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The ARRL seeks to claim 472-479 kHz for radio amateurs in the US; the FCC looks to assign the entire amateur portion on 160 meters to the Amateur Radio Service; Logbook of The World now has hourly status updates; hams and Morse code come together in a new Spielberg movie; more.

Our Cover

The two solar flux monitors (far right) at Canada's Dominion Radio Astrophysical Observatory, located just outside Penticton, British Columbia, make accurately calibrated daily measurements of the 10.7 centimeter solar radio flux. A continuation of a pioneering radio astronomy experiment begun in 1946, many agencies — including NASA, NOAA and the Department of Defense, as well as hams, satellite operators and power utilities — use the 10.7 centimeter solar flux for space weather applications. Turn to page 39 to learn more about why solar flux can be so important to radio amateurs.

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The World Above 50 MHz

Jon Jones, N0JK, n0jk@arrl.org

High Northern DX

A 6 meter contact scrapes along the Arctic Circle.



Figure 1—This 6 meter contact between K179K and CPEP spanned 748 miles using only 80 W and an attic loop.

gh concerning everything in state of Alaska and the Canadian Discovery Channel features the 48 Bush Alaska "white National Guard" Alaska State Troopers" — to has some "Alaska sized" at High North. On October 13, 1 UTC, Ron, K179K, in Alaska was excited to make his first DX contact with David, 7065 via Aurora sporadic E: the story of his VHF activity in state:

normal Friday night set. All aspects along the usual activity. You, N179W, down in Chaska announces that he was meter because out of Canada, as many of you folks who I heard 6 meter traffic, but for not missed with high gain antennas for my chance to work news.

60 Jump up to 50.125 MHz, then for a bit, but I don't hear 1 contact to listen and start see light traffic. On a hunk, I a few Qs from "K179K/BP51" as I hear static for the effort. (lightly, I start hearing something to the BP51 station I back now and I see K179K opened up.

What is the chance then in K179K on the same time I am? as that K179K was an ac 1" noise, and continue calling if that the VEB just misheard.

see my call again and hear his signal in light with QRZ and to pull it out. Another station PRK1, who also lives here in a, tells me he hears the VEB being to me, but I can't quite as. How nice, works like and 25 to see. By now David is a good 55 so I try again and I reply. Conditions slowly over the next few minutes until 70 both signs (see Figure 1) as heavy aurora activity in the Territories of the time, which is, of course, after years of

fruitless efforts on my part I had just logged my first meter contact outside of Alaska. So, others do this for once I do and are used to these things. Even in Alaska others work in on occasion to distant lands. (K179K and K179K are in, on occasion, to the lower 48 states via E, and Aurora E, on 6 meters — E.) However, for me, this was a most exciting 6-meter contact.

I was using my many FT-990 transceiver running 80 W into first, a G5RV, and then a 6 meter loop in the attic. Both worked, but the loop was by far better. In fact, that was my first contact of any kind on the loop. For me, at home, it proves, theory that an attic loop can be effective.

And I hooked You because I have worked everything from 100 meters to 13 continents that has been an operating road for me long.

What's the message here? Watch those DX spots on the web and listen for the beacon. When you're not using your radio for contacts, monitor 6 meters just in case. All you need is a short wire — a small loop — or both.

BP51 (Anchorage Alaska is CPEP Newcomer Web, Northwest Territory, Canada is 748 miles as the crow flies. Maybe that's not a record for the 6-meter loop

gains, but for this point station it's amazing!

Ron made his contact with VE5ANV via Aurora E. This mode was also used by K179K and others to work M0MAAW and G0ETU in 6 meters on November 14. It is similar to, but different from, the "sporadic E" you may encounter during the summer months.

Radio aurora and sporadic E occur at approximately the same 100-120 km altitude. Radio aurora propagation takes place when your signal is reflected from an intense band of aurora ionization. It is a "backscatter" mode. Typically, signals are very distorted with a "buzz" or "hiss" on 50 MHz. On higher VHF and UHF bands, signals spread out wider with Doppler shift at times. SSB sounds like someone is gargling steam.

There are times, more commonly later during an aurora, when suddenly the signals become crystal clear. Bands of E-layer ionization can form under the aurora curtain and reflect signals just as typical sporadic E. Sometimes these bands are higher than regular sporadic E clouds. Sometimes, signals can be ducted between the aurora curtain



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