Geophysical Research Abstracts
Vol. 18, EGU2016-573, 2016
EGU General Assembly 2016

Source regions of whistlers detected in the American, African/European and Western Pacific sectors

David Koronczay (1,2), Peter Steinbach (2,3), Janos Lichtenberger (2,1)

(1) Geodetic and Geophysical Institute, RCAES HAS, Sopron, Hungary, (2) Eötvös University, Hungary (david.koronczay@ttk.elte.hu), (3) MTA-ELTE Research Group for Geology, Geophysics and Space Sciences, HAS, Budapest, Hungary

AWDANet is a recently completed network for automatic whistler detection and analysis. Here we investigate whistler measurements from its first years of operation, analyzing the time distribution of whistlers detected at various stations in Western Antarctica, Southern Africa, Europe and the Western
Pacific region. Whistlers detected on the ground are thought to originate in their magnetic conjugate location, travelling through the plasmasphere before returning to the ground. We carry out a correlation analysis, comparing the occurrence of whistler events to lightning strokes using multiple lightning databases, including WWLLN (World Wide Lightning Location Network), to locate the events' source region. Our results can lead to a better understanding of the source regions and mechanisms of whistlers observed on the ground. This knowledge can improve their use as a tool to probe the plasmasphere.