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of seismic waves in the northern Appalachians of southeastern Canada

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We investigate seismic attenuation characteristics of the Canadian portion of the northern Appalachians. Coda Q is determined using 389 earthquakes ($1.8 \leq M \leq 3.9$) recorded on four stations of the Canadian National Seismic Network (CNSN) in New Brunswick from 1985 to 2020. For comparison, we divide the study area into northern and southern portions, each with two seismic stations and 162 and 227 events, respectively. At lapse times of 12 to 60 seconds, coda Q at 1 Hz (Q_0) at the two seismic stations in the region of northern New Brunswick that is closer to the seismically active Charlevoix seismic zone (including a $M7$ event in 1663) is 82 ± 5 on average. In contrast, the two stations in southern New Brunswick have an average Q_0 of 114 ± 3 . The lower Q_0 value in the north in comparison with the southern part of the region is in agreement with Jin and Aki's (1988) finding that Q_0 is lower in the vicinity of large earthquakes. Ongoing mapping of coda Q in the area using the CNSN stations is planned in order to contribute to the ongoing development of more accurate seismic hazard models.

Promotional text

Our presentation provides an overall knowledge about coda Q in a region in southeastern Canada which is one of the most useful parameters for the study of earth structure and seismic hazard assessments.

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