

チェリャビンスク隕石火球：広帯域地震計および微気圧計に記録された衝撃波シグナルの解析

Chelyabinsk meteorite fall: analysis of shockwave signals recorded by broadband seismometers and infrasound sensors

石原 吉明^{1*}, 平松 良浩², 西田 究³, 新井 伸夫⁴, 岩國 真紀子⁴, 柿並 義宏⁵, 古本 宗充⁶, 山本 真行⁵
Yoshiaki Ishihara^{1*}, Yoshihiro Hiramatsu², Kiwamu Nishida³, Nobuo Arai⁴, Makiko Iwakuni⁴, Yoshihiro Kakinami⁵, Muneyoshi Furumoto⁶, Masa-yuki Yamamoto⁵

¹産業技術総合研究所, ²金沢大学, ³東京大学地震研究所, ⁴日本気象協会, ⁵高知工科大学, ⁶名古屋大学
¹National Institute of Advanced Industrial Science and Technology, ²Kanazawa Univ., ³ERI, Univ. of Tokyo, ⁴Japan Weather Association, ⁵Kochi Univ. of Tech, ⁶Nagoya Univ.

A huge bolide was appeared in the skies over the Ural district, Russia around 03:20 UTC, and a few minutes after, strong shockwave struck at Chelyabinsk city. The shockwave destroyed lots of window glasses of buildings and injured more than 1,000 residents. The shockwave signals were clearly recorded by global broadband seismic network and CTBT-IMS infrasound monitoring array stations. At the small meteorite fall (e.g., Jan. 20th, 2013 fireball event, Iwakuni et al., this JpGU meeting), the shockwave related signal detection range is limited as wide as 150 km from terminal burst point or atmospheric trajectory. However, the case of Chelyabinsk bolide, we could identify shockwave related wave phenomena at least beyond 1,000s km in range. It is no doubt that this is the largest bolide event since 1908, when the Tunguska event occurred.

In this presentation, we will present the results of analysis of shockwave related phenomena based on seismic, infrasound, and GPS TEC records.

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