PSKReporter for VarAC Users

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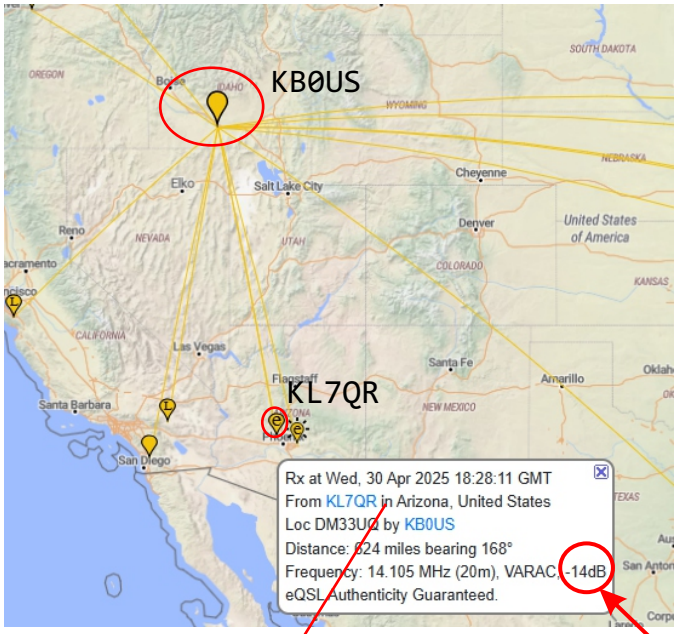
PURPOSE: To provide some additional insight in using PSKReporter.info for VarAC users. It assumes the reader is already familiar with the website. Also, for questions on VarAC itself, please refer to the manual found under the Resources menu in VarAC.

Signals Received By

On 20m, show signals rcvd by the callsign KB0US using VARAC over the last 2 hours Go! Display options Permalink

Here we've selected the signals received by KB0US on VarAC over the last two hours. One of those was KL7QR in Arizona. KL7QR was sending a beacon which KB0US received at -14dB. This was then automatically forwarded to PSKReporter by VarAC and we can see that number shown when we click on the KL7QR's pin.

An important thing to realize is the propagation may only be good in one direction. This "one-way skip" can be frustrating since you may hear a beacon very well, but they may not be able to hear you well at all. Looking at the beacon's SNR levels starts to build a picture of what areas of the country you're currently hearing. There is no guarantee, however, that they can hear you!



Beacons

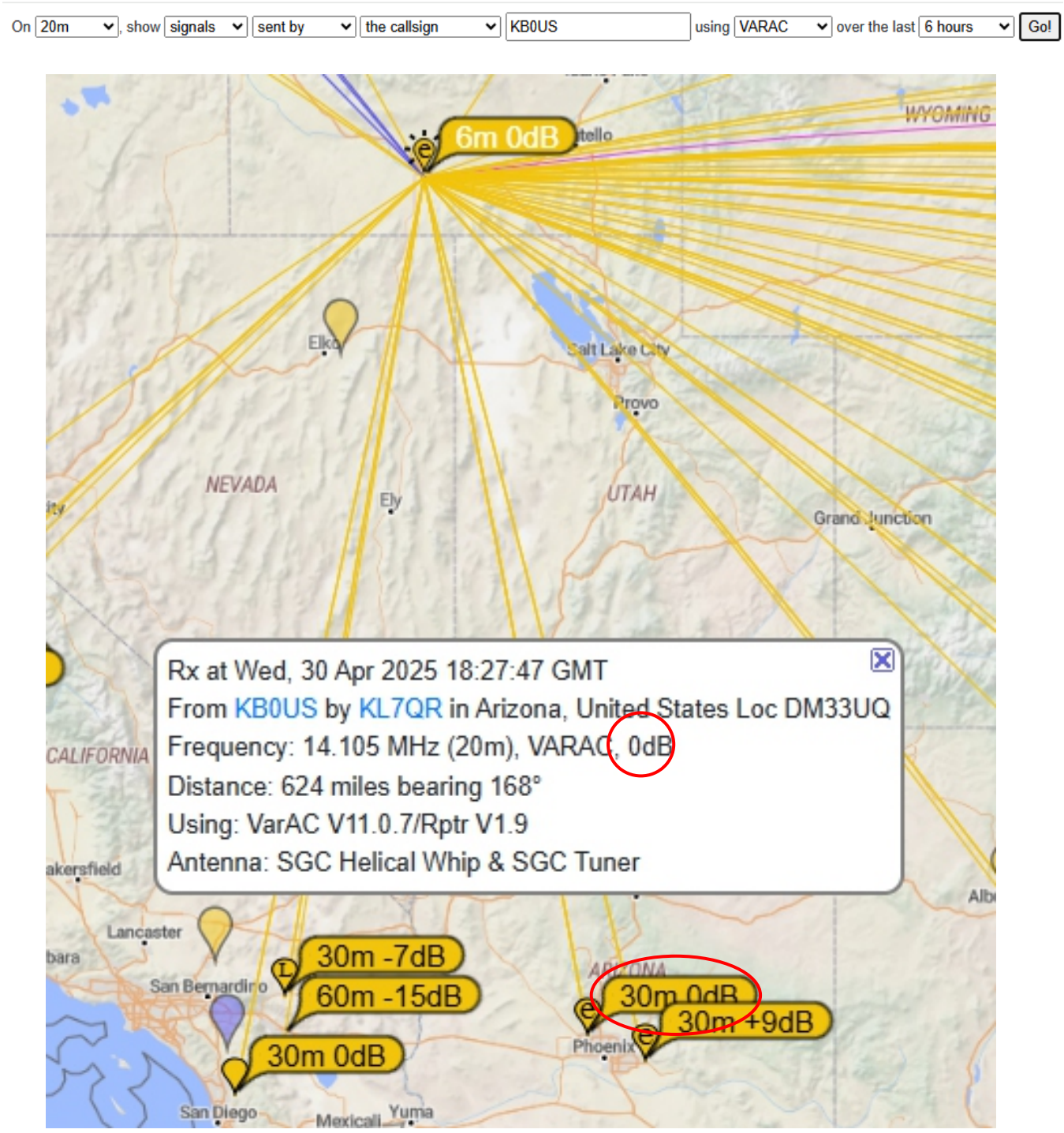
Bnd	TΔ	Callsign	LOC		SNR
20m	00:04	N5AMD			-19
20m	00:09	K6NLX	DM43FJ		-01
20m	00:09	KL7QR	DM33UQ	🔗	-14
20m	00:51	KJ5HIJ			-15
20m	00:51	N9MUF	EN51WN	🔗	-16
20m	00:52	WB6EDK	DM13MA	🔗	+03
20m	00:52	AL0R			-14
20m	00:55	KX0U	EN21AE	🔗	-10

Signals Sent By

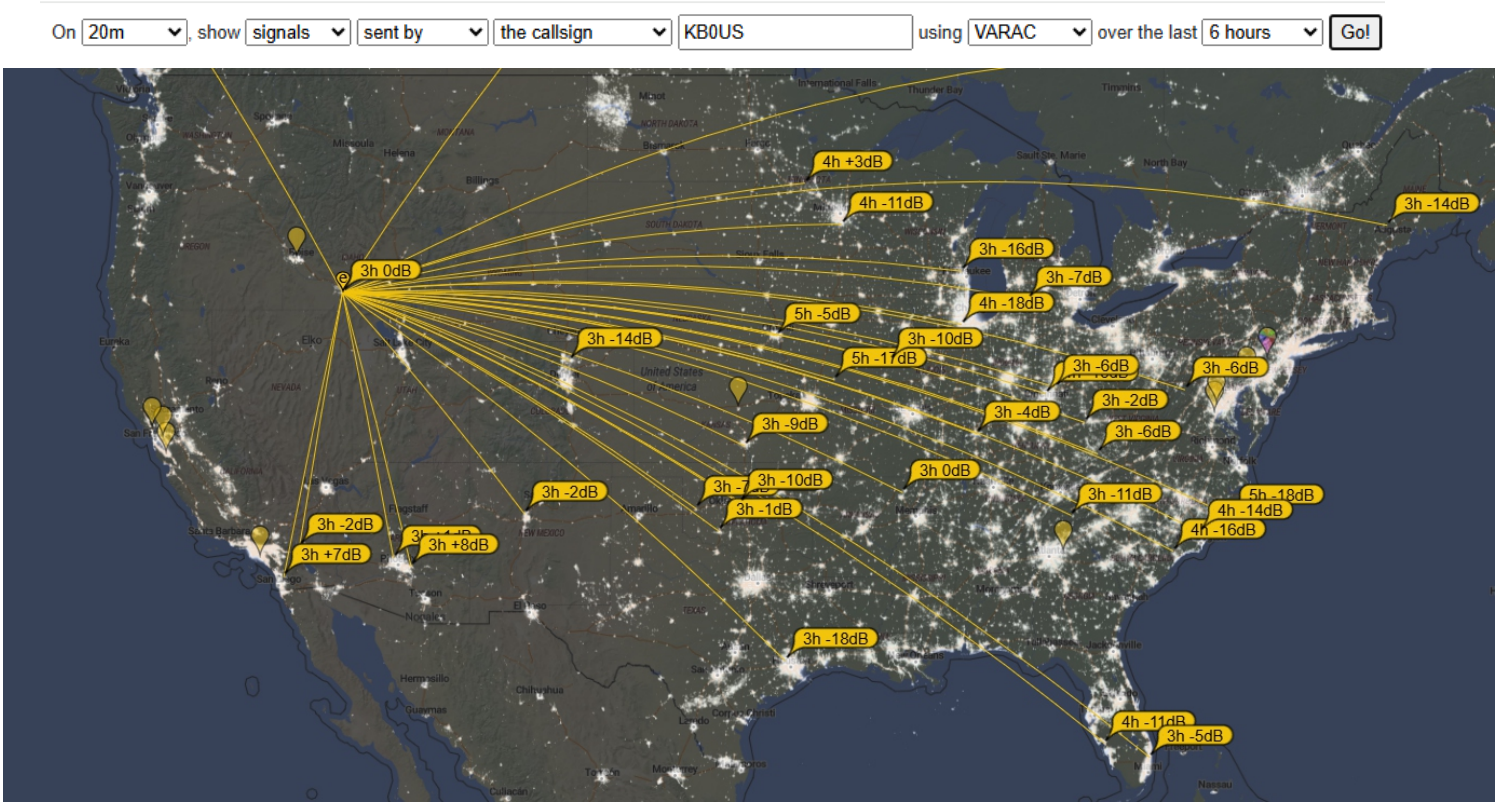
Below shows how well signals sent by KB0US are received by stations reporting to PSKReporter by VarAC on 20 meters over the last 6 hours.

KL7QR is receiving KB0US at 0 dB. This number is shown in the yellow flag as well as the information pop-up from single clicking on the flag or simply mousing over the flag.

Notice the difference in the number of yellow lines on the map indicating there are many more people monitoring the calling frequency than beaconing. It's also worth noting that not all VarAC stations are reporting to PSKReporter. To upload your signal reports, check the Upload box in Settings → Rig Control and VARA Configuration → Logging tab → PSKReporter.



The Big Picture



As you gain familiarity with PSKReporter, you'll be able to make big picture observations about the band conditions and how likely you'll be in making a VarAC contact.

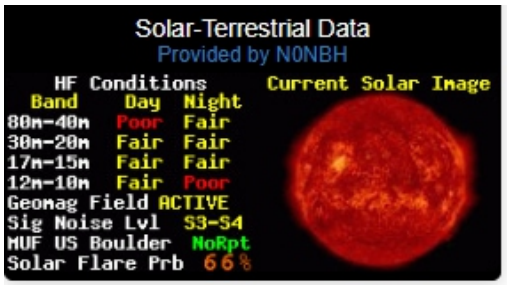
Here again we're looking at how signals sent by KB0US are received by stations reporting to PSKReporter by VarAC on 20 meters over the last 6 hours. At this point, the entire west coast isn't reporting hearing my station nor is most of the west with the exception of Arizona and a couple other spots.

There's a swatch from Michigan down through South Carolina where I'm being received fairly well. Texas is poor for me today.

One thing to point out is how I may be strong at one station and weak or not receivable at all by someone relatively nearby. That's one of the things that makes this hobby fun!

Once again, even though they are hearing me, there's no guarantee I can hear them!

It's also interesting to watch what happens when the Gray Line passes through your QTH. The Gray Line refers to the twilight zone on Earth, the band between day and night where the sun is just below the horizon. The gray line creates a low-loss path for radio signals, often allowing contacts over thousands of miles with minimal attenuation, especially along the terminator (the boundary between illuminated and shadowed areas).



Digital modes such as WSJT-X, JS8, and VarAC can still function quite well with less than ideal band conditions and in high noise environments. However, when the bands are dead, go do something else!

Practical Rules of Thumb

VarAc and VARA HF are terrific pieces of software that can facilitate communications in poor band conditions. However, most stations have gone off to do something else during these periods and you'll likely become frustrated with the lack of contacts. Even in great conditions, there are a few things you might want to consider:

- VarAC is an emerging program and has many fewer users than some modes such as FT8. The mode is growing by leaps and bounds, but if you want to make a lot of contacts in a short time, you'll be disappointed.
- This also means you need to maximize your chance of finding stations on the air that are willing to chat with you. During the weekdays until about 6:00PM local time, most operators are retired and are on 20 meters. In the United States, more stations come on as those who are working have finished dinner after 6:00PM local time. Obviously, on the weekends there is more activity the entire day.
- As the gray line passes over, many stations move to 40 meters. You can see this every night by just watching how the number of "VARAC monitors" increases on 40 meters and decreases on 20 meters as it gets later in the evening.

- As much as you might like 10 meters, 15 meters, or 80 meters, the number of VarAC users is low on these bands and they are not a "target rich environment."
- Personally, I don't often reply to CQs with an SNR worse than -15. The bitrate is often going to be very low. A price we pay for 100% perfect copy are many retries when signals are poor which can make the contact rather tedious. JS8 might be a better choice in these situations since there is no error correction. Of course, it's up to you to interpret missing or incorrect characters in the received message.
- VarAC is unique in that QSOs often last over 30 minutes and some can go on for much longer. What that means for your CQ is that is that someone out there is committing to the possibility of spending a fair amount of time with you. Having something compelling to say will get you more repeat contacts.

Why are there so many beacons and why don't they answer me when I connect to them?

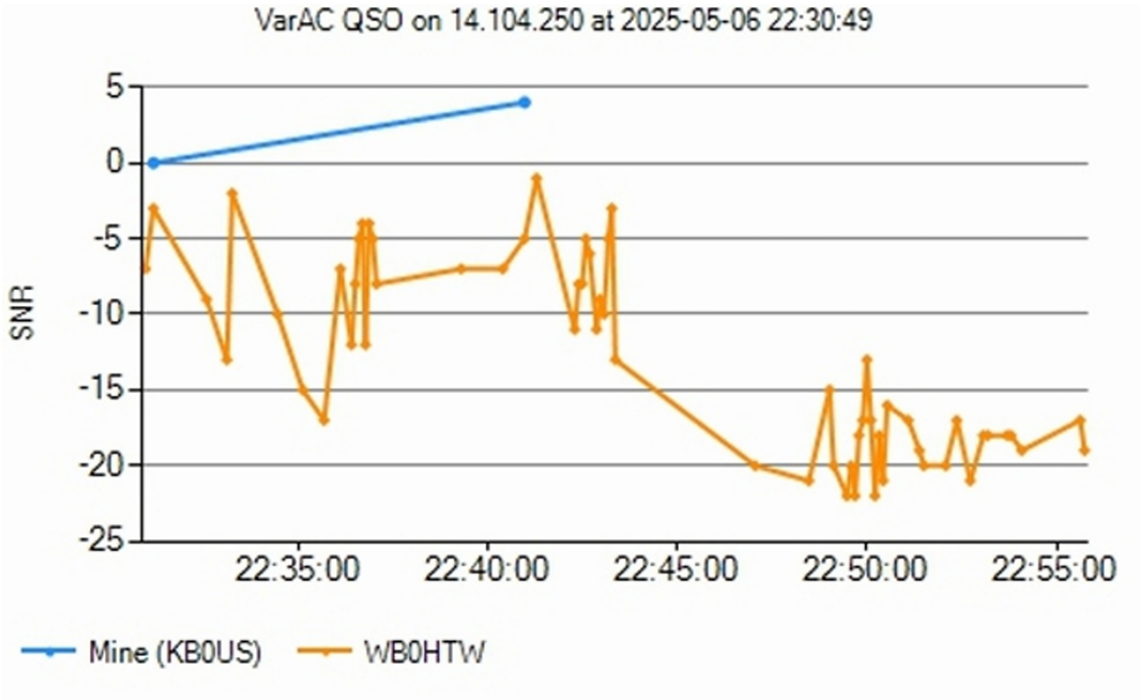
The reason they don't answer you is they're not there. Many beacons in the United States are unmanned. Perhaps someone is in their shack, but they also have to want to stop doing what they're doing and chat with you for perhaps 30 minutes.

There are lots of reasons why people beacon. It might be because they exchange messages with friends and beacon to let them know their station is available to connect to. Some people do it as a means of emergency preparedness or to assist in passing VMAILs or (now) emails. Some do it to watch the propagation and then attempt contacts when a particular part of the world seems available. And probably some beacon just to have the radio doing something.

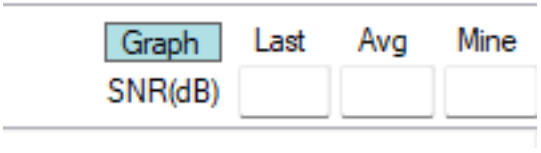
Regardless, beacons serve an essential function in passing along messages, but they're seldom interested in having a chat unless they're in the shack and decide to respond to a CQ.

And Sometimes the Band Just Drops Out

We sometimes forget how fickle the HF bands can be. Here is a 20 minute VarAC contact where the band simply dropped out going from about -5 to -20 in about five minutes. The band never recovered and we disconnected. The fact that your signals look good on PSKReporter doesn't mean that the band won't change on you at any given time!



This graph is available in VarAC during a QSO by pressing the GRAPH button.



The Legend

Many people miss the menu click for the Legend. This shows you the colors used the various bands as well as what the “e” and “L” mean on pins. The “e” means an eQSL user and the “L” indicates that station logs to Logbook of the World (LoTW