

A method of Hugoniot estimation of ice between HEL and 0.7 GPa

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An observed shock wave of ice with a peak shock stress lower than 0.7 GPa showed a complicated wave structure: it had a precursor wave followed by a main wave longer stress rise-time and higher stress amplitude. This wave structure indicates that the shock velocity above 0.7 GPa decreases with increasing the shock stress as shown in the previous Hugoniot of ice (see Gaffney 1985). Here we propose a method of Hugoniot estimation of ice between the HEL and 0.7 GPa on the assumption that the main wave in this range consisted of multiple shock waves.