

# **President's message**



We notice that many of our members have not yet accepted the invitation to join the "members only" groups. ie e-mail group. It is emphasized again that unless they join, they may not get important mailers like AGM notices and nomination / ballot papers as ARSI will soon stop sending such notices by ordinary post as it has been found that many are not delivered and ARSI has been blamed for not sending them.

So PLEASE do send a mail to < <u>sec.arsi@gmail.com</u> > from your preferred email address and quote your call sign and membership number so our records may be updated.

We had two very successful, and from all accounts, very enjoyable contests recently - the Hill Topping combined with Field day and the CQVU 40 Meter contest.

Both brought in good numbers of participants and, more importantly, logs were received by the Contest Manager, unlike what happened in earlier years. This bodes very well for the contesting activity which also gives good exposure to operating in temporary locations, putting up temporary antennae etc. WPC officials need to be commended for according the requisite permissions in very good time.

ARSI is of course still working on getting the pre-permission condition of our amateur licenses for portable and mobile operation removed, but we have not had much success. Changes in senior officials at WPC have not also helped progress matters. We will continue to do whatever is required in this direction and also to correct many anomalies infrequency allocations on the WPC web page.

# 73 - Gopal Madhavan VU2GMN

# From the Editor's Desk



This issue covers the full story of the ARSI Field Day and Hill Topping winning team VU2SBJ; congrats to the team on the excellent job. Reports from other teams too are included.

The 40 meter SSB contest was successful too in spite of the poor band conditions. The few times I checked the band during the day, I did not hear any activity.

Thanks to all those who sent in articles that makes this issue very interesting.

#### 73 - Ganesh VU2TS



# **ARSI FIELD DAY & HILL TOPPING**

The event was held on the weekend of 24<sup>th</sup> and 25<sup>th</sup> February 2018. ARSI had decided to combine hill topping and field day as one event. And certainly it received a very positive response overall. Teams who would have left behind otherwise felt they were more engaged on air during the day and night time as well. There were 15 field teams registered to the event initially.

1. The event generated significant amount of interest in hams around VU. Following were some key observations to share:

2. In total 1000+ QSOs were made by field stations

3. Most QSOs came from stations who actually sweat taking Solar and Battery to the hill tops!

4. Location choice and population proximity seems to be obvious in all of their scores

Still a long way to go for log submission by VU individual stations. There were 350+ unique calls identified from VU, however, only 8 (EIGHT) home stations submitted their logs.

Our categories were geared to promote outdoor camping, publicity and trying new techniques such as satellites communications. Couple of teams such as Mangalore/Manipal clubs with lead call of VU2SBJ and Belgaum team AT1HT lead by VU3TYG turned their Yagi's beyond horizon to make handful of satellite contacts as well.

We congratulate all the winners and also other field participants and VU hams who joined this event on air to make it a grand success.

Following are the category winners:

Winner Category	Winning Team	Score
Mixed - Solar- Camping	VU2SBJ	741
Mixed - Grid	AT3HT	339
VHF - Solar- Camping	VU3UNO	456
HF -Solar- Camping	VU2ECB	216
Non ARSI member team	VU2KPA	1204

ARSI will start distributing certificates to all of the winners and participants who submitted their logs in April.

VU2XE - Kiran Contests and Awards Manager – ARSI

Here are some reports received from participants:

# Posadigumpe

#### Mangalore, Manipal hams' field day for ARSI's 2018 VHF Hill Topping and National Field Day Contest

# - A report by Sri, VU2SBJ

We had probably decided we would not go this year. Somehow things never took off, and we hadn't arrived at a definite location. Everyone seemed busy, and nothing progressed. A fortnight before the event though desperation had set in. Why are we not even participating I thought. Like we usually do, we would go as a team from Mangalore, NITK and Manipal clubs. But most of the team members never expected to go this time, though. The topic had been in discussion for over a month, but nothing progressed after the meetings.

As the dates closed in, any location that was decent would do. If someone could offer some logistical support we would buy it. That is what happened, and when VU2QDX mentioned of Posadigumpe near his native village Uppala (in Kasargod district of Northern Kerala) we decided we would give it a shot.

It was certainly not a great location in terms of height. Was only about 1000 feet above mean sea level. But was logistically practical, not far off, and we could pull it off at short notice without even a recce trip maybe.

In half a day we put together the paperwork to WPC and sent it off. We just hoped our permission would arrive on time – we were extremely late in applying, due to our own folly!

Everyone was busy with their respective office work - yet, VU2RDQ and VU2QDX made a quick visit to the site on 15th and understood the logistics better. Easily took them more than half a day from Mangalore and Moodbidri. It was soon understood that the location had some private property too, and owners were known to VU2RCT. With all the right strings being pulled we got the permission to use their



property in no time. Not too much of planning or discussions going on yet - when two days to the event things began getting warmer. We quickly put together a list of things to get and got a final feel of participants. Amidst a few Yes and Nays, we eventually came to about 2 car loads of folks. That is all we thought would ply.

Few dropped out, and a few joined in late. We decided to carry enough batteries, HF and VHF, UHF stations, basic antennas for HF, and camping gear. VU2RDQ's 4WD Duster would go till the end point. Some folks can trek up about a kilometer, but then we figured we would have too much of luggage for about a 10 member team.

Main meals would be arranged at the foothills, with a local caterer – who would be our event logistics partner too. It meant frequent trips downhill and back climbing up after the feast each time.

The significance of another 4WD became paramount - and there came to the rescue our friend VU3WKR, OM Raj. He lived not too far away (in the same state!) - Though he could not join us for the field day, he offered his 4WD jeep. This indeed ended up to be our saviour.

After last minute confusions and more-thanexpected luggage, we ended up taking an extra vehicle till Manjeshwar - At 4 AM we began with one almost fully loaded car from Manipal - with myself VU2SBJ, VU3BUN Manu, VU2NJN Soma, VU3VXT Paramesha and our some of our station stuff - We were to be joined by VU3PWO Sampath midway at Surathkal. We decided we would have a pit stop at VU2HEG Hegde's to load some more accumulated stuff by VU2TAO Ganga from NITK and VU3PWO would join us there.

This was planned to happen at 5:30 AM, and at the said time we soon realized that it was either VU3PWO or some of the rations! We were so tight on space. VU3PWO quickly decided he would get his car too, and that made things a whole lot easier.

Manjeshwar, just south of Mangalore and bordering Kerala was our next stop. We were to be joined by another car full of friends and more station stuff enroute at Mangalore - VU2RDQ Ro with his harmonic Abhinav, VU2MTT/VTI, Mur and VU3LMP Lester on Ro's 4WD Duster. Ro's car was fully loaded - was the only car with a carrier so all long paraphernalia was on it. The batteries and solar panel filled in most of the car not occupied by the folks. Another last minute surprise - VU3FDU, OM Ashwin and his SWL sideband Anosh decided to accompany us for a brief visit to the hill top. They would not stay for long, but participate in the setup and return.



Ensemble at VU2JBM's home in Manjeshwar. L to R SWL Anosh, VU3FDT, VU2JBM, VU3BUN, VU3LMP, VU3VXT, VU2VTI (ex VU2MTT), VU2RDQ, SWL Abhinav, VU3PWO,VU2QDX; sitting: VU2NJN

That became the 4th vehicle and we now had a fleet. With more re-shuffling we all proceeded to Manjeshwar. VU2QDX Majeed, our local aide was to join us near a Kerala border toll booth and he was there as promised on his mobike. More to our fleet! After a couple of hits and misses and return drives we all managed to assemble at VU2JBM Jagadish's home QTH in Manjeshwar - Tnx to his XYL we had a quick delicious breakfast before setting out to our hill top. Raj's 4WD jeep was arranged here, and we left Sampath's car behind instead.

At the foot hill of Posadigumpe, our proposed hill top, we parked all the non 4WD cars. Few of us immediately went up the hill on the jeep with one load of stuff. The rest quickly had their lunch at the caterer's house here and prepared transferring stuff for the next uphill trip. The journey uphill was through a rocky terrain that was pretty bad at certain places. It easily takes about 10 minutes by a 4WD vehicle, or about 15 minutes by trek. Couple of hours later than planned, and a small bike fall (with without injuries) later we were all on the hill top by walk, with the jeep and the Duster too.

While the station was being set up, few of us started operating our handies from atop. We did get to QSO with the Tadiandamol hill top group with super clarity - they were literally on top of the world! The sun was scorching. The breeze made it less difficult but it was still very hot and humid. Not too much of a shelter or shade to be seen. Thanks to our caterer's resources we could arrange for a 'shamiyana'



tent up there. Our low roof sleeping tents would be very inconvenient shelters for the day otherwise. At least one thing was certain - there was no problem for solar charging our batteries. Full force in that department.

The Diamond X520 VHF-UHF collinear antenna was first to be deployed. The moment it was up, we began active CQ calling on our designated calling frequency of 145.660 MHz. Not much of a response there – maybe it would pick up later in the day, we thought. The HF 40m/20m inverted vee was next to go up. Soon we were calling CQs on HF too. Not much of a response there either – maybe it would pick up later in the day we thought. Stray contact here and there. Some from other hill top stations, some from our home friends. Nothing to boast about yet. Maybe it would pick up later in the day we thought!+

The HF bands were amazingly quiet, much unlike what our homes provided. We were used to the noisy bands. Full of RFIs by all the different gadgets – the LED lamp revolution had only made things worse in this department. All that was missing at this place.



Another antenna was to go up – the 2x 10Element VHF Stack. The merciless Sun was firing away to glory. But will this antenna change our luck? Would it improve things greatly? These thoughts pushed us to continue with the antenna spree. With some more effort the antenna came up in about an hour. By now we had 3 antennas up and running. We had another yet to come up: the 80m inverted v dipole. We pushed that away for later in the day.



View of the Hilltop Station - VU2SBJ

Meanwhile our efforts on the radio were on. Everyone was taking turns calling CQ. VU2VTI (ex MTT) was our main CW operator. VU3BUN was the main telephony HF operator. The rest of us took turns both on VHF and HF. The log was not progressing that much! QSOs were rather slow.

HF conditions looked pretty decent – with quite a few stations being heard, but surprisingly not many were able to hear our calls. Too little power? We could do a decent 65 watts without any problem. Not sure why. Maybe it would pick up later in the day wethought :-)

As sunlight began fading away two more tasks were to be completed before nightfall – pitching the tents, and the pending 80m dipole. Ro and his son SWL Abhinav are seasoned campers where we derive all our camping expertise from.

Abhinav was in charge, and he pitched one tent after another – four in all. Well planned and executed, we had our camping site ready in no time. It was a very pretty sight over-all. Some of the tents we brought here were last opened only for the 2017 VHF Hill Topping event! One year in storage now brought out some dust from our previous hill top!







Tent Array

Photo: VU2RDQ

In parallel we began erecting the dedicated 80m dipole hoping for some magic activity. There was enough and more space for the full length 80m dipole. We used about a 12ft mast and 1 sq-mm wires and a newly acquired GEK made 1:1 balun for this inverted vee dipole antenna. Within a couple of iterations we were able to tune the antenna 1:1. Sounded promising; Will it be worth the effort?



VU2SBJ - Station view

As the evening progressed, we were visited by a few more local friends. VU3GAQ Hasan, and VU2GOG George with 2 harmonics visited our station. As the sunset we were fortunate to receive more visiting friends, VU3WKR Raj with his XYL and YL QRPP visited our station. Team members VU2RCT and VU2TAO who could not join earlier now made their way to the camp. After spending some time with all of us the visitors left, and we began taking turns going downhill to the caterer's house for our dinner – those who stayed back continued on the radio. Raj's 4WD jeep was our carrier, and each trip took about 10 minutes each way, plus the time for grub.

Back on top of the hill after dinner - dinner was sumptuous. Homely vegetarian meal, complete with desert! How could we stay awake after all that! Mur continued his CW efforts breaking in between for Manu to get on SSB. VHF kept calling and searching for new contacts.

One of the other objectives of this field day was to try out working satellites, and seeing one pass too.

We had compiled and carried a list of satellite passes for our field day period, and the night seemed promising. With the clear panoramic opening on the hill top, low elevations on the passes were an easy bet for our simplistic collinear antenna array. The Diamond X520 was a dual bander, so a dual band mobile radio connected to it completed a basic setup for working the satellites. AO-91, AO-92, SO-50 the main targets. Having FM were transponders, we figured it should be easy to work them. We did give it a try and were rather easily successful in working a handful of stations spread over 3 or 4 passes. One of the passes was past midnight – staying awake after that busy tiring day was not easy. So we kept ourselves occupied by preparing some 'Charmuri' (a sort of bhel). That easily kept us busy and we ended up almost forgetting about the satellite pass! Meanwhile HF station, mainly manned by Mur and Manu kept calling and working a few stations occasionally.

The next objective was to do a visual of the ISS. A rather high elevation pass of the ISS at 5:27 AM, before sunrise of the following morning (25th Feb) promised to offer this show. What could be more thrilling than being able to see the space object at the predicted time and location? It was enough to impress the new viewer, enough to push him overboard to the world of working the birds. Despite hitting out tent sacks well past 1:30 AM, some of us actually wanted to check out the ISS. Many were up even before the alarm went off at 5:20, and came out of the tents. And lo, the ISS was flying as promised. It was a fantastic sighting, and we ended up discussing the features and facts about ISS.

Within no time, the day was beginning to break. It was not as chilly as we had expected it to be. The winds last night were reasonable, nothing harsh or uncomfortable. The morning too was pleasant. There was plenty of condensation collected on the tent surface, and also on the station roof top, enough to have caused a little puddle right on the radio table. Fortunately we had pulled off the radio for the night and everything was safe.



It was time for reconnecting everything and putting the station back on air. Early morning VHF DXing had its decent share of success. Once up and fully awake, we heard nature calling CQ. Some had the foresight last night to complete the tasks in advance at the foothill home during their dinner visit. Others braved all odds and chose an isolated distant location behind the bushes for their DX contact. Nothing was as satisfying as this well made QSO!

Some of the team members had to leave and we gathered for the official team group picture.





nding L to R: VU3PWO, VU3VXT, SWL Abhinav, VU2VTI(exMTT), VU2NJN, VU2QDX, VU2RDQ, VU2SBJ Sitting Lto R: VU2TAO, VU3BUN

Soon after we all set for our breakfast to the house downhill - we took turns. When we came back Manu and Sampath announced proudly their maiden satellite QSO with a Singapore station via AO-92!! Introduction to working satellites was mission accomplished! They also were happy to have received a group of students from the village downhill - a full demo and intro to ham radio was provided.



Manu, explaining Ham Radio to student visitors Photo: VU3PWO

Shortly latr we were joined by a few local dignitaries, including two headmasters from schools in the neighborhood villages. Introduction to Ham Radio and a full fledged demo followed.



Demo to local visitors

Photo: VU3PWO

In return the locals provided a very interesting facts and some history of the location at Posadigumpe. Mutual exchange of information! This event was turning out to be very useful in many ways!

As time passed, the sun gained upper hand again. Folks had returned from their breakfast trip. Signs of tiredness was now slowly showing. We summarized our achievements:

Decent number of HF VHF UHF and 6m QSOs done - totaling well over a hundred

Worked the hill-top team from Yellur; The almost 400 kms was the longest distance covered for a terrestrial VHF QSO in our log

- Satellites worked DX station contacted too
- Demo to youngsters and locals
- Fantastic camping and field day experience
- National level contest participation complete!

It was a list long enough to easily help decide towards winding up. We began bringing the antennas down by around 11 AM. Loading the vehicles required Ro's expertise. Each knot tied had to be approved and pass his meticulous standards. So it was best left to him!

After a couple of trips downhill to the other parked vehicles with all the gear, and a round of inspecting for left- overs and picking up any waste, we bid adieu to our fantastic hill top location. It was an awesome 24 hours spent we all agreed. We'll soon return to this place!

For a field day we never thought we would participate in until the last moment, we indeed

Ham Radio News



did a great job. We attended in good number as a team from Mangalore, Manipal, Surathkal and Manjeshwar. Each participant brought with him his expertise, fun and also took back something more than he came with.

It was indeed a fantastic team event. Looking forward to many more fun events together. At the time of this writing we now also know our team ended up topping the contest in ARSI member mixed mode Solar-Camping category! Something we never aimed for, nor ever imagined to achieve.

Thank you ARSI for making it all happen and ARSI's contest Manager VU2XE, Kiran for his outstanding support!

# **GURGAON - HARYANA**

As the news of ARSI Hill Top Field Day and Contest spread, VU2UUU – Kaustav Saha, from Gurugram invited us to participate with prior permission from WPC for change of QTH of VU2UUU call sign.

So, VU2UUU Team of four hams, namely., VU2ATN - Atanu, VU2UUU - Kaustav, VU2VV - Vedant and VU2OEC – myself, loaded with all equipment/gear headed towards Barbet Tourist Complex, Sohna in Aravalli mountains, away from the QRN of the millennium city – Gurgaon.

On the day of the event, the only team from North India, arrived at the Sohna Aravalli hill resort to put up the station and antennae for the field day. Our gridsquare was ML88mf – 252 m above sea level. VU2UUU – Kaustav, arranged all the antenna and radio equipment with support accessories. A homebrew dipole cut for 20 m and 40 m, matched with balun was installed in sloper fashion in North-South direction. Station grounding was done by fixing a rod in the ground and connecting rig with Copper wire. Safety measures were well considered by all team members in the event.

The place was full of rare species of birds, peacocks, macaques, squirrels and many more with no harm to antenna. Wonderful experience to install antenna in the wilderness.

The rally of QSOs picked up with the beginning of the contest and by noon it was a pile up with stations all over from Europe, China, Japan and Southeast Asia. Within no time, VU2UUU field day call sign was in dx clusters. Later on, we managed few QSO on 40 m and many QSOs on VHF also. For the two days of the contest, that is, February 24 & 25, 2018, the four hams took turns to push the score of the VU2UUU team call. By the end of the contest, the total tally was 154 QSOs.



VU2UUU Kaustav and the station setup

It is said "Wandering Bee Gathers Honey". Our participation in the ARSI Hill Top Field Day and Contest, churned out many ethos of amateur radio emergency communication, such as, preparedness to install antenna/radio setup for the region during disasters like earthquake or floods, team-building and coordination to work together, and above all perfect simulation of the location for VHF/UHF communications.



VU2VV, VU2ATN, VU2OEC, and VU2UUU

The biggest outcome of the field day, that it was a good location for all line of sight emergency communication as the signals reached almost whole of National Capital Region. The Aravalli hill resort could also become a good HF link for most of the European continent and South East Asia during emergency communication due to very less QRN or QRM. We wish and hope that in future hams from Nagpur, being the strategic location from propagation point of view, do participate in ARSI



Field Days. Participation from central part of India would have perfect emergency communication simulation for the Indian peninsula so that we know our readiness for the length and breadth of India.



We thank ARSI for organizing this national field day event and expect many more to enjoy and promote the hobby of amateur radio for the generations to come.

#### 73, Rajesh Chandwani VU2OEC

# **PUNE - MAHARASHTRA**

On 25th Feb 2018 The PUNE HAMS & AMATEUR RADIO CLUB - VU2PHQ participated in ARSI's VHF HILL TOPPING & NATIONAL FIELD DAY event from the location DSK VISHVA, VADGAON DHAYARI, off Sinhagad Road Pune GRID: MK68vk.

The team operated with the callsign VU2ASH from the designated QTH of the call sign as a field station.

The Team a sets of inverted 'V'antennas for 40, 20, and for 2 meters, a 5/8 antenna and a hand held tape Yagi antenna was used. The Team also tried to operate 6 meters with a vertical GP antenna.

There were SWLs and new hams in the team and while setting up of the inverted V antenna we had a hands on training for tuning of the antennas. Before lunch VU2ASH -ASHOK JOSHI had a very interesting interactive session on the topic of antennas & antenna tuning. Of the SWLs four are undergoing a course at a local institute 40kms from Pune, to appear in Aircraft Maintenance Engineering (Radio and Navigation) and Director General of Civil Aviation conducts their exam for issue of AME R&N Licence. These SWLs found the event very helpful as they saw theory in a practical form.



We had multiple sessions of introduction to ham radio and demonstration on the use of the equipment to the many visitors to our field station. We thank SUHAS SAMANTH -VU2SMN of Kolhapur who remained on 7.030 Mhz with us for almost 2hours during the demonstrations for various groups of visitors to our field station. We are also grearful to the Goa team, AT3HT consisting of Manju - VU2SMS & AMAY - VU2QY for joining VU2SMN on 7.030Mhz during the demonstrations.

One visitor who deservs a special mention is Mr. Shelar from DSK VISHVA, A BE E&TC graduate who was fascinated to see the set up and its operation that the brought his wife who is also a BE E&TC graduate and their two daughters who asked a lot of questions & were really fascinated to see the working of the station. Then by 3pm he once again returned with a group of friends, all electronics engineers & they came and saw the working of the station.



Although the team could participate only on the second day of the event and hence couldn't log many QSOs, we were extremely happy with what we were able to achieve. Such events gives our club members an opportunity to practice in setting up of a field station & helps them gauge their own field operational preparedness. It also helps members of the club to interact with one another and to learn from one another certain tricks of the trade and this event helped in achieving this objective.

We are thankful to the ARSI team & specially Kiran for all the efforts put in for the success of this event.

A big thanks to the members of our club who participated in the event & a big thank you to the President & working committee members of the Jesta Nagrikg Sangh (senior citizens group) at DSK VISHVA, Vadgaon Dhayari Pune for their active support to our clubs during this event.

# 73, DE Udaya Patil /VU2UPQ

# Mt.Girnar, Gujerat

# Introduction:

There are five prominent hills in Gujarat and highest among them is Girnar at elevation of more than 1000 Meters. We selected Girnar despite having to climb almost 10,000 steps (as there is no rope-way or road to the peak)

# Mount Girnar :

The mountain Girnar is older than the Himalayas and the Jain temples upon it are amongst the most ancient in the country; it is the Nirvan bhumi of 22nd Tirthankara Neminath. It is 3666 feet high, and is one of the most remarkable mountains in India. From the city of Junagarh, which is at an altitude of barely 351 feet only the top of Mount Girnar can be seen, as it has in front of it lower hills, of which Jogniya, or Laso Pawadi, 2527 feet; Lakhshman Tekri, Bensla, 2290 feet high; and Datar, 2779 feet high, are the principals.

We selected the exact QTH at Ambaji Mandir, Girnar Hills at an altitude (elevation) of 3427 feet (1045 mtrs) above MSL, grid location ML51gm, 21 deg 52 min North and 70 deg 52 min East, after studying various peaks at different elevations.

## On way :

Since the location of our field day station was 400 kms. Away from my QTH, we started two before and reached to davs Raikot after noon on 22 Feb,2018. Many senior hams from Rajkot remained present to flag off to us and we had a wonderful eyeball and VHF contest activity, both hand in hand . We proceeded to Girnar Hills on 23 Feb,2018 to organize a field day on day before contest as in the base of Girnar mountains. We started climbing the hill and covered almost 10.000 steps to reach the peak of Ambaji and selected the exact QTH suitable for erection of Antenna, Solar Panel and our tent etc.

#### **Initial Preparedness :**



The Girnar VHF team from Gujarat having two members had actively participated in the contest. We managed to operate the VHF Hill Topping Contest from Girnar hills,District Junagadh,Gujarat. The callsign for the contest operation was VU3OZW and the allocated frequency was on simplex 145.530 MHz at grid location ml51GM, 21 deg 52 min North and 70 deg 52 min East. We started making QSO exactly at 9.00 AM on 24 Feb,2018 from our designated location Ambaji Mandir,Girnar Hills at an altitude (elevation) of 1045 mtrs above Mean Sea Level.



# <u>Equipment</u>

The equipment that were used for the contest include Icom IC2300H and Baofeng UV5R 4watt handie.



#### Power Supply

We carried portable battery of the car and was charged form solar panels fitted on the roof of Police wireless room. Throughout the contest, the battery was working well once charged as we made most of the contact with 4 watt power.



#### <u>Antennas</u>

It is worth mentioning here that all the four antennas we carried were home brewed by the two of us. We had (1)  $2 \times 5/8$  vertical antenna (2) 5/8 antenna (3) UHF slim Jim antenna (4) 4 element quad with PVC boom. We erected the antennas on mast fixing in sand filled cans..

# <u>QSOs</u>

In total we made 51 contacts covering whole Gujarat, the farthest being Valsad 350 kms

away from our location. Also heard many stations from Dunny Island about 30 kms away from Jamnagr where 25 people group were operating IOTA-2018 with special call sign AT7BK. Most of the station was contacted with low power 4 watt using handy.



# **Band Condition**

Gusty winds appeared every day after about 11.00 AM at our location. Temperature remained moderate and humid. The band condition for VHF was good on first day but it drastically changed on second day.

#### **Outdoor Camping gears**

As our team leader OM nanubhai-VU3OZW is renowned trekker and had been remained as a camp leader in YHAI national Himalayan trekking expeditions, he had vast experience of staying in tents and experiencing wilderness. So we stayed in 3 persons dome type outdoor camping tents for one day but due to gusting winds on second day night, we had to shift in hut made by local shopkeepers.

## VIP visits

Deputy Superintendent of Police, Junagadh district and Police inspector cybercrime



investigation met us at the base point of the mountain. We had a special awareness generation camp at this point for the students and staff of OM engineering college Junagadh and students of Dhoraji High school.

# Awareness Generation

Due to advanced planning and information, students of OM Engineering college Junagadh and school of Dhoraji remained present for the field day on the day before the contest at the starting point of the mountain. We made surprising QSO with Rajkot Hams nearly 100 kms from the location. Also demonstrated emergency communication with hand held 5/8 vertical antenna and readily available car battery with 10 watt. Students were curious to know about HAM radio.



There was also demonstration on how to prepare for emergency communications. It was really Field Day in every sense. All the students were fascinated to see our set up.

After lunch on second day when band condition was poor, we had a a very interesting interactive session on the home brewing of antennas & its tuning by VU3HMM -Ghanubha The students of Subhash Academy ,Junagadh practically dismantled and erected the antennas within 15 minutes while practicing.

The place being a holy destination and highest peak of Gujarat, there was round the clock flow of visitors and all were curious to know from us seeing our antenna set up in open field.

### Special Thanks

We thank GIAR and MHRC team operating a IOTA -2018 along with field day with special call sign AT7BK station from Dunny Island for the their qso they had with our station for demonstrating to school children and visitors for demonstrating two QSO with HAM radio during emergency.

We are grateful to Shri Natha Bhagat Makwana who rendered voluntary services of providing complimentary tea, water and buttermilk at height of 600 feet on way to Girnar to all pilgrims for more than 40 years. We were warmly welcomed by tea during up and down and were really fascinated by his hospitality. We salute his pious and consistent services for mankind.

A big thanks to my co participant VU3HMM-Ghanubha who helped me a lot in home brewing every antenna and supporting me whenever needed. I am thankful to VU2EXP for burning midnight oil in preparing my log in Cabrillo format. Our heartfelt gratitude to our mentor and senior Ham OM Bhogibhai (VU2BGH) for encouraging us from starting of the contest and helping us lot for preparing comprehensive report for the event. Our ton of thanks to police wireless operators on Girnar for providing every support including solar panel during this event.

ARSI VHF Hilltop & National Field day 24-25 February, 2018 Girnar Hills, Junagadh Gujarat, INDIA Team - VU3OZW-Nanubhai VU3HMM-Ghanubha								
Grid -ML5 igm Altitude- 3427 Feet								
Confirming		Date						
QSO with	Day	Month	Year	UTC	MHz	RST	2 way	

Finally we are thankful to the ARSI team & specially Kiran Padiyar for all the efforts put in for the success of this event.



Such events gives every ham an opportunity to practice in setting up of a field station & helps them gauge their own field operational preparedness. It also helps enthusiastic hams to interact with one another and to learn from one another certain tricks of the trade and such event really helps to prepare for emergency communications during disasters

# 73

Team Girnar from Gujarat

# De

# CQ VU Contest - 40 meters SSB 31<sup>st</sup> March 2018

Other than the popular National Field day and VHF Hilltopping, ARSI had announced CQ-VU '40 meters only' contests. This year's SSB contest was held between 31st March and 1<sup>st</sup> April. It attracted a significant number of hams on air creating much excitement. The CW contest will be held in December.

The new contest formats formed by ARSI are catching up with many old timers and new comers alike. Main objective behind these are to specifically get many VU hams into contesting, familiarising logging software and improving log submission discipline. Following are some statistics of this contest:

Unique VU Calls recorded in the contest: **225** Total logs submitted: **38 (only 17% of the participants)** - significant improvement is needed in this discipline. Total QSOs made by the contesters in the 24 hour period was:**1200+** 

Lookout for BigCQ award announcements for those VU record breakers in CQWW contests! BigCQ award is new introduction this year to raise the benchmark of records set earlier by VUs in various categories within CQWW SSB, CW and RTTY contests.

# 73, de Kiran VU2XE

# KARJAT, MAHARASHTRA

Contest Station Call: "VU2ECB" - Club Station – Disaster Amateur Radio Emergency Services. Location: EVA Farms, Karjat, Maharashtra. (Grid Locator : MK69ra)

Members Participated: VU2NXM, VU3NPI, VU2YKG, VU2JPN, VU2AXN, VU2TWU, VU3OCP, VU3VOY

We had operated one station (MChF Radio) for making couple of QSOs ( as and when possible) using Solar Power and couple of us experienced staying in Tent at our location in the farm house.



It was fun and great experience in the filed with a lot of learning by participating in contest. We are looking forward for many more such contest in future. We will send our detail report for HRN in couple of days.





Team DARES, VU2ECB Mumbai



# Report from Manu VU2BEN, Manipal

Dear friends,

I have participated in the CQVU 40 meter ssb contest in 'check log' category and was continuously monitoring the contest behaviour. It is heartening to see many seniors coming on air to cheer up the youngsters. I appreciate the enthusiasm with which they were exchanging the contest numbers.

I have participated in similar 40 m VU contests twice in the past. Those were conducted by Quilon amateur radio league (QARL). I have observed a peculiar aspect which is unheard in the international contest arena.

For example, when I am calling CQ on a particular frequency and making a contact, my fellow contestant comes over to gain a contact point occupying my frequency and wasting my time. I have to wait all these while to get back the frequency.

I am sure that this mail or similar awareness programs are not going to make any changes in this behaviour.

The participants of the contest should abide by the rules and follow the etiquette.

Happy contesting.

73 de VU3BUN (Manu) Manipal

(Point taken, Manu. More important than the equipment and the expertise is discipline! Don't operate ham radio like you drive a car in India!!)- Ed.

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# **CLUB NEWS**

# HAM Radio in Patna, Bihar Community Traffic

Patna Community Traffic had a program on 9 March 2018 where they had all junior and senior NCC 70 cadets in Patna Traffic police head quarter. They asked me to provide some time with all and make them aware about HAM Radio and its advantages.



I gave a lecture to them along with a live demo, which impressed them. S.P. Traffic Patna himself was present and took special interest. S.P. was pleased to receive knowledge of HAM Radio and its operation. He also asked me to visit again in future to provide proper training and conduction of exam for license. It was a very good and friendly program. I am thankful to all the NCC cadets and especially to S.P. Traffic for his involvement.

# 73 de Jayu S. Bhide VU2JAU

# **ASOC** exams in Patna

ASOC exam was conducted in Patna on 10 and 11 March 2018. Jayant S. Bhide VU2JAU gave a training to all candidates for Morse and theory. Some of the candidates who were VU3 license holders and wanted to upgrade to VU2, appeared in this exam.

Total 31 candidates filled the exam forms and 29 appeared in the exam. It was a good experience to the candidates as well as to Jayu.





Candidates came all the way from Chandigarh and Assam also. Hopes to get a good results. Thanks to organizers - specially to om Pranav VU3NEJ and his team for coordinating and organizing the exam.

#### 73 de Jayu VU2JAU

QST: - Once again, I reiterate – we need to remember that Amateur Radio is a scientific hobby and cannot be used for purposes other than experimentation and contacting other amateurs worldwide. This fascinating hobby cannot be used for commercial purposes even by Government departments. For such uses, the WPC allots commercial frequencies outside the ham bands – both on temporary and permanent basis. We simply cannot have anyone else other than genuine amateurs communicating on frequencies allotted to us.

We need to make this point very clear to everyone while demonstrating and/or introducing the hobby to students and others.

Please remember – we cannot use Amateur Radio frequencies for crowd control. traffic control and such mundane activities. However. since licensed amateurs are expert communicators. in case of emergencies, they certainly can volunteer to operate stations that use commercial frequencies that are outside the ham bands. Ganesh/VU2TS/Ed

# Amateur Radio club Gwalior

ARC Gwalior members organized a promotional tour for the awareness and to provide knowledge of amateur radio and Disaster Communication to the young students in Bhopal and Indore.

As per the plan, the hams reached Bhopal on the evening of 19 February 2018 and conducted a program in Sagar Institute of Research and Technology on 20 February in the morning. The response was tremendous and the authority agreed to continue the activity in future. The team proceed to Indore in the evening and conducted a program on 21st in SAGE University Indore.



The students of SIRTE and SAGE University were introduced to Satellite communication too. The satellite communication impressed the students of both the institutions as these AO 91 and 92 are very active and students received live demo. We propose to conduct the ASOC examinations in the near future.





The ARC Gwalior team consists of Kailash VU3CTP, Gupta VU2OO and myself. All have coordinated well and helped students to understand communication skills.

## 73 de Jayu VU2JAU

#### PUNE, MAHARASHTRA

Pune Hams viz. VU2VPR OM Vilas & VU3YBU OM Shripad visited Ahmednagar 9/10 Feb 2018 for Eyeball QSO with Ahmednagar district Hams. Thanks to OM Parshu VU3YBW.

OM Parshuram Kute Patil **VU3YBW** received the Pune Team at his QTH Newasa for Hurda party. Every one enjoyed fresh *Hurda* at his farm. (*Hurda is a tender jowar bhel*)



The team installed a *G5RV* at his QTH and explained its design, after testing it. It was very good technical session excited Ahmednagar district hams. viz. VU3YWW OM Vasant & VU2YWB OM Santosh. Hams monitored DX on 20 meters as a contest was going on.

73, Vilas Rabde VU2VPR

**Operating techniques** 

# The Business End

The previous issue of HRN had a very nice article from Kiran VU2XE titled "DXpeditions and how to work them". It focused on how to get in the DX station's log the right way. Indeed, a lot of this information is available in the vast swathes of the WWW if anyone has the time and inclination to browse, read, and learn. What is missing or present in very little quantity is what to do when you are not in the comfortable confines of your well put-together shack but sweating it out, literally and figuratively, at the DX end.

From the recently concluded VU Field Day and also IOTA operations, there were many lessons for the eager newcomer. If only they had the good fortune of an Elmer watching over their shoulder! Through this article i will try to address a few points which i have learnt along the way by being a participant in quite a few field operations, and also acquired wisdom through the experiences of others who were kind enough to share it with me.

#### 1. Goals

Your Number 1 goal is to have fun. ALWAYS remember this. It is a hobby and hobbies are meant to de-stress and make us happy. If anything causes anxiety or stress, it is not worth your time and energy.

All other goals are secondary and now let us discuss those. Having decided that your idea of fun is to lug your equipment and make QSOs from a QTH outside of your home, identify the criteria for success and make a note of it. If you wish to make it public, it is entirely up to you but never forget why you decided to start in the first place. This goal could simply be "Make at least 200 domestic and dx QSOs with my newly designed antenna/ newly acquired radio". A more experienced op could set bigger goals depending on his capability and it could be something like "Push VU7 down 10 spots on the Most Wanted list". How to go about meeting your goals is entirely up to you. Remember, you will not be successful every time but the experience acquired through an unsuccessful attempt is invaluable.

With the newly kindled interest among VUs for activating IOTAs and the desire to go on expeditions, 2018 could easily see new faces handing out QSOs from exotic locations. I will narrow the focus of this article to operating from locations which can always cause excitement on the bands.

# 2. Split operation

Pileups are a natural occurrence on the HF bands and the sooner one learns to handle them, the better it is for everyone calling in the pileup. Simplex operation on the HF bands



works well only when the number of QSO participants are few or everyone knows when it is their turn to transmit. A rare DX station generates a frenzy of callers that can quickly get out of control if the dx station continues to operate simplex. Split operation helps the audience hear the dx station and the dx hear his callers who are calling away from his QRG.

A good op on CW will generally keep the pileup spread no more beyond 2-3 KHz. If the pileup starts to get bigger instead of thinning out, which usually occurs when you have propagation to more than one key population area, it is okay the spread the callers over a wider range e.g. having a mass of callers from EU and JA when operating from VU4 can easily justify a split wider than 3 KHz on CW. If you are somewhere rarer than VU4, the pileups can stretch beyond 5-7 KHz but they would invite the wrath of other users on the band. Remember to operate responsibly!

On SSB, the standard split is 5 Khz but if engaging a filter, the pileups can start 3 Khz above the DX QRG and go beyond depending on the operator's skill. Usually 10 Khz wide pileups are common if the band is open and the QSO rate is a steady 150+ per hour. If your rate is lower, a 5 Khz split is more than adequate. An operator using 10 KHz or more spectrum and having rates lower than 100 on SSB would invite questions on his capability!

Note: Digital, and by that I mean RTTY, pileups can draw a parallel with CW and are generally slower in terms of rate. A good RTTY op can easily touch rates of 100 QSOs/ hour. A more typical RTTY QSO rate is about one per minute which is 60 QSOs/ hour.

# 3. QSO mechanics

It takes two to tango and nothing can be more joyous to hear where both caller and the dx are synchronised and the callers are getting in to the log without much effort. Take Nigel G3TXF for instance, a renowned traveller and CW op par excellence. Nigel can regularly be heard shovelling QSOs in the log without giving the impression that he is difficult to work. A steady rhythm on CW with no more than 32 wpm sending speed, a pileup spread largely restricted to 2 Khz and inspiring confidence among the callers that they will get in the log sooner or later. What is he doing that most DX ops fail to do? Lots of things can go wrong when you are the DX. It is a thrill and can cause ample excitement in the operator in charge that he can get carried away by the intensity of the pileup. (I say this with enough examples of my own lidness on the air during the early years, hi). Too often, CW ops can crank up their sending speed assuming this will help thin the pileup quickly. It can turn out to be more counter-productive! A QSO is considered complete only when both parties acknowledge each other that the QSO is indeed good. This means the DX, assuming it is G3TXF operating from Mauritius as 3B8XF, responding to me having heard my callsign by sending "VU2CDP 5NN" and I responding by sending "R 5NN TU", 3B8XF completing the QSO by sending "TU UP" indicating the QSO is complete and inviting more callers to call above his QRG. This is a live example having worked Nigel earlier in March on 17m CW with minimal fuss. Nigel was sending at 30wpm and I matched his speed after finding out how high in his QSX he was listening. He was sending UP after every QSO and was working JAs in a 1 Khz range.

Contrast this with one of the recent dxexpeditions to Africa where a not-so-skilled CW op was sending at over 35wpm but his QSO rate was no more than 100 per hour. Not to mention the QRM on his frequency and the nasty comments on the cluster. Why so?

Various reasons: not everyone calling in the pileup has CW skills that can match the DX op. Most people cannot copy CW beyond 20-25 wpm, some can only copy their call, some use CW decoders that can decode accurately only when the signal is solid copy, QSB can wipe out copy, the dx QRG is QRMed someone who forgot to engage split on his radio and ended up calling simplex wiping out the dx station's response, or there was deliberate QRM (DQRM) from the many lids/frequency cops who invade every pileup spoiling everyone's fun. What determines a good op is how quickly he is putting QSOs in the log irrespective of his sending speed.

On SSB, this is equivalent of speaking fast which most of us are guilty of. Not everyone in the world can easily understand VU accents. When speaking fast, or worse, lecturing the audience, it makes no sense. The rate tanks inviting not-so-pleasant remarks on the cluster and over the air. On phone, it is important to focus on enunciation and using as few words as possible to get the message across.



# 4. Targeted CQs

When one finds that there is propagation to difficult to reach parts of the world from our neck of the woods, it is important to focus on the window and maximise QSOs. Typically this means having prop to North America and getting Europe to standby. On CW, the usual norm is to say "NW EU QRX = QRZ NA ONLY PSE DE.... UP" or to emphasise your focus by sending "CQ VUxxx UP NA NA" as the case may be. Most people standby respecting the wishes of the DX station but it is not always the case. There are always those who keep sending their call no matter who the DX wants to work. It is best to ignore them unless they are equally rare themselves! e.g. when calling state-side, if 9Q6BB calls, it is okay to work him and go back to calling NA. But it is definitely not okay to work an OY (even though it is relatively rare) because it would unleash EU on top of the weak NA callers!

Likewise on phone, calling "CQ North America only" is perfectly acceptable. But directed CQs on Day 1 of the expedition having just started on a particular band can have negative consequences as yours truly learnt while on VU7AG having QSYed from 15m to 20m at 12z and started by sending CQ NA. If VU7AG was s5 in NA at that time, we were s9+ in EU with not many EUs worked on 20m. Obviously, the directed CQ backfired and the EU pileup ensured little or no NA were worked. Trick is to pick a band and work down the demand to the point where the occasional foray to check for NA, SA or OC is met with compliance instead of QRM.

# 5. Pileup control

Which brings us to perhaps the most critical aspect of operating. Pileup control is what separates the proverbial men from the boys. A DX station causes a pileup and is solely responsible for its conduct. How a pileup behaves is attributed to the DX op's ability to handle it. There will always be a segment in the crowd that will misbehave, call out of turn, tune their amps on the dx QRG, forget using split or make weird sounds out of frustration from their inability to get in the log. The efficient DX op will march on and make QSO after QSO keeping up a steady rate. Regardless of the mode, it is important to bear in mind how the pileup is being conducted. A sense of general awareness about how loud you might possibly

be, how fast you should send (or speak), whether you need to repeat call signs more than once either because of polar flutter or high K index are things the op must bear in mind instead of mechanically going about making QSOs.

It is often said that the pileup is a reflection of the DX op's ability. But that has started to diminish now given how many people are now calling in pileups without having adequate skills. This has also been compounded by a lack of HF Elmering, easy to obtain HF operating privileges and high power/ gain equipment. Most people view HF operating as an extension of the VHF or 40m bands and those operating habits manifest themselves when they decide to work what they deem is an interesting callsign. It is easier than ever now to find a DX station by simply looking at the cluster or the Reverse Beacon Network and hitting a few buttons on the radio/computer and getting into the log. But when you are at the other end, listening to your receiver exploding and picking out call signs one after another from the wall of sound is a skill that is only acquired over years. It is no secret that the most famous names in DXing circles are those who have gone out somewhere and repeatedly showcased their supreme skills to the audiences sitting in their shacks at home.

There are many other subtleties to handling pileups and those are only learnt by listening to first-class ops running or having the rare privilege of sitting alongside someone who can show you how to do it better. Yours truly has had the privilege of listening to some top ops like VU2PTT and 9V1YC run high rate pileups without breaking a sweat. Remember, i told you this is meant to be fun? As homework, spend time listening to the next dxpedition pileup and imagine yourself as the op. Now type out all the callsigns you hear the dx works for the next 60, 90 or 120 minutes. While doing so, keep making mental notes. You will find that you have learnt something that you can perhaps use the next time you are out somewhere.

# 6. Human -vs- robot

This brings us to two schools of pileup handling. The 'human' aspect is where the DX op is friendly and connects with his audience. This would mean a hello or a pleasantry to a known callsign. An occasional mention of the working conditions, often using humour, such that the audience instantly feels connected and



respects the operator's wishes. If he asks Europe to standby, everyone complies because the audience feels he is a nice guy. By no means are such ops less efficient. Ops like OH2BH or WB9Z are known to connect with those in the pileup in a conversational style without impacting the QSO rate or letting anyone feel that they are wasting time.

The other school is the robot operator who is like a machine-gun. On CW, he is heard blazing away at speeds generally above 35wpm and rates north of 200 per hour. Rarely will he send anything other than 5NN or TU even if his XYL were to call him! On SSB, it would be like talking to an automated machine that just FiveNined you in 0.6 secs before he picked up another caller and by the time you logged him, he is on to his third caller.

Both schools have their followers and depending on your personality type, you might find one style suitable over the other. Either way high rate hours are achievable. Typical highrate QSO hours are in excess of 250 on phone, 200 on CW and 100 on RTTY. There are various factors of course and the net rate is a sum total of those factors, some of which i have discussed here. The rest will be discussed in a later edition along with aspects like accuracy, equipment, team formation, etc.

Until then,

73 de Deepak VU2CDP

# TECH TALK:

# Fan Verticals for the field

There are lot of theories to dig out in any technical area, but the real proof of pudding is when you yourself test it out in the field. For me, Amateur Radio is all about open minded thinking and experimenting!. Experimenting with simple antennas such as verticals pose problems to most of the hams like me who live in city apartments. I wanted to try out low band verticals and operate on those bands. I teamed up with my ham buddy VU3NXI to realize that aspiration with a short trip to relatively secluded coastal area just north of temple town of Udupi. Our plan was to make simple antennas for 40, 80 and 160 meters, and prioritize any operation on the lowest band first then gradually work on higher bands if no luck on lower ones!. Original plan was to make one full height vertical for 40mtr using my 12mtr spiderbeam pole and have two inverted L antennas for 80 and 160 on the same pole. When we reached the field site, we quickly realized the potential to explore tall coconut trees which are 60-70 ft high!. Quickly juggling with our plans and hashing out what we want to do, we became instantaneously elevated to next level of going vertical idea. Plan was changed to full size vertical for 40, full size vertical for 80mtr (well almost!), and then inverted L for 160mtr all with single feedpoint.

Ingenious ideas popped up on how to raise and lower wires quickly so that we can adjust and tweak the formations. We used packing tape roll and nylon ropes as our pulley arrangement and with help of tree climber available in the farm, we hoisted our primitive pulley mechanism just beneath the large bunch of coconuts. We all read about ideal vertical setup, radial directions, number of them etc. Sometimes it is hindrance to bold moves we as amateurs should be doing. On the other hand we should just try those ideas out and observe the outcome.

Just to ensure that the readers know science behind radial system - Radials are electrical pathway mechanisms directly underneath the quarter wave section of vertical element. This system is to be designed and implemented in such a way that the maximum energy gets radiated out into free space by providing optimum return paths for energy. Eliminating ground coupled loss is most important aspect here. This normally accomplished by either having great number of radials on the ground of varying sizes or having few resonant radials decoupled from ground. When we say decoupling, at least a few feet of separation height above ground. Experts in this field have done lot of research to give enough gyan. But for the people who are yet to open their score on band DXCC, decent amount of efficiency to get signals out is more than what is needed.



That's that!. Now we decided to put all out hand carried wires into use, we hoisted two radials for 40, one for 80 and one for 160 so that we covered all directions. Adjusting SWR was bit tricky. Adjusting the height of radials to 6 to 7 feet above the ground got us into good sweet spot of SWR within 1.4 to 1 on all the bands we planned. As they say, picture is worth more than thousand words, sketch here shows our simple arrangement of the fan vertical system all fed with single Coaxial line. We added choke at the feed point made with mix 31 ferrite core and RG 142 coax to reduce RF on floating on the coax surface. We also pulled the vertical element wires bit apart using jute and nylon chords and tying them to nearby trees.



Results were just awesome!. We had two other antennas for RX only for experimentation such as N6RK loop and Terminated Delta loop. Though listening from low noise location on those bands was just pleasure even using verticals. While we were sceptical about operating on 160 meters and making any contacts, we ended up with many DX and a long haul Grey line DX from NA. We worked 7 CQ Zones on 160 and 80 with around 200 QSOs and some inspiration to VU DX friends on those bands Hi!.

So, next time when you go out to the field, don't get constrained with some ideal thoughts and carried away with complexities involved. Just try simple antennas and have fun!

Cheers!

VU2XE Kiran

References:

- N6RK Receiving Loop: <u>www.n6rk.com/loopantennas/pacificon</u> <u>.pdf</u>
- Author's blog post on field trip: <u>http://kiranpadiyar.blogspot.com/2017/</u> <u>12/lowband-hf-experiments-near-</u> <u>coastal.html</u>

# EARTH-MOON-EARTH BEACON

The ON Ø EME moon beacon is active since the 31st of March 2012. The beacon antenna tracks the moon when above  $10^{\circ}$  of elevation and transmits a high power signal direction to the moon.



# 1296 MHz moon beacon ON0EME JO21JG

The signal is bounced off the moon and can be received with modest receiving antennas. The smallest station reported is from Carlos, CS5RAD using a 1,35m parabolic reflector.

The idea is to encourage other radio amateurs to attempt receiving the signals and improve their equipment.

On the website you will find all information about the 1296 MHz moon beacon.

http://users.skynet.be/on0eme/ON0EME/Publi \_files/1296%20MHz%20moon%20beacon.pdf

Operational parameters can be seen at <a href="http://www.on0eme.org">http://www.on0eme.org</a> Ganesh VU2TS



# Up to 10 million people could be hit by threatened radio shut down in Germany

The airwaves across many parts of Germany could fall silent shortly due to a financial dispute between radio stations and an FM broadcasting provider.

The company **Media Broadcast** announced on Friday that it would cut off FM broadcasters for several radio stations if they did not immediately fulfil certain payment demands.

Major public service broadcasters such as MDR, NDR and Deutschlandfunk are among those who could be cut off, the newspaper reported.

Though digital and online streaming radio will still be available, the mass cut-off of FM radio broadcasts would affect a huge proportion of the population. According to Bild, around 92.7 percent of Germans said they still preferred listening to radio on an analogue device in a poll last year.

https://www.thelocal.de/20180406/up-to-10million-people-could-be-hit-by-threatenedradio-shut-down

Our thanks to Southgate ARC Newsletter

# First UK 136 kHz ham radio transatlantic contact with USA

The ARRL reports UK radio amateur **Chris Wilson 2E0ILY** made what may be the first 136 kHz (2200 meters) transatlantic contact with a ham-in-USA.

Chris Wilson 2E0ILY in Shropshire worked Paul Kelley N1BUG in Maine using the mode **DFCW60** which is dual-frequency CW with a 60 second-dit-length.

This was not a quick contact. It took four nights to complete, using night-by-night sequencing. And you think PSK31 or FT8 is slow!! The twoway exchange included call signs, signal reports, and acknowledgements. They used the TMOR reporting system, borrowed from the moonbounce-world.

The contact was finally completed at 0020 GMT on March 28, 2018.

http://www.arrl.org/news/apparent-first-2200meter-transatlantic-contact-by-us-radioamateur-reported

(As with most radio communication, information can be transmitted at low frequencies only by varying the amplitude, frequency and phase of a carrier wave. The 2200 meter band (135.7 -137.8 kHz) is only 2.1 kHz wide, so voice work on SSB or AM is out of question. The limitations particular to this range include low signal levels due to under-sized transmitting setups, narrow frequency bands, and high noise levels. Approaches that work well at MF, HF or higher may be poorly suited for LF work.) – Ed.

# Lunar satellites on WSJT JT4G mode

Two microsatellites **DSLWP-A1** and **DSLWP-A2** carrying amateur radio payloads are planned to be launched with the **Chang'e 4 Relay satellite** on a CZ-4C from the Xichang Space Center China into lunar orbit in June 2018

Wei Mingchuan BG2BHC reports DSLWP is a lunar formation flying mission for low frequency radio astronomy, amateur radio and education, consists of two microsatellites.



Hu Chaoran BG2CRY tests 435/2250 MHz dish feed for DSLWP ground station

Image credit Wei Mingchuan BG2BHC



Developed by students at the Harbin Institute of Technology the amateur radio payload onboard DSLWP-A1 will provide telecommand uplink and telemetry / digital image downlink. An open telecommand is also designed to allow amateurs to send commands to take and download-an-image.

The satellites are 50x50x40 cm with a mass of about 45 kg and are 3-axis stabilized. Two linear polarization antennas are mounted along and normal to the flight direction.

The downlinks for DSLWP-A1 are 435.425 MHz and 436.425 MHz while downlinks for DSLWP-A2 are 435.400 MHz and 436.400 MHz using 10K0F1DCN or 10K0F1DEN. Will use 250/500 bps GMSK with turbo code or JT4G.

Planning a launch into a 200 x 9000 km lunar orbit.

Harbin Institute Of Technology Amateur Radio Club-BY2HIT

http://www.weibo.com/by2hit http://www.qrz.com/db/BY2HIT Google English: http://tinyurl.com/BY2HIT

# HERE'S SOMETHING FOR LINUX USERS

Version 1.1.0 of **PyQSO**, a generalpurpose contact logging tool that runs on the Linux operating system, was released on 2 April 2018.

The new release includes better support for satellite contacts and several upgrades to the world map tool:

\* ADIF fields such as SAT\_NAME, SAT\_MODE and GRIDSQUARE are now included.

\* Maidenhead grid squares can be shown on the world map, with worked grid squares shaded purple.

\* Station locations can be pinpointed using the new right-click popup menu. \* Basic QSO copy/paste functionality has also been added. More information can be found on the project's-webpage:

http://christianjacobs.uk/pyqso

# India to employ long wave radio technology

Two towers, about three times the height of the Qutab Minar – which is 73 meters tall - are likely to be erected at as-yet-undecided locations in the country for disseminating **Indian Standard Time.** 

The National Physical Laboratory, an organisation charged with ensuring that Indian time stays accurate, has signed an agreement with IFR Information Dissemination Services (IFR) Ltd., which will set up the towers and employ long wave radio (LWR) technology to purvey this time to a range of users, from phone companies to railway stations. Customers will need a microchip that can be embedded into everything, from wall-clocks to servers.

"Long range radiowaves from the towers can be reliably transmitted even during major disasters. Other than time, information such as a tsunami warning or weather warnings can also be sent," Pawan Kumar Kasera, director, IFR, said at a press conference. IFR is affiliated to the Germany-based EFR GmbH, which is in the business of providing similar services in Germany.

The company now requires a plethora of permissions from other government departments to host these towers, each with a range of 1,000 km, and an investment of about Rs. 600 crore, which it will raise privately.

The NPL would help IFR keep their caesium clocks (located in the tower) calibrated but wouldn't be involved in setting up the infrastructure related to time dissemination. Last year, the Council of Scientific and Industrial Research-body had tied up with the Indian Space Research Organisation to provide time-related services for its satellites.

"The advantage of LWR is that the waves travel close to the ground and so can reach out to farflung locations, even to submarines. We'd advertised through newspapers asking private



players to help us disseminate NPL-time to the public. Five companies approached us and we've selected IFR," Dinesh Aswal, director, NPL, told The Hindu newspaper.

http://www.thehindu.com/todays-paper/tpnational/coming-huge-towers-to-publiciseright-time/article23377284.ece

 <u>High frequency</u> broadcast service is operating at 10.000 MHz under call sign *ATA* to synchronise user clocks to within a millisecond, *-Ed*



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