

## The Mystery of the Fluttering Signal A WN9AVT Mystery

Being a kid detective isn't easy. Rodney Dangerfield said it best: "I don't get no respect". After I solved my first case (The Case of the Inappropriate Impedance), I couldn't wait for the next case to emerge. It didn't take long. After getting my Novice license in October 1961, my Novice buddy Pete WN9BAB and I visited Bud K9WQS's QTH one cold January (1962) morning.

Bud didn't live too far away (about a mile). Pete was a couple years older than me, and he could drive. So Pete picked me up, and off we went. Bud had a tower with a tri-bander on it. I don't remember the height (my guess is it was 50 feet or so – typical of a residential area at the time) nor the specific tri-bander (a good guess would be one of the Mosley TA-33 models). Compared to my 40m dipole at about 15 feet, K9WQS had a big-gun antenna system on the real DX bands.

Bud's shack was in the basement. Bud warmed up the transmitter and receiver (transceivers were just beginning to emerge), and proceeded to call CQ on 15m CW. He received a reply from a weak but readable station. Since we had been hams for several months and were confined to CW (yeah, we had 2m phone privileges back then – but I certainly wasn't in a financial position to have both an HF station and a VHF station), both Pete and I were able to copy the station that replied to K9WQS's CQ. It was a JT. Wow – Mongolia.

My NC-60 didn't have an RF stage (it was of the five-tube all-American design), so I was not used to hearing DX stations at such a distance on 15m. Pete had a Hallicrafters S-108, which had an RF stage. Pete could hear a lot more stations on 15m than me. Heck, it was amazing if I heard anything but the loudest stations on 15m.

Bud completed the QSO with the JT while Pete and I pretty much followed along, copying in our heads. After Bud signed off with his 73, I was still in a daze because of what had just happened – Indiana to Mongolia via ham radio. One thing that stood out in my mind was the JT had a quite noticeable flutter on his signal. I wondered about that, but had no idea what was going on. For all I knew, it could have been caused by the JT's transmitter or Bud's receiver. Afterwards, Bud said something about "polar flutter". Aha! A clue to mystery! Maybe the ionosphere was affected by the Earth's magnetic field.

Years later I learned that this polar flutter was the signature of geomagnetic field activity in the polar region affecting the ionosphere. I knew nothing of great circle paths back in my Novice days, and even less about the ionosphere at the high latitudes. But with my new knowledge, coupled with the fact that the Indiana-to-Mongolia path was a polar path, it was clear to me what caused the flutter.

Another case solved. Join me next time for another WN9AVT Mystery.

WN9AVT Mysteries

