29VXX (thanks to the low loss reflections across the Pacific Ocean), on the other side, it should have been impossible for the path to reach most western Europe, due to the ground reflection losses over Asia.

DL3DXX - The long way to serious Low Band DXpeditions

Willis – Oct 2008 – VK9DWX



10 Ops x 5 Stations x 16days = 95k QSOs

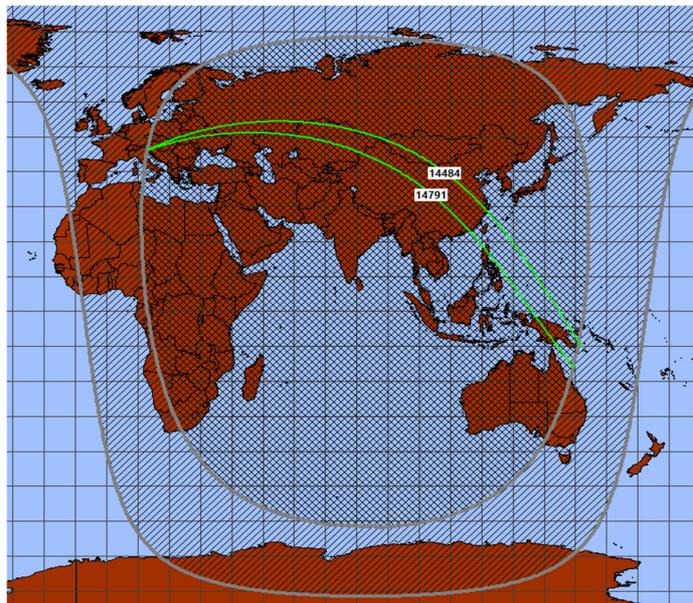
5x Elecraft K3
5x ACOM1000 power amplifier
Antennas
V160E with matchbox for 160m
4-Square for 80m
4-Squares for 40m and 30m
Vertical Dipole Arrays for 20m to 10m
120m beverage dir. NA
160m beverage dir. EU



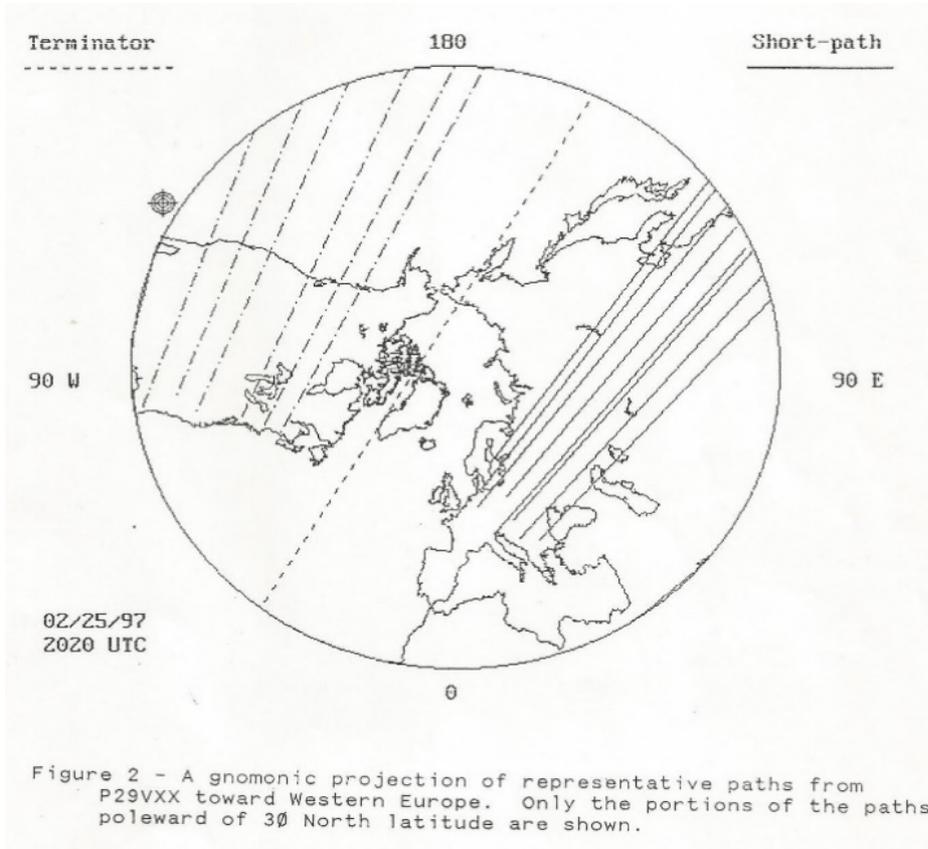
Band	VK9DWX
Days	16
Total	95 K
40m	8.4 K
80m	12.3 K
160m	2558

VK4DMC, SP5XVY, DJ5IW, ZS6DXB, W4WJF, DL5LYM, DK2JW, DJ9RR, DL8OH, DL1MGB, DJ7EO, DL3DXX, DL8WPX

DL3DXX @2017



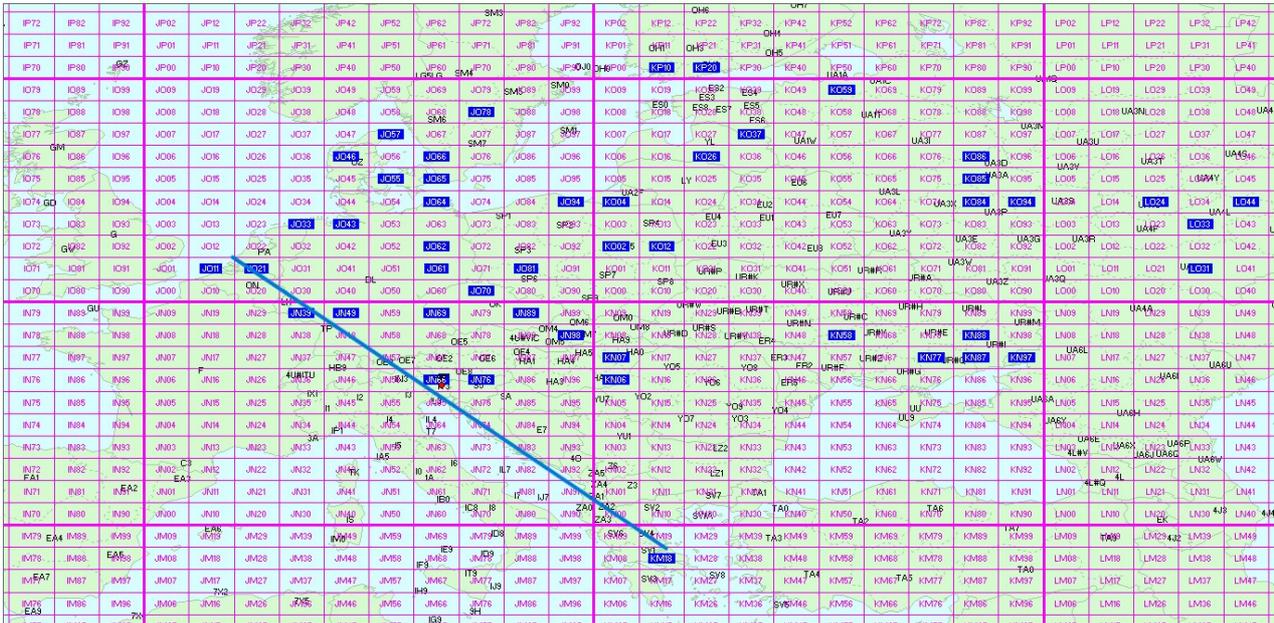
I recommend reading Professor Brown's document, but I've included one of his images here showing where the P29VXX signals from the Northeast ended in Europe on February 25, 1997: one at DLOTU and one at my QTH.



To have a better comparison between the two DXpeditions, I recall here the DX Atlas imagine of ALL European grid squares worked in 11 days of operations by P29VXX in February 1997 (the front line being JO31 – JN49 – JN58 – JN66 – JN65 – JN83).

47	IP67	IP67	IP77	IP87	IP97	JP07	JP17	JP27	JP37	JP47	JP57	JP67	JP77	JP87	JP97	KP07	KP17	KP27	KP37	KP47	KP57	KP67	KP77	KP87	KP97
46	IP66	IP66	IP76	IP86	IP96	JP06	JP16	JP26	JP36	JP46	JP56	JP66	JP76	JP86	JP96	KP06	KP16	KP26	KP36	KP46	KP56	KP66	KP76	KP86	KP96
45	IP65	IP65	IP75	IP85	IP95	JP05	JP15	JP25	JP35	JP45	JP55	JP65	JP75	JP85	JP95	KP05	KP15	KP25	KP35	KP45	KP55	KP65	KP75	KP85	KP95
44	IP64	IP64	IP74	IP84	IP94	JP04	JP14	JP24	JP34	JP44	JP54	JP64	JP74	JP84	JP94	KP04	KP14	KP24	KP34	KP44	KP54	KP64	KP74	KP84	KP94
43	IP63	IP63	IP73	IP83	IP93	JP03	JP13	JP23	JP33	JP43	JP53	JP63	JP73	JP83	JP93	KP03	KP13	KP23	KP33	KP43	KP53	KP63	KP73	KP83	KP93
42	IP62	IP62	IP72	IP82	IP92	JP02	JP12	JP22	JP32	JP42	JP52	JP62	JP72	JP82	JP92	KP02	KP12	KP22	KP32	KP42	KP52	KP62	KP72	KP82	KP92
41	IP61	IP61	IP71	IP81	IP91	JP01	JP11	JP21	JP31	JP41	JP51	JP61	JP71	JP81	JP91	KP01	KP11	KP21	KP31	KP41	KP51	KP61	KP71	KP81	KP91
40	IP60	IP60	IP70	IP80	IP90	JP00	JP10	JP20	JP30	JP40	JP50	JP60	JP70	JP80	JP90	KP00	KP10	KP20	KP30	KP40	KP50	KP60	KP70	KP80	KP90
39	IO69	IO69	IO79	IO89	IO99	JO09	JO19	JO29	JO39	JO49	JO59	JO69	JO79	JO89	JO99	KO09	KO19	KO29	KO39	KO49	KO59	KO69	KO79	KO89	KO99
38	IO68	IO68	IO78	IO88	IO98	JO08	JO18	JO28	JO38	JO48	JO58	JO68	JO78	JO88	JO98	KO08	KO18	KO28	KO38	KO48	KO58	KO68	KO78	KO88	KO98
37	IO67	IO67	IO77	IO87	IO97	JO07	JO17	JO27	JO37	JO47	JO57	JO67	JO77	JO87	JO97	KO07	KO17	KO27	KO37	KO47	KO57	KO67	KO77	KO87	KO97
36	IO66	IO66	IO76	IO86	IO96	JO06	JO16	JO26	JO36	JO46	JO56	JO66	JO76	JO86	JO96	KO06	KO16	KO26	KO36	KO46	KO56	KO66	KO76	KO86	KO96
35	IO65	IO65	IO75	IO85	IO95	JO05	JO15	JO25	JO35	JO45	JO55	JO65	JO75	JO85	JO95	KO05	KO15	KO25	KO35	KO45	KO55	KO65	KO75	KO85	KO95
34	IO64	IO64	IO74	IO84	IO94	JO04	JO14	JO24	JO34	JO44	JO54	JO64	JO74	JO84	JO94	KO04	KO14	KO24	KO34	KO44	KO54	KO64	KO74	KO84	KO94
33	IO63	IO63	IO73	IO83	IO93	JO03	JO13	JO23	JO33	JO43	JO53	JO63	JO73	JO83	JO93	KO03	KO13	KO23	KO33	KO43	KO53	KO63	KO73	KO83	KO93
32	IO62	IO62	IO72	IO82	IO92	JO02	JO12	JO22	JO32	JO42	JO52	JO62	JO72	JO82	JO92	KO02	KO12	KO22	KO32	KO42	KO52	KO62	KO72	KO82	KO92
31	IO61	IO61	IO71	IO81	IO91	JO01	JO11	JO21	JO31	JO41	JO51	JO61	JO71	JO81	JO91	KO01	KO11	KO21	KO31	KO41	KO51	KO61	KO71	KO81	KO91
30	IO60	IO60	IO70	IO80	IO90	JO00	JO10	JO20	JO30	JO40	JO50	JO60	JO70	JO80	JO90	KO00	KO10	KO20	KO30	KO40	KO50	KO60	KO70	KO80	KO90
29	IN69	IN69	IN79	IN89	IN99	JN09	JN19	JN29	JN39	JN49	JN59	JN69	JN79	JN89	JN99	KN09	KN19	KN29	KN39	KN49	KN59	KN69	KN79	KN89	KN99
28	IN68	IN68	IN78	IN88	IN98	JN08	JN18	JN28	JN38	JN48	JN58	JN68	JN78	JN88	JN98	KN08	KN18	KN28	KN38	KN48	KN58	KN68	KN78	KN88	KN98
27	IN67	IN67	IN77	IN87	IN97	JN07	JN17	JN27	JN37	JN47	JN57	JN67	JN77	JN87	JN97	KN07	KN17	KN27	KN37	KN47	KN57	KN67	KN77	KN87	KN97
26	IN66	IN66	IN76	IN86	IN96	JN06	JN16	JN26	JN36	JN46	JN56	JN66	JN76	JN86	JN96	KN06	KN16	KN26	KN36	KN46	KN56	KN66	KN76	KN86	KN96
25	IN65	IN65	IN75	IN85	IN95	JN05	JN15	JN25	JN35	JN45	JN55	JN65	JN75	JN85	JN95	KN05	KN15	KN25	KN35	KN45	KN55	KN65	KN75	KN85	KN95
24	IN64	IN64	IN74	IN84	IN94	JN04	JN14	JN24	JN34	JN44	JN54	JN64	JN74	JN84	JN94	KN04	KN14	KN24	KN34	KN44	KN54	KN64	KN74	KN84	KN94
23	IN63	IN63	IN73	IN83	IN93	JN03	JN13	JN23	JN33	JN43	JN53	JN63	JN73	JN83	JN93	KN03	KN13	KN23	KN33	KN43	KN53	KN63	KN73	KN83	KN93
22	IN62	IN62	IN72	IN82	IN92	JN02	JN12	JN22	JN32	JN42	JN52	JN62	JN72	JN82	JN92	KN02	KN12	KN22	KN32	KN42	KN52	KN62	KN72	KN82	KN92
21	IN61	IN61	IN71	IN81	IN91	JN01	JN11	JN21	JN31	JN41	JN51	JN61	JN71	JN81	JN91	KN01	KN11	KN21	KN31	KN41	KN51	KN61	KN71	KN81	KN91
20	IN60	IN60	IN70	IN80	IN90	JN00	JN10	JN20	JN30	JN40	JN50	JN60	JN70	JN80	JN90	KN00	KN10	KN20	KN30	KN40	KN50	KN60	KN70	KN80	KN90
19	IM69	IM69	IM79	IM89	IM99	JM09	JM19	JM29	JM39	JM49	JM59	JM69	JM79	JM89	JM99	KM09	KM19	KM29	KM39	KM49	KM59	KM69	KM79	KM89	KM99
18	IM68	IM68	IM78	IM88	IM98	JM08	JM18	JM28	JM38	JM48	JM58	JM68	JM78	JM88	JM98	KM08	KM18	KM28	KM38	KM48	KM58	KM68	KM78	KM88	KM98
17	IM67	IM67	IM77	IM87	IM97	JM07	JM17	JM27	JM37	JM47	JM57	JM67	JM77	JM87	JM97	KM07	KM17	KM27	KM37	KM47	KM57	KM67	KM77	KM87	KM97
16	IM66	IM66	IM76	IM86	IM96	JM06	JM16	JM26	JM36	JM46	JM56	JM66	JM76	JM86	JM96	KM06	KM16	KM26	KM36	KM46	KM56	KM66	KM76	KM86	KM96

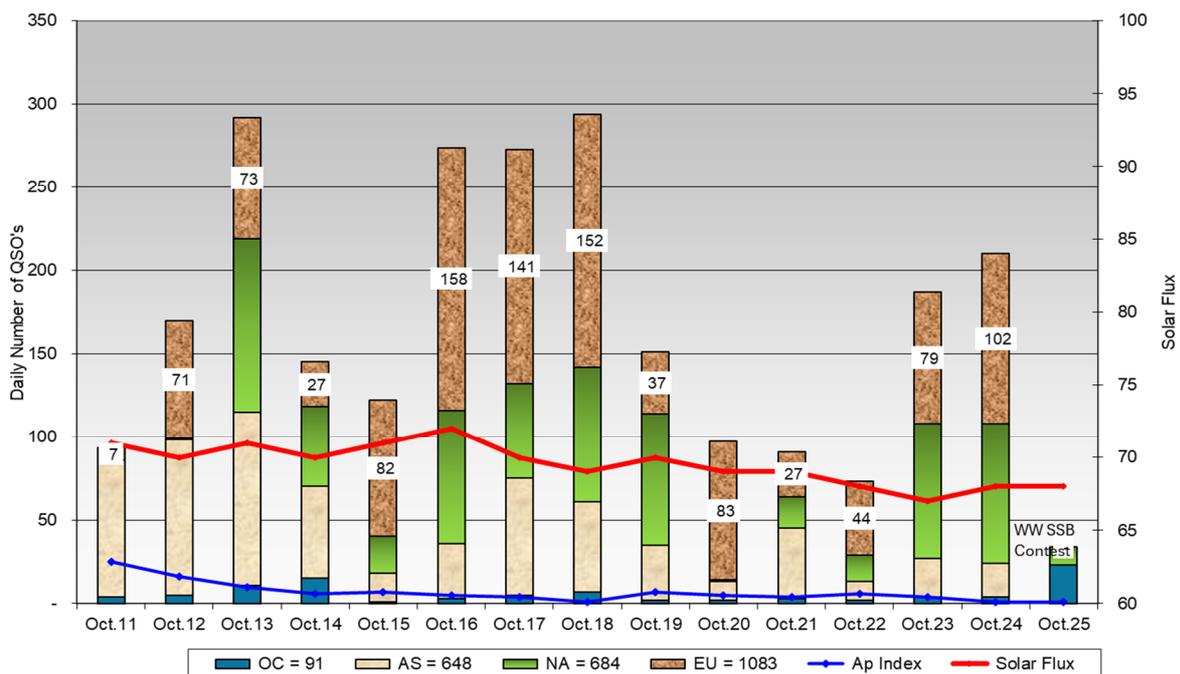
This is the same image with the European grid squares worked by **VK9DWX** in the first two days of operations (Oct. 11 and 12, 2008). Note that the front line is almost the same, just a bit expanded from JO11-ON4UN, to JO39 - DJ2BW, JN66 - IV3PRK, till down to a lonely KM18 by SV3RF.



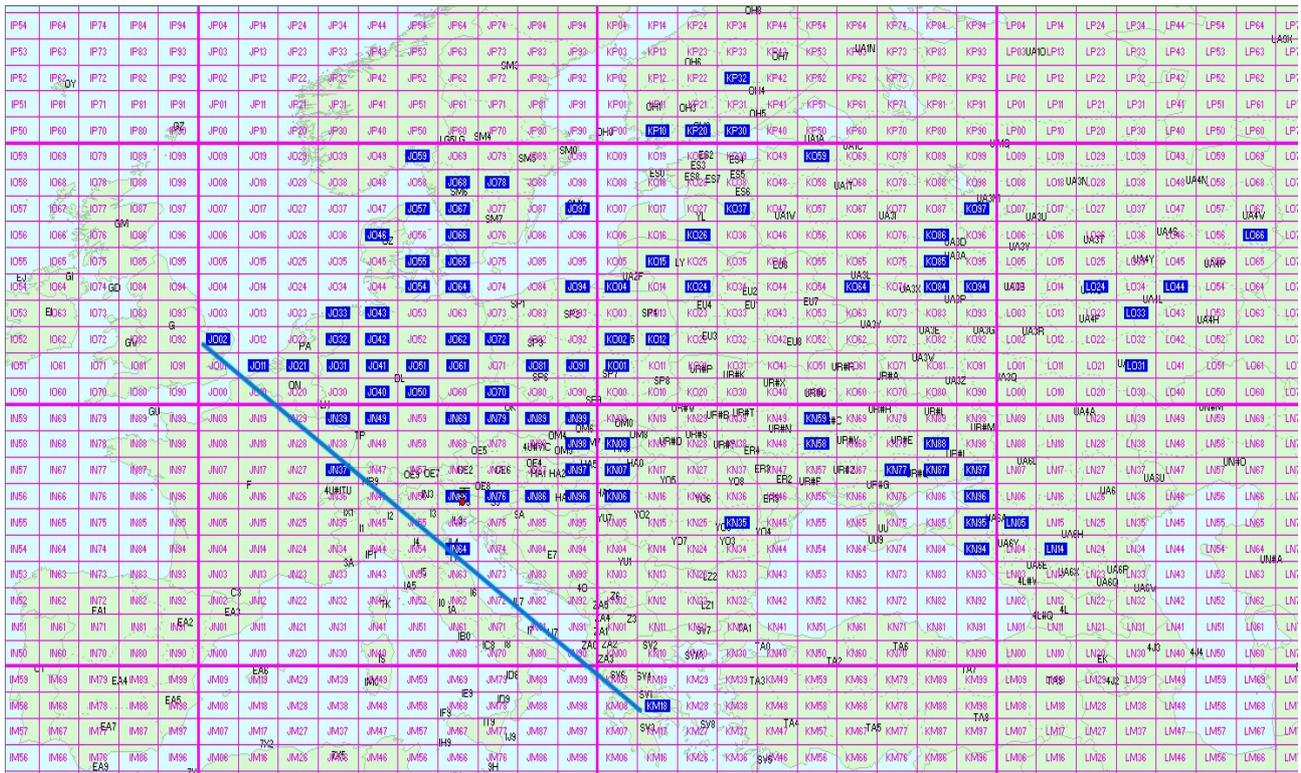
But we are currently at the initial stage of our analysis. Dietmar provided the complete VK9DWX log, and I manually extracted all the 160-meter QSO's and entered them into an Excel sheet, where each European callsign was matched with its grid square. It's a huge and long work. While many were already present in my archives, there were also several new entries - mostly little pistols - who contacted this DXpedition, facilitated by the operators' experience and effective transmitting and receiving antennas.

This is the first graph showing the whole 2500 QSO's made each day on 160 m. (left column set), grouped by continent with indicated the number of the European ones. I added the solar flux line (flat at the min. values 67-70) and the Ap index, decreased from 25 of the first day to very quiet numbers during the next two weeks. I can assure that, having carefully scrolled the 95 thousand rows of the log, they have been active every night on 160 meters - from sunset to sunrise – and not a single opportunity for everyone has been left out!

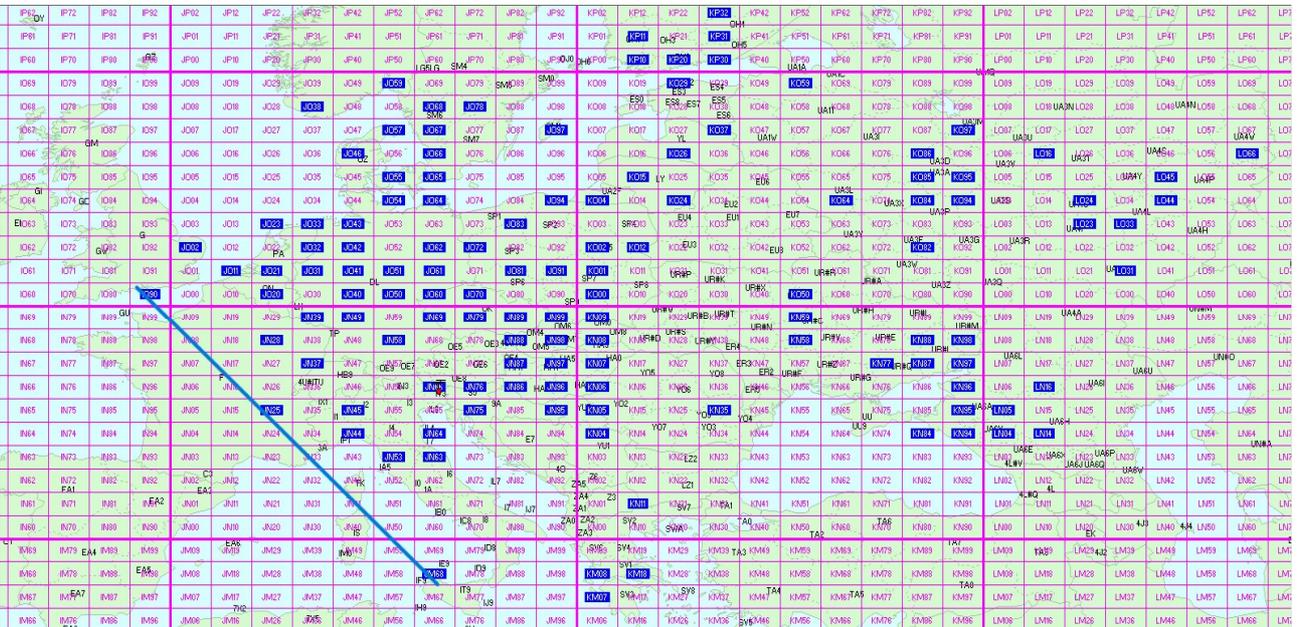
VK9DWX DXpedition October 2008 - 160 m. QSO's



Now let's add to the Atlas map also the QSO's of October 13, which are going to intensify the grid squares in northeastern Europe and move a little bit ahead the front line towards the west: from the first British, G3BJ in IO82, to DF9TF in JN37, and to Fausto, I4EAT, and his well-equipped low-band friends in JN64.

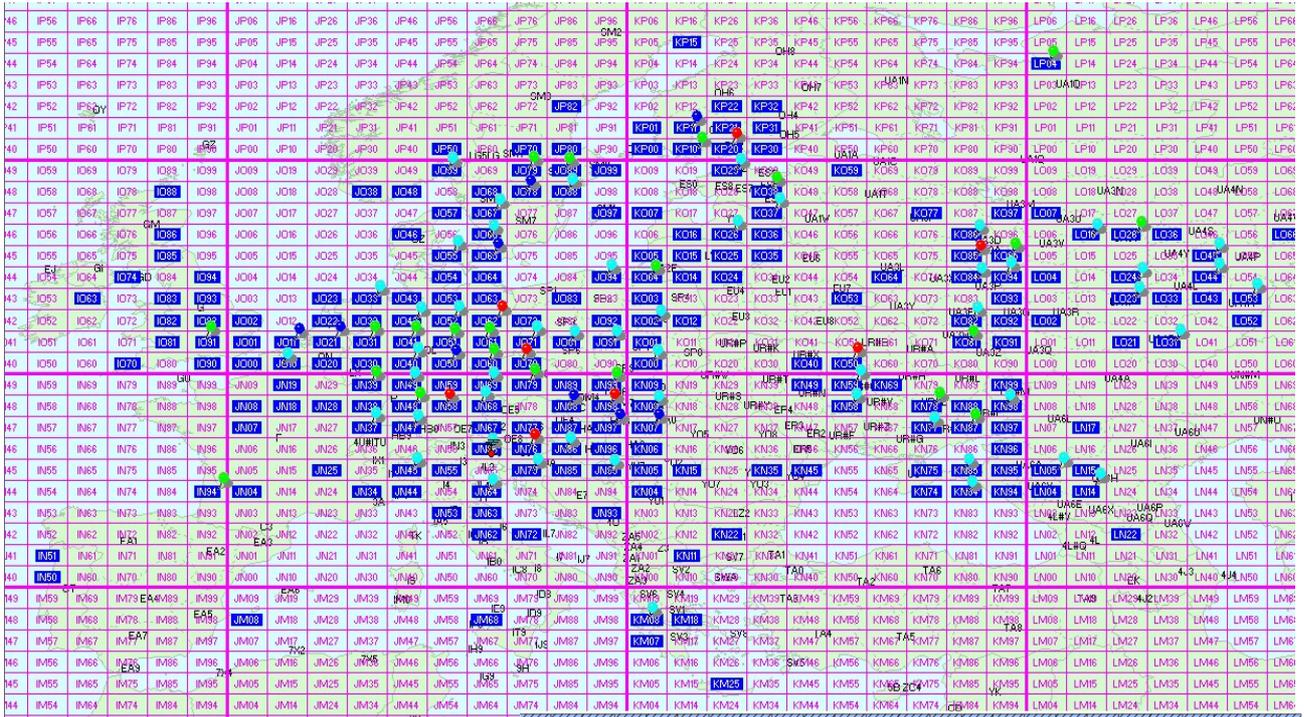


In the next step I added October 14 and 15, bringing the total of 260 Eu QSO's of the first five days of operations. We see more squares filled in the northeastern area, but also a bunch of stations in Italy, Slovenia and Greece has been worked in the last day, with a further small progress of the front line, going from G3SED in IO90, to F4DNW in southern France and down to Palermo, Sicily, with my friend Piero, IT9ZGY (SK).

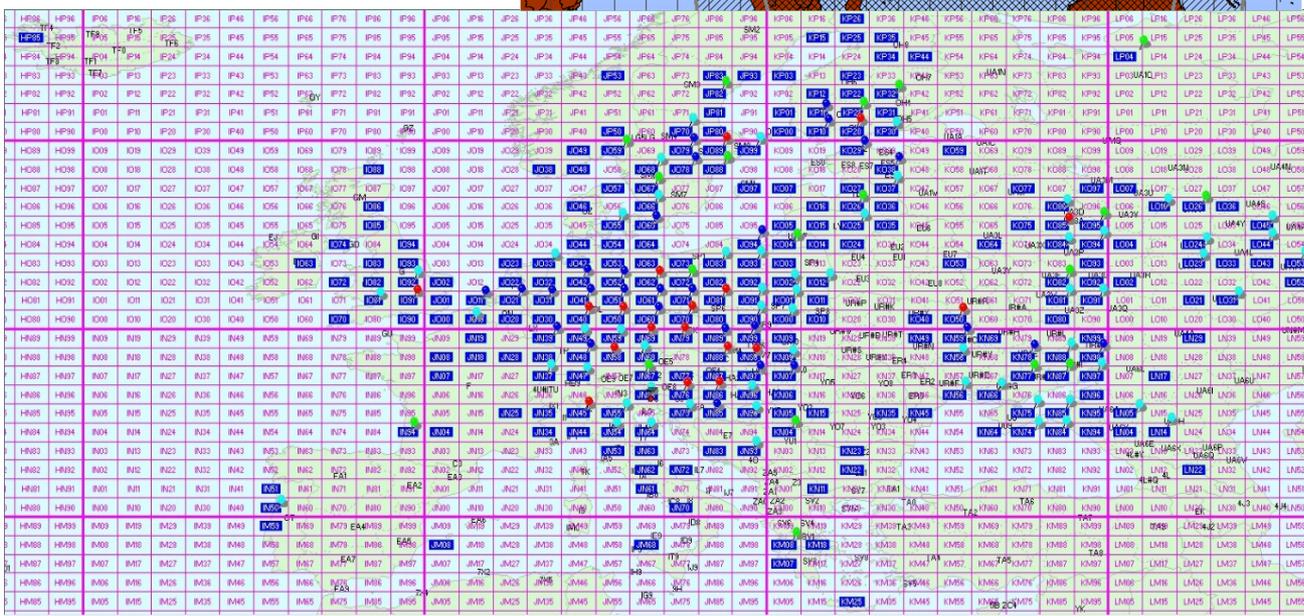
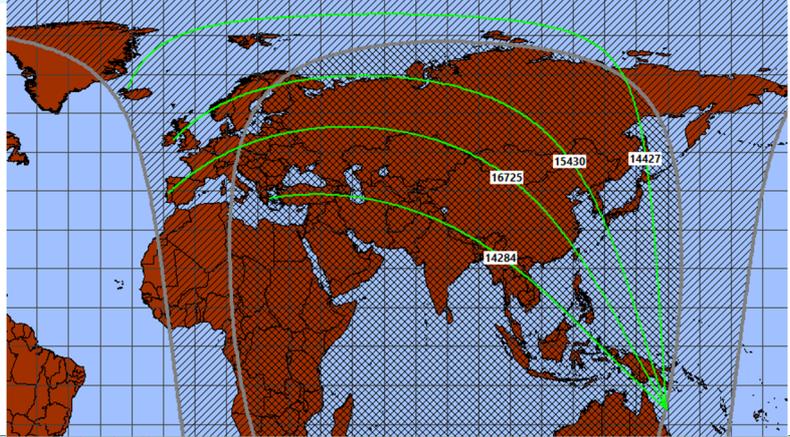


The next map includes the three most productive days for Europe - 16, 17 and 18 - bringing the total over six hundred QSO's. Now the VK9DWX sigs seem to have no limits to the west: we see many contacts with the British Isles, from northern Scotland to Ireland, down to France and Portugal, until CN2R in Morocco, IOF4, which is out of the map and has been the only station worked in the African continent by the DXpedition.

The map is really crowded, as I added also the colour pins in the grid squares with the usual code: azure = 3 QSO's; green = 5 QSO's; bleu = 7 QSO's; red = 10 or more QSO's.



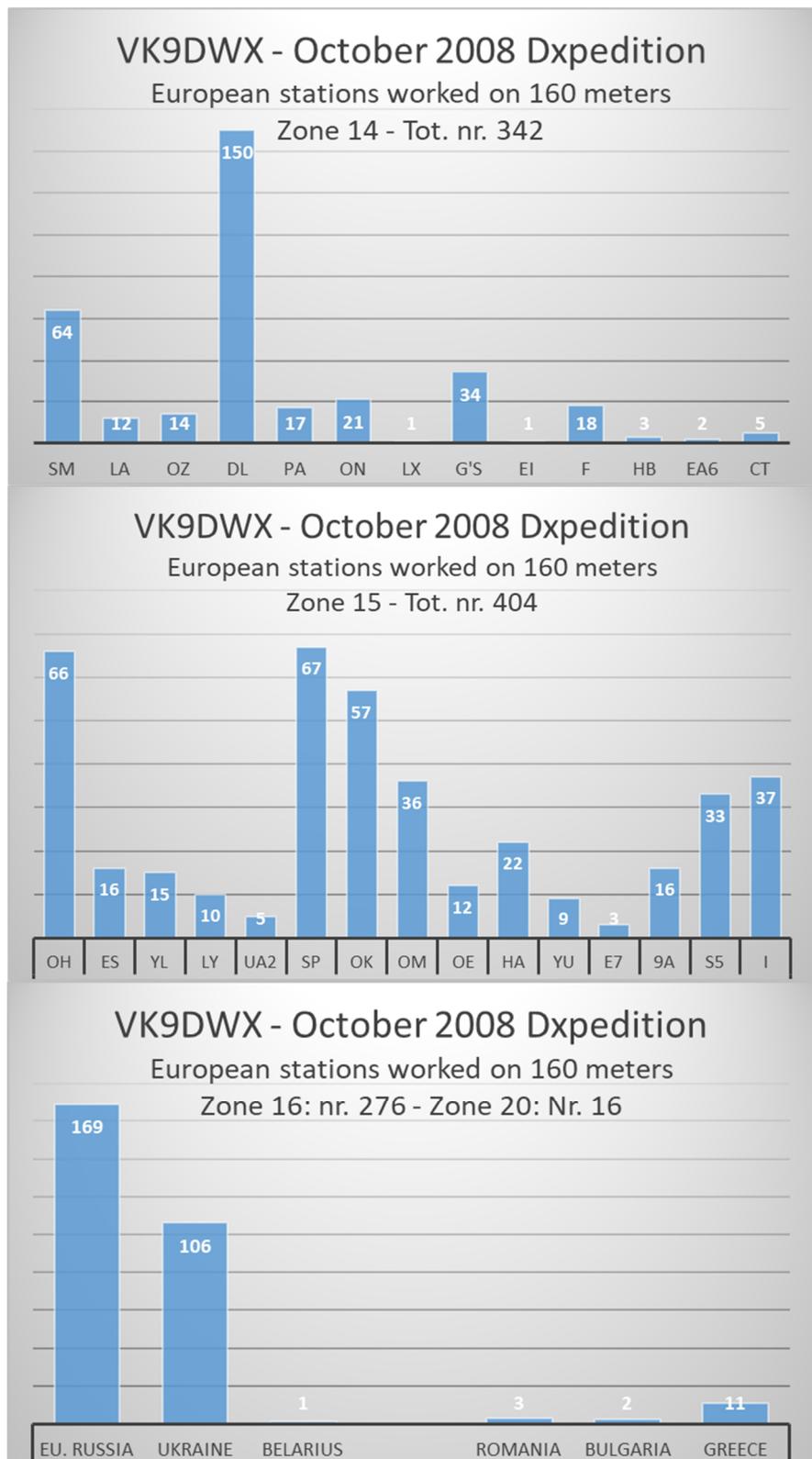
Finally, the map has been updated with all the last six days of operations, reaching over one thousand QSO's with Europe. Almost all the northwestern squares have been filled, and we note that, after so many days of quiet geomagnetic field, several contacts were made with locations within the polar cap, and also beyond it: TF4M on the last day! On the right we see the toughest paths: 16,725 km. to Portugal, and only 14,427 km. to Iceland - but at higher latitude, through the North Pole.



The map shows that fewer squares were worked in France compared to Germany and other Western European countries, and there is no recorded activity in continental Spain, despite activity in Portugal. This suggests the pattern was not due to propagation issues.

These last three graphs show the exact distribution of the number of stations worked in each European country, after deleting the dupes.

In summary:
 Zone 14 = 342 stations
 Zone 15 = 404 “
 Zone 16 = 276 “
 Zone 20 = 16 “
 Total Europe = 1,038.



Thanks again to Dietmar, DL3DXX, for providing me the ADIF log.

August 2025

Luis, IV3PRK