

Long-term variation of radio noise detected from ionospheric observation

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We NICT has been operating ionospheric observation for more than half century since IGY (International Geophysical Year: 1957) in domestic and Antarctic observatories. These information are used for stable operation of telecommunication, broadband and satellite positioning. We transmit/receive HF radio wave from 1 to 30 MHz including artificial noise near the observatories. We think that we can detect long-term variation of city noise from these dataset. We use 10years data set observed at four domestic observatories (Wakkanai, Kokubunji, Yamagawa and Okinawa). As an initial results we found that the low frequency noise (1-3 MHz) in Kokubunji extremely increased since 2013. Some reports show that some new devices e.g., LED, are possible noise sources so we will discuss the possibilities.

Keywords: radio propagation, radio noise, ionosonde, long-term variation