

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Data Management Systems (4)

Author: Dr. Fujio Nakano  
Japan Aerospace Exploration Agency (JAXA), Japan, nakano.fujio@jaxa.jp

AN EXPERIMENT TO INVENT A NEW FIELD “SPACE HUMANITIES STUDY”

**Abstract**

The technologies obtained through the space activities should be used in various areas including cultural sciences. Surveillance study by ALOS (Advanced Land Observing Satellite) data on the trace of migration in ancient history is an experiment to invent a new field as “Space Humanities study”. At the ancient time, a great number of Goguryeo, Shilla, Baekje people came to Japan from the Korean Peninsula across the sea. And to Japan, they introduced a lot of thing such as masonry, casting and so forth. Signs on their activities are found within the wide range in Japan such as shrines and ruins. Then, how did these people move from ruin to ruin, or between signs through uncivilized area? The history of mankind is coexistence of the movement and settling down. As concerns their permanent home, the verification works are still continued in many ruins. And to the contrary, the researches in movement are not performed enough. Because the verification work is usually done on the ground, and location of ruins are replaced to the average maps. On 2D-maps without rich indications of geographical features, it makes difficult to find out and trace the ancient people’s footprint between ruin-to-ruin. The combination image of contour maps and the bird’s eye view image by ALOS that shows details of geographical features, are ideal for these verification works and feasibility study of field researches. In addition, using the newly developed software ”Map-data-importer” and 3D-software on the market, it becomes capable to show the details of geographical features on 3D-maps. And tracing footprints of ancient people will be possible in low cost. This method is expected to apply for various fields such as cultural anthropology, archaeology including verification work on Iceman’s footprint, and even for amateur historian’s personal study.