



Core-mantle interaction and co-evolution

核-マンツルの相互作用と共進化

JOINT GROUP MEETING @ NIIGATA UNIVERSITY

A01-2,A02,A03-1 合同班会議(新潟大学)

NOVEMBER 22-24, 2019

場所：産学連携共同研究棟 2 号棟

(サイエンティフィックビジュアライゼーション室)

新潟大学 (五十嵐キャンパス)

PROGRAMME

November 22, 2019

14:00: 14:05: Welcome speech and announcements (Satish)

14:05-14:10: Opening address: ----

Session – I (Chairperson: Satish)

14:10-14:40: George Helffrich (ELSI, TIT) : Anisotropy at the inner core boundary.

14:40-15:10: Sho Kakizawa, 柿澤 翔 (東大) : Effect of Al on stability and water content of superhydrous phase B

15:10-15:30 : Coffee break

Session-II (Chairperson: Suzuki Akio)

15:30-16:00: Tomotaka Tanaka, 田中友崇 (東大) : 希ガスの鉄-シリケート間の分配

16:00-16:30: Yuki Hibiya, 日比谷由紀 (JAMSTEC) : Cr and Ti isotope anomalies among planetary materials: toward understanding the origin of the Earth' s accreting material(惑星物質の Cr-Ti 安定同位体異常 : 地球材料物質の起源解明に向けて)

16:30-17:00: M. Satish-Kumar (Niigata Univ.) : Stony iron meteorites as analogues of core-mantle interaction process + Group discussion

18:00 – Welcome Reception



November 23, 2019

Session – III (Chairperson: Tetsu Kogiso)

9:00-9:30: Anupam Banerjee (Niigata Univ.) : Ca, Sr and S isotopic studies of carbonatites: implications on recycling of crustal components and temporal evolution of upper mantle

9:30-10:00: Tetsu Kogiso 小木曾 哲 (京大) : マグマオーシャンにおける金属液滴沈降の時間スケール

10:00-10:30: Gen Shimoda, 下田 玄 (産総研) : マントルの同位体進化

10:30-10:50 Coffee break

Session – IV (Chairperson: Shigehiko Tateno)

10:50 – 11:20: Hiroyuki Kagi 鍵 裕之 (東大) : Incorporation of nitrogen into stishovite (SiO_2) under high-pressure and high-temperature: deep “hidden” nitrogen reservoir formed by subducting slabs

11:20 – 11:50: Riko Iizuka-Oku, 飯塚 理子 (東大) : Behavior of light elements in Earth’s evolution: In-situ neutron and X-ray diffraction observations of Iron-hydrous silicate system under high-pressure and high-temperature

11:50 – 13:00 Lunch Break & Poster Presentations

P-1: Toru Inoue, et al. 井上 徹 (広島大) : Al に富んだチェルマック置換型ブリッジマナイトの高温高圧下での弾性波速度測定 (Poster)

P-2: Akio Suzuki, 鈴木昭夫 (東北大) : Phase transitions of ScOOH under high pressure

P-3: Takahiro Kuribayashi et al. (東北大) : Structural study of a new high-pressure form of $\text{Al}_2\text{Si}_2\text{O}_7$

P-4: Silpa A.S. (Niigata Univ.) Late Archean to early Proterozoic lithospheric mantle evolution of southern India: Geochemical and paleomagnetic study of mafic dykes in the Western Dharwar craton.

Session – V (Chairperson: Riko Iizuka-Oku)

13:00-13:30: George Helffrich (ELSI, TIT) : Mg, Fe-silicate transfer from the metallic core to the mantle

13:30-14:00: Shigehiko Tateno, 館野 繁彦 (ELSI, TIT) : Fe_2S : The Most Fe-Rich Iron Sulfide at the Earth's Inner Core Pressures

14:00-14:30: Masaki Matsushima, 松島 政貴 (東工大) : Effects of core electrical conductivity on core surface flow models (2)

14:30-15:00: Christine Hernlund (ELSI, TIT) : Temperature Uncertainty of the Lower Mantle

15:00-15:20 : Coffee break

Session – VI (Chairperson: Yuki Hibiya)

- 15:20-15:50: Asami Sano 佐野 亜沙美 (日本原子力研究開発機構) : オリビンとその高圧相間における水素同位体分配実験
- 15:50-16:20: Hiroshi Amakawa, 天川裕史 (東大) : ^{142}Nd 同位体進化のレビュー
- 16:20-16:50: Taku Tsuchiya, 土屋 卓久 (愛媛大): 水、タングステン、ハフニウムの鉄-ケイ酸塩間分配の最新計算結果
- 16:50-17:30: Katuhiko Suzuki 鈴木 勝彦 (JAMSTEC) : $^{182}\text{W}/^{184}\text{W}$ 進化と核-マントル相互作用検出の可能性 + Group discussion

18:00 – Banquet

November 24, 2019

Session – V (Chairperson: Asami Sano)

- 9:30-10:00: Akio Suzuki, 鈴木昭夫 (東北大) : Elucidation of the melting phenomenon at the top of the lower mantle under the reproduced redox and hydrous environment (含水及び酸化還元環境再現下での下部マントル最上部での熔融現象の解明)
- 10:00-10:30: Akira Ishikawa, 石川 晃 (東工大) : 太古代マントルの白金族元素とマントルオーバーターン
- 10:30-11:00: Satoru Tanaka, 田中 聡 (JAMSTEC) : Concluding discussion
- 11:00-12:00: Lab tour (optional) and disperse

□ Meeting place outskirts map

