Aftershocks of the February 14, 2013 Ilin-Tas (Abyi) earthquake (Mw=6.7), Northeast Yakutia

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Abstract The features of the development of the seismotectonic process of a long series of aftershocks of the strong Ilin-Tas earthquake in 2013 with Mw=6.7 are presenting. For their registration in the closest to the epicenter zone, a joint Russian-American expedition with the participation of employees of the Yakutsk Branch of the Federal Research Center of the Unified Geophysical Service, RAS and the Michigan University (USA) was organized. As a result, most of the aftershocks with $K_R \geq 6-7$ (MS=1–2) were registered by four field digital stations and four stationary stations of the Yakutsk Branch. The operation of digital stations using solar panels has shown their effectiveness in the extreme conditions of the north. During the year, over 4 thousand aftershocks were recording. The maximum aftershock activity occurred in February-May 2013 when the earthquake itself and almost all strong aftershocks occurred. Most of them arose at a depth of 9-12 km near the focus of the main event. The aftershocks area was localized in the zone of influence of the Ilin-Tas fault on an area of about 700 sq. km. The parameters of the focal mechanisms (ISC Bulletin) showed that the movements in the focus of the aftershocks are thrust and its coincided with the movements in the center of the mainshock. This event and its aftershocks confirm the general picture of the Earth's crust compression in the Arctic-Asian seismic belt in the northeast of the Asian continent.

Keywords earthquake, aftershock, regional Ilin-Tas fault, hypocenter depth, focal mechanism, Arctic-Asian seismic belt.

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