



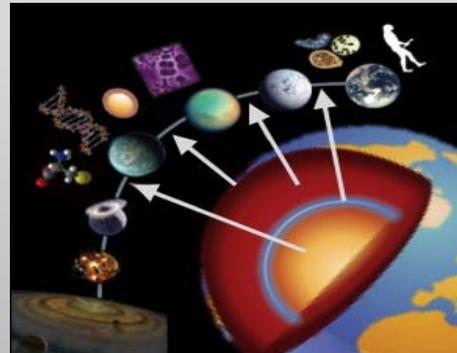
Director:
Kei Hirose

Kei is a discoverer of post-perovskite, a principal mineral in the Earth's lowermost mantle. Also, he and his colleagues first created the conditions at the center of the Earth in the laboratory. His recent research explores the formation and evolution of the Earth's core and its role in modulating the surface environments.

Research Objectives

The research at ELSI has the grand aims of exploring “the origin of the Earth” and “the origin of life”, both of which are fundamental questions to humankind. They are inseparable topics, because nature of the first life should have been strongly controlled by surrounding environments. Similarly we will also examine the evolution of life in the context of the evolution of the Earth.

- ◆ What were the environments at the beginning of the Earth's history?
- ◆ When and where did the primordial ecological system originate?
- ◆ How did the Earth and the Universe affect the evolution of life?
- ◆ How unique is our planet?



Research Specialty

- ◆ Daily internal communications will follow the model of Institute for Advanced Study, Princeton, US (ELSI Satellite).
- ◆ We will promote interdisciplinary research.
- ◆ Young researchers will be directly supervised by the Director. We provide maximum opportunities for young scientists.

Outline of Research

the Origin & Evolution of Life

Genomes & Env.
 database
 “EarthDB”

Synthetic
 Biology

Early Earth Environments

Planet formation
 theory &
 High P-T
 experiment

Early Earth geology
 & Exploring
 asteroid

the Origin & Evolution of the Earth

Bioplanet in the Universe

We will focus equally on both sides of Earth and life, because the early Earth environment is the key to better understand “the origin of life on Earth”. The evolution of the solid Earth should have changed the surface environments and evolved the life as well.

Satellites

- ◆ Ehime University
- ◆ Institute for Advanced Study, Princeton
- ◆ Harvard University