Geodynamics Seminar

第322回ジオダイナミクスセミナー

Measurements of elastic velocities and elastic constants of nano polycrystalline diamonds with pulse and resonance methods under fluid pressure

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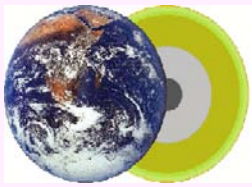
主催：愛媛大学地球深部ダイナミクス研究センター
日時：3/9（金）午後 4時30分～
場所：総合研究棟 4F 会議室



EHIME UNIVERSITY GRC GEODYNAMICS RESEARCH CENTER

Abstract

The elastic properties of materials under hydrostatic pressure have been studied by the measurement of ultrasound velocities using a gas pressure. The elastic velocities in nano-polycrystalline diamonds (NPD) were measured up to 0.1 GPa and to 500℃. These conditions of pressures and temperatures is useful for studying the properties of materials. Both the longitudinal and transverse elastic velocities of samples were obtained from analyzing the elastic wave signals by both pulse and resonance methods under He or Ar pressure mediums. The bulk modulus, rigidity, Young's modulus and Poisson's ratio were determined derived from the velocities. The bulk modulus and rigidity of pressure dependencies were derived from sphere NPD sample.

詳細は当センターホームページ: http://www.ehime-u.ac.jp/~grc/をご覧ください
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