Can RF- Receivers detect Earthquakes?

Evidence has been mounting that it might be possible to detect earthquakes by measuring the changes in the ionosphere.

The RF-Seismograph team has been collaborating with Earthquakes Canada to find a correlation between HF propagation and earthquakes. A distinct event that occurred on Nov 1st (M5.0 off the coast of Vancouver Island) that caught the eye of the RF-Seismograph team.

We are in the process to correlate earthquakes that a bigger than M6.0 into the 4 years of data we have accumulated. Attached you find a compilation of the year 2016 and all significant earthquake data that was given to us by Earthquakes Canada.

We also believe that tsunamis create RF-signatures and will further investigate on this.

The RF-Seismograph uses a HF radio, a LIF interface to decode the IF via a sound card and a 9-band vertical antenna to receive and record RF-background noise and log the data into files. For more info on LIF go to:


A quick introduction what we are seeing:

RF-Seismograph Plot displaying the time of the quake M5.0 event below
The time is PST – 8h (4PM = 000UTC). The earthquake occurred on Oct 31 20:23PST (0423UT).

**Interesting are two things on this plot.**

a.) The rise of the 80m noise level starting at about 0100UTC (red)
b.) The dropout of communications at about the same time (20m - mag, 30m – yel, 40m – grn)

The buildup of the energy and the change can be seen about 1 to 2h in advance on the red plot, which measures 80m. After the quake the 80m stays disturbed for another 2h. After that the band recovers.
Glossary of some Signals Displayed

Man-made Signals: these signals have a fast rise and fall time and are usually consistent in amplitude.

- Static Discharge
- Indicator: time of quake
- Noise increase on 80m, usually seen before quake releases and after quake
- Signal drop because of the disruption of the ionic layer (green)

We believe we should investigate this further and will be posting updates as they come available. Comments are also welcome! Send message to: alexschwarz@telus.net

Please join us at: https://scistarter.com/project/21138-RF-Seismograph and help explore the possibilities of the RF-Seismograph from your station!