

# Geodynamics Seminar

## 第310回ジオダイナミクスセミナー

### High-Temperature and high-pressure world produced by shock wave

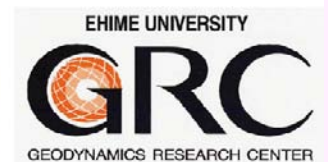
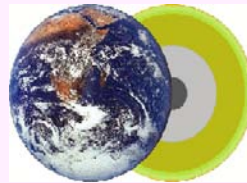
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主催: 愛媛大学地球深部ダイナミクス研究センター

日時: 11/25(金) 午後 4時30分～

場所: 総合研究棟 4F 会議室



### Abstract

Materials behaviors under high-temperature and high-pressure (HTHP) conditions play an important role to understand the planetary interiors and meteorite impacts. Most materials subjected to HTHP behavior as a function of time to deform, transform, melt, and decompose depending on the HTHP. However, some of the changes may not be completed in a limited time. Then what is the quenched state? There are in-situ measuring methods to understand the Hugoniot state and partially released states from the Hugoniot state. Another issue is more critical; heterogeneous temperature rise due to several heating mechanisms during the shock compression. These phenomena are known in meteorites as shock veins and melt pockets. The higher temperature areas provide potential places for high pressure minerals to be observed. It is important to know the heating mechanism during shock. Shock waves are characterized by not only high pressure and high temperature but also high strain rate and large deformation which may play important roles to generate heterogeneous, local, high temperatures. I will review the conditions produced by shock wave and compare some experimental results with the static high pressure works.

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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