

of infrasound from Brazilian thunderstorms

The International Monitoring System infrasound network dedicates to the verification of the Comprehensive Nuclear Test-Ban-Treaty. However, due to its high potential for scientific applications as well as the clamor for the access international scientific community, data from IMS stations were made available for use in other applications, like investigations about thunderstorms. Some studies have been conducted to understand the impact of lightning flashes in the infrasound signals. Following this, some of the stations, such as that one's located in South America, where the lightning activity is high and more appropriate for these investigations. Moreover, studies have already indicated visible increases in lightning in urban areas. This incidence of lightning is related to the increase in temperature and pollution. Brazil is one of the largest countries in the tropical zone of the planet. Thus, its climate is warmer and more favorable to the formation of storms and lightning. Around 77.8 million lightning discharges happen every year. The weather in Brasilia city, where the infrasound station operates, has two distinct seasons: a rainy summer, and dry winter. On the rainy months, thunderstorms typically occur and can produce infrasound waves. This work intends to show how thunderstorms affect infrasound signals detected in Brazil.

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