

MEXT Grant-in-Aid for Scientific Research on Innovative Areas
Interaction and Coevolution of the Core and Mantle:
Toward Integrated Deep Earth Science
Program of Kickoff Symposium

August 7 (Fri.)

13:00-13:10 Opening Remarks by Taku Tsuchiya

Research Item A01 Physical Measurement

13:15-14:05 Research Project 1 : Dynamics group

13:15-13:35 Takashi Yoshino (Leader) Introduction of “Dynamic process of core and mantle”

13:35-13:50 Kenji Ohta “Thermal transfer at CMB: now and then”

13:50-14:05 Yu Nishihara “Ultrahigh pressure deformation experiment: now and then”

14:05-14:55 Research Project 2 : Structural property group

14:05-14:25 Akio Suzuki (Leader) Outline of the research project "Properties of the materials in the Earth's deep interior"

14:25-14:40 Hiroyuki Kagi Nitrogen in the deep earth

14:40-14:55 Hidenori Terasaki Sound velocity and elastic properties of liquid Fe-alloys

14:55-15:15 Break

15:15-16:05 Research Project 3 : Technological development group

15:15-15:35 Tetsuo Irifune (Leader) 「核-マントル物質の精密高圧実験技術の開発」の概要

15:35-15:50 Naoki Ishimatsu 「NPD を用いた高圧下 X 線吸収測定の研究計画」

15:50-16:05 Masayuki Nishi “High-pressure generation in a multianvil apparatus using sintered diamond and its applications”

Research Item A02 Chemical Analysis

16:05-16:55 Research Project 4 : Isotope analysis group

16:05-16:15 Katsuhiko Suzuki (Leader) “Perspective of isotopic research on core-mantle interaction and its evolution”

16:15-16:30 Gen Shimoda “Geochemical model of possible origin of mantle reservoirs: implications for production of mantle heterogeneity”

16:30-16:40 Asami Sano “Trial-and-error and vision toward understanding high-pressure isotope fractionation”

16:40-16:55 Ryuichi Nomura “Partitioning experiments at ultra-high pressures: current techniques and future prospect”

16:55-17:45 Research Project 5 : Element partitioning group

16:55-17:15 M. Satish-Kumar (Leader) “An appraisal on core-mantle interaction based on element partitioning”

17:15-17:30 Tetsu Kogiso “Abundance of highly siderophile elements in mantle peridotite and the chemical evolution of the mantle”

17:30-17:45 Shigehiko Tateno ”Element partitioning between lower mantle minerals and partial melt at the CMB condition”

18:00-20:00 Banquet at “Setorian”

August 8 (Sat.)

Keynote lecture 9:00-10:00 William McDonough “Nature, evolution, and origin of the Core and Mantle: future prospects for understanding the Deep Earth”

Research Item A03 Geophysical Observation

10:15-11:05 Research Project 6 : The team of seismic-geoelectromagnetic observation

10:15-10:35 Satoru Tanaka (Leader) “The outline of seismic-geoelectromagnetic observation of the core and mantle”

10:35-10:45 Kenji Kawai ”Seismic anisotropy at the base of the mantle and its implication for mineral physics”

10:45-10:55 Christine Houser “Global tomography below and above the core-mantle boundary”

10:55-11:05 George Helffrich “Properties of the F layer at the base of the outer core”

11:05-11:55 Research Project 7 : Neutrino observation group

11:05-11:25 Hiroyuki Tanaka (Leader) 「ニュートリノ観測から制約する核-マントルの化学組成」の概要

11:25-11:35 Makoto Yamano 「島弧地殻の放射性発熱と沈み込み帯の温度構造」

11:35-11:45 Tsuyoshi Iizuka 日本島弧地殻の組成推定

11:45-11:55 Hiroko Watanabe KamLAND における地球ニュートリノ観測とその応用

11:55-13:15 Lunch break

Research Item A04 Theoretical Calculation

13:15-14:05 Research Project 8 : Theoretical calculation group

13:15-13:35 Taku Tsuchiya (Leader) “The outline of Theoretical calculation group”

13:35-13:50 John Hernlund “Core matters: Two plausible end-member scenarios for Earth’s thermal, chemical, and magnetic evolution”

13:50-14:05 Haruhiko Dekura ”Current status and future research plans of the thermal transport properties of the Earth’s deep mantle”

14:05-14:15 Closing Remarks

14:30-16:00 Administrative Meeting at the 4th floor of the meeting room (GRC)