

# Building of archive and curating system for astrogeoscience materials

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In 2020, a proposal entitled "Toward the Deepening and Promotion of Open Science" was made at the Science Council of Japan. The proposal explained the necessity to establish a basic policy regarding the establishment of a permanent storage and curating system for all the important samples to bring about research results and some of the samples to produce the background for the research. Thus, archiving research samples is now an urgent issue. Therefore, in collaboration with the Japan Association of Mineralogical Sciences, the Geological Society of Japan has proposed a research program entitled "Building of archive and curating system for astrogeoscience materials" for the Master Plan 2020. It seems that the Master Plan will not be continued, but it is said that a new program will be formulated in this year. So the Geological Society of Japan is preparing for the upcoming large-scale research program. Therefore, in this presentation, we will explain "Building of archive and curating system for astrogeoscience materials" applied for the Master Plan 2020, and introduce the preparation for the next large-scale research program.

The outline of "Building of archive and curating system for astrogeoscience materials" applied for in the Master Plan 2020 is as follows. You can also see it at

<http://www.scj.go.jp/ja/info/kohyo/kohyo-24-t286-1.html>.

"It has been 150 years since modern science was born in Japan, and many rock and fossil samples, meteorites, and geological and topographical information (hereinafter referred to as astrogeoscience materials) have been collected from over the world since then. However, unlike Europe countries, where natural history is regarded as the most important academic field, the development of curation facilities for the research materials has fallen far behind in Japan. Therefore, it is difficult to maintain even materials with high academic value or scientific heritage. In addition, recent some serious issues such as land development, conflicts, and restrictions on sample collections are making it increasingly difficult to collect new foreign materials. Therefore, curation becomes more and more important. There are many examples of scientific contributions from the stored materials such as the discovery of new evidence for the existence of water in the Moon by recent reanalysis of Apollo samples and the study of the Burgess Shale, which created the concept of the Cambrian explosion. Both began with the study of samples stored for over 30 years. Furthermore, given the recent rapid progress in research technology, ultra-trace element geochemistry of rock samples and fossils, paleogenomics, and ultra-micro analysis of fault rocks formed during earthquakes will be possible in the future to create material-based new sciences. This project includes the construction of an integrated database, and storage and curation of the astrogeoscience materials to supervise open access of digital sources and comprehensively archiving of the astrogeoscience materials distributed in Japan. By constructing the system as soon as possible, we will support the research fields that are currently competitive with foreign countries, and produce the new sciences when new technology will be developed. In addition, open access to paleo-topography, ground data, and resource samples, and central management for loans of the research materials to museums, schools and mass media will contribute to industry, land development, territorial management, and lifetime and primary education in Japan.

It is necessary that the project is endorsed by the broader scientific community to be selected so that we try to collaborate with many scientists of other societies in addition to the Geological society of Japan, Japan Association of Mineralogical Sciences. In addition, a preparatory committee for the establishment of the archive center for the astrogeoscience materials will be set up with related academic societies and

institutions. In addition, a subcommittee for sharing academic materials was established in the Earth and Planetary Area Subcommittee of the Science Council of Japan. Because both committees have many members in common, we are preparing for this plan together with those committees.

Keywords: Master Plan, Archive and curating system for astrogeoscience materials