Report of my IG9Y expedition adventures on the VHF bands

By Rob Hardenberg, PE1ITR

This is my report of the VHF activities during the expedition IG9Y Lampedusa in the period from 21 to 26 October 2013. Below is a link to the website of the expedition [1].

The reason for me to go was that Romeo S52RU was organizing an expedition to the island of Lampedusa. His plan was for the period from 17 to 30 October to participate in the CQ World Wide SSB contest on six HF bands. The expedition would consist of an international group. Via Aurelio PC5A, one of the participants, I heard that Romeo also was looking for radio amateurs to activate Lampedusa on the VHF bands. I had already met Romeo at the PI4TUE station, so the contact was easily made. We made arrangements for a meteor scatter station 4m and 2m. Also Gabi HA1YA would go, and we together would take care of the VHF bands.

Lampedusa is an Italian island in the Mediterranean Sea. This southernmost part of Italy lies 205 kilometers south of Sicily and 113 km east of Tunisia. Geologically the island belongs to the African continent. Culturally and historically it is usually included in Europe. The distance from the Netherlands is about 1900 kilometers.

In the course of 2013 the plans were more concrete. We would have a location on the north side of the island, a few meters from the 80 meter high cliff above the sea in the popular locator square JM65HM. This location was a guarantee for a great take-off. It was also not insignificant that the JM65 locator square still is in many VHF DX-ers wish list. The period in which we would operate on VHF fell largely in the Orionids meteor shower. This rain is characterized by a flat increase in the number of meteorites, with two peaks around October 21 and 23 October. This year was the rain was not very prominent.
The expedition consisted of the following participants: JH5GHM, S54W, N3BNA, S52RU, PC5A, S59A, S57UN, PE1ITR, RT4RO, HA1YA, S50X, S57DX, RC0F en VE3LA.

The equipment I brought was an IC-706MK2G transceiver, laptop, microHAM sequencer and audio interface, nine elements homemade DK7ZB yagi, two rolls of 20m Ecoflex-10 coaxial cable, 2m HA8ET contest pre-amp, 4m transverter, 12V and 28V power supplies, the necessary PAs and various connection cables and guy wires.

I had three suitcases for the flight checked in and I had to stay under a total weight of 65 kg. Just before leaving, I had to take of the second transceiver and the second laptop from luggage taken to prevent too many overweight. Unfortunately I could no longer be QRV simultaneously on 2m and 4m by this action, but it could be missing because Gabi had taken also his stuff. Eventually I left with only 3 kg overweight.

I also had two eight meter high telescopic masts and a six elements LFA yagi for 4m. This items where more difficult to be transported aircraft. These where shipped directly from EAntenna from Spain to our contact in Sicily. Later on the trip to Lampedusa the where picked up by the Slovenian group travelling by car.

I travelled by plane from Eindhoven to Tripani, Sicily. For the journey of 180 km from the airport to the harbor, I rented a car. Then I took the boat from Porto Empedocle to Lampedusa. This boat trip is sailing about eight hours. I decided to take the car on the boat to Lampedusa. This has been a good move in all respects. In Porto Empedocle I had to wait

a few hours on the boat. I found a small restaurant and I ate the most amazing Spaghetti Carbonara here.

The trip was without problems. Except when checking in on the boat they were not accepting my internet reservation. I was told to buy new tickets. After some discussion I finally got a stamp on my internet reservation printout paper and that was the ticket to the boat. How I came back but I had to see… When entering the boat again I got the same discussion, but after four important people had viewed the matter, I was allowed on the boat. The boat trip was comfortable from here.

1 First View on Lampedusa when arriving

On October 22 at 9:30 am I arrived on the island and I was picked up by Romeo S52RU. First we went to the supermarket to buy beer (very important!) and then to the resort where we would sleep and eat. I met our cook, Silvo S50X, who had made a perfect lunch. Silvo mode all our meals for the whole day. I found out that he was also moonbouncer and that we where both qrv on 9cm, so we were soon on the same wavelength.

2 Front: 9 element 2m DK7ZB Yagi and background 2nd 2m beam and 4/6m beam.

While enjoying a nice beer I met some of other expedition members. Then we went to the station location about 2km from the resort. I was told that the whole expedition had big problems when the power supply was far from adequate at the location. Fortunately a 50kW aggregate could be rented on the island and this was just delivered.

I build up my station with help of the expedition participants. I was around 16:00 UTC QRV on 4m and 2m on the 'new' aggregate. Half an hour later I made my first MS connection from Lampedusa to 2m with Peter PA3BIY.

3 70MHz beam a 6 element LFA yagi from EAntenna

Gabi HA1YA arrived earlier and was already qrv for two days. We agreed for the day that he would stay on 2m and I would be on 4m. During the first meteor scatter sked on 4m with another station I was surprised by Marc ON5VW with, it seemed, a 30 second meteor scatter burst. But when his signal was still 59 + + present in the following sequence I soon found out that we were dealing with an E-skip opening. We made a SSB contact and soon after that followed QSOs with some English and Belgium stations. Also Sjoerd PA3DOL was logged by me as the first Dutchman on 4m via E-skip. Great, immediately hit the first day. Gaby was on 6m which was also open.

44 Gabi HA1YA in operator position. Empty chair right Rob PE1ITR operator position

When the E-skip propagation was over we stayed at the station as could leave any time for eating in the 2nd shift. So I called CQ on 144.300 MHz for some time. This resulted immediately in a number of QSOs, the most beautiful tropo QSO with IZ4JIF (JN64) was over a distance of 993 km. After dinner back with MS on our expedition frequency 144.363 MHz to 00:30 UTC, with the Dutchman Joop, PA0JMV in the log. Then I went to to bed.

5 Rob's station now qrv on 144.373MHz with FSK441 meteor scatter

The next day I was present again at 6:30 UTC on 144.363 MHz. The meteor scatter QSOs started running again. Later in the morning Gabi HA1YA came in and we decided to work with two stations in parallel. Gabi went on 144.363 MHz and was on 144.373 MHz.
By noon I usually switched to 4m. In the evening reversed: first 4m and then to 2m. This pattern we kept full until Saturday, October 26th, the last day before leaving for home.

Saturday morning the HF CQWW contest started, the primary goal of this expedition. This caused some QRM on the VHF receivers so we could do little. At noon I packed my station for the journey back home.

We have made 252 QSO's on VHF. Below a breakdown on the thee vhf bands we were QRV

Band	**Count**
50	83
70	27
144	142
Total QSO	252

Also a breakdown of the QSO's by propagation

Propagation	**50**	**70**	**144**
Tropo	12	3	16
Meteorscatter	6	16	122
Es	62	7	
TEP	3		
EME			4
Total QSO	83	26	142

The most QSO's where made with meteor scatter propagation. We had a few days with E-skip propagation on 6m and one day on 4m. The take-off to the north was very good, resulting in some nice tropo qso's. In the direction west from 280 degrees azimuth futher south the noise level was rising. We made little qso's in that direction. The most west one was CS7/PD0HNL from Portugal. This was a difficult QSO take more than one hour to complete mainly because the noise level.

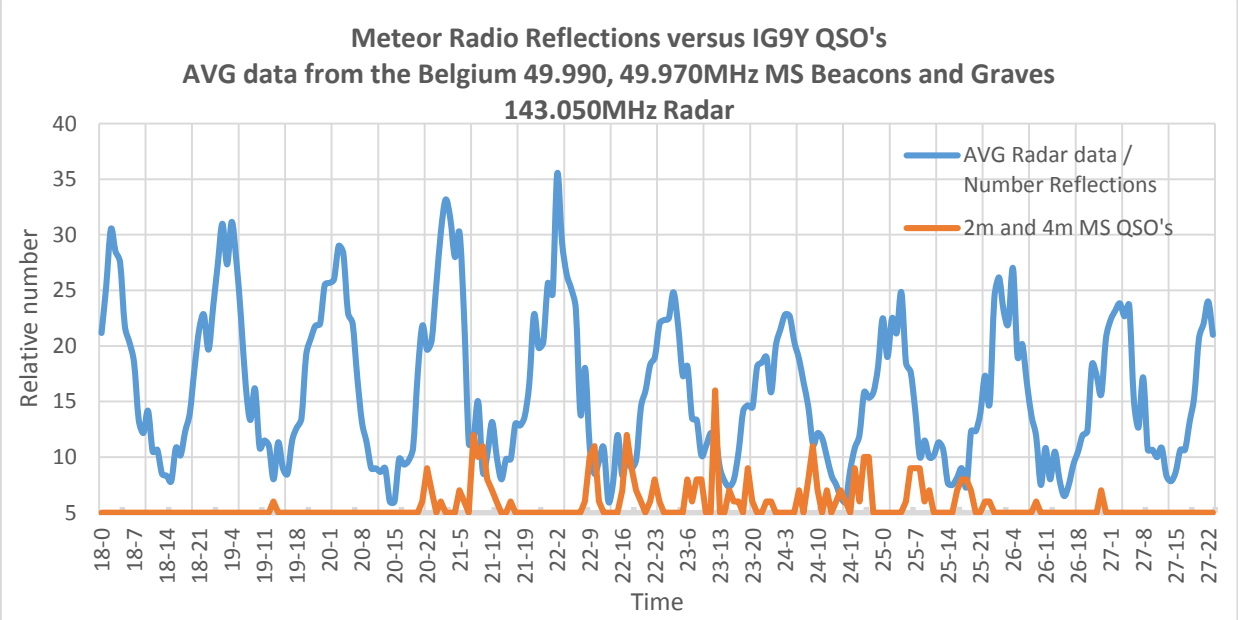
6 Take-off direction north

The best meteorscatter dx on 2m was SM7FMX (JO65) with a distance of 2230 km. Below a table to give an idea on the longest distances.

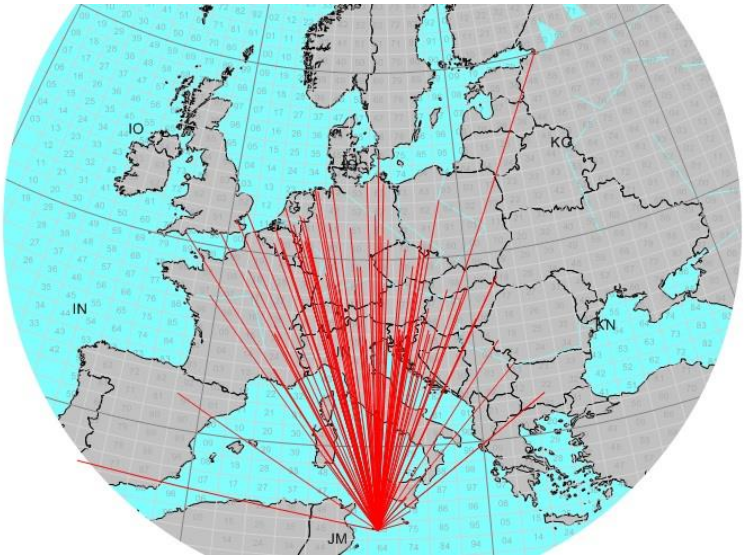
Band	Propagation	Best DX
50	TEP	ZS6BTE, KG48RC 7040km
70	MS	PF7M, JO33BA 2012km
70	Es	G3VYF, JO01FN 2030km
70	Tropo	IW0FFK, JN61FS 696km
144	MS	SM7FMX, JO65KM 2229km
144	Tropo	IZ4JIF, JN64AK 994km

I also particularly liked my MS-sked to 4m with OZ8ZS (JO55). We expected both not much of this sked considering the large distance, but tried we anyway. A smile appeared on my face when I received some nice reflections of him. Unfortunately we couldn't complete the QSO, but the distance of 2285 km is only 29 km below the 4m world record. We have to try again another time…

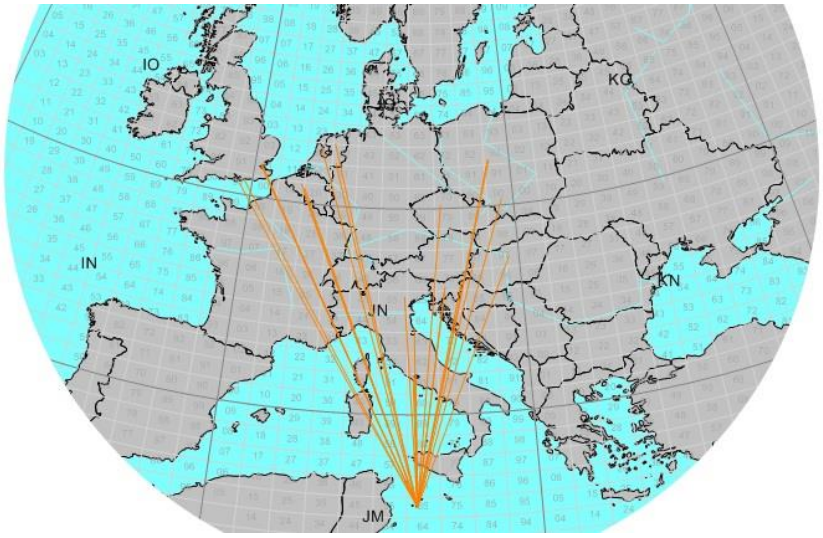
There is no observation data of the Orionids meteor shower on the IMO website. So I took the radio reflection data from observers and plotted in the same graph our qso times. The Orionids normally peak around 21 October and few days later a smaller peak. This year there shower wasn't very strong and seen from the graph actually we missed the peak.



We were qrv during a normal work week. So most VHF operators where sleeping when the meteor radio reflection where at the best. Most QSO's where made in the early morning hours or late evening hours.



7 144MHz QSO MAP



8 70MHz QSO MAP

Each evening there was a very nice moonrise above the sea in the east. A beautiful sight in the clear Lampedusa nights. So we came up with the idea to try moonrise during moonrise and make use of the groundgain antenna lobs. On Friday night I called CQ on 144.157MHz with my single yagi station. This resulted in two QSO's with the big guns and I2FAK and RU1AA. Gaby worked Saturday night OZ1LPR and RX1AS on the moon.

In our dreams we hoped on TEP propagation on 4m or perhaps also 2m. That is possible from Lampedusa but unfortunately, it did not happen. Three TEP QSO's only on 6m: 20/10 with ZS6BTE and 23/10 with ZS6NK.

9 Left to Right Gabi HA1YA, Aurelio PC5A and Rob PE1ITR

On Sunday October 27th I left and went home with the boat. Before I was on the boat I had again the now familiar thing with my internet reservation. But after some talking, internal discussion and back and forth call I got another stamp on my internet reservation printout and I could enter the boat again.
Monday morning at 13.00, after a long journey, I was back on the couch at my home in Eindhoven. Looking back on a nice expedition in which we have helped many vhf operators on a new locator square and for me a great experience richer on a fine expedition.

73 Rob Hardenberg PE1ITR

[1] http://ig9.ii9p.com