ID: Type: **Poster**

# of infrasound signals before earthiness landslide sliding

The motion and friction between soil particles and the crack propagation in the soil mass will generate infrasound waves before earthiness landslide sliding. In order to analysis the characteristics of infrasound signals of earthiness landslide critical-sliding, six groups of landslide simulation experiments are carried out on the soil slope model, at the same time, acquiring the infrasound signals that generated in the experiments. Analyzing the time-frequency characteristics of the signals using the Short Time Fourier Transform, then, studying the energy feature of the signals in each frequency band by wavelet decomposition. The result shows that there are special infrasound signals generated before earthiness landslide sliding, and the frequency of the signals is mainly concentrated in 0.5 ~ 6Hz and 12.5Hz around. According to the development law of creeping stage of earthiness landslide, the infrasound signal of 0.5 ~ 6Hz is the intermittent motion and friction of the slip surface; and ,the infrasound signal near 12.5Hz is generated by the crack propagation of the sliding body. The infrasound characteristics obtained by the experiments can be used as an important reference for the infrasound monitoring of earthiness landslide.

Primary author: LYU, Jun (Institute of Acoustics, Chinese Academy of Sciences)

Presenter: LYU, Jun (Institute of Acoustics, Chinese Academy of Sciences)

Track Classification: Sources and Scientific applications