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The book consists of abstracts of plenary lectures, oral reports and posters presented at the XXXIII International Conference on Equations of State for Matter (1–6 March 2018, Elbrus and Tegenekli, Kabardino-Balkaria, Russia). The conference is devoted to the 40th anniversary of the I All-Union Session on Equations of State (October 1978). The presentations deal with the contemporary investigations in the field of physics of extreme states of matter. The conference topics are as follows: equations of state and constitutive equations for matter at high pressures and temperatures; shock waves, detonation and combustion physics; interaction of intense laser, x-ray and microwave radiation, powerful ion and electron beams with matter; techniques of intense energy fluxes generation; experimental methods of diagnostics of ultrafast processes; low-temperature plasma physics; physical issues of power engineering and technology aspects.

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The editorial board with deep regret announces the death of friends and colleagues: Academician Evgeny Nikolaevich Avrorin (11 July 1932 – 9 January 2018), who was the organizing committee member of the Conferences on Equations of State for Matter and Interaction of Intense Energy Fluxes with Matter; Professor Valentin Fedorovich Kuropatenko (18 December 1933 – 13 October 2017), who was an active participant in these meetings starting with the first session; Professor Mikhail Fedorovich Ivanov (29 September 1945 – 16 October 2017), who was a regular participant of these conferences too.

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