

Seismic and Infrasound recordings observed shockwaves and seismic waves of a large bolide in Tohoku, 31 October 2016

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A large bolide which transferred from east to west in Tohoku around 05:43 31st October 2016 was observed at NIED Hi-net seismograms and barometers.

Observed Signals are very impulsive of about 10Hz and the figures seem opposite N character in the stations where estimated to be transferred right overhead. We estimate that the bolide transferred faster than a sound speed, therefore these figures of observed signals became impulsive. While, in several stations which are a bit far from overhead ones, around 3Hz signals were observed a bit before 10Hz impulsive signals. We supposed that these seem to be seismic waves transferred after shockwaves transferred to the ground in shortest path on the way of flying.

We could estimate the roughly trajectory and suppose this bolide was not burst on the way of flying by many seismic recordings of Hi-net located in dense.

Keywords: bolide, shockwave

