

Report on Curation of Antarctic Meteorites at National Institute of Polar Research, 2014. A. Yamaguchi^{1,2}, N. Imae^{1,2}, T. Ojima¹, M. Kimura^{1,3}, M. Ebihara^{1,4}, N. Shirai⁴, H. Kojima^{1,2}, ¹National Institute of Polar Research, Tokyo 173-8515, ²Department of Polar Science, School of Multidisciplinary Science, Graduate University for Advanced Studies, Tokyo 173-8518, ³Faculty of Science, ³Ibaraki University, ⁴Graduate School of Science, Tokyo Metropolitan University, Hachioji, Tokyo 192-0397

This abstract reports the current activity of the Antarctic Meteorite Research Center, NIPR in 2014.

Updated website

We updated the website (mostly Japanese version) of the Antarctic Meteorite Research Center (<http://yamato.nipr.ac.jp>) in the last April. The site is still updating, and the new database will be included soon.

Meteorite Newsletter

Meteorite newsletter 22 (June 6, 2014) published meteorite names and data for 437 meteorites mainly collected near the Sør Rondane Mountains by three Japan-Belgium expeditions consisting of the first joint mission (JARE 51) in the Balchen Ice Field in the eastern Sør Rondane Mountains region (2009-2010), the second joint BELARE-SAMBA (2010-2011) in the north-west part of the Nanczen Ice Field, and the third mission (JARE 54 – BELARE-SAMBA) (2012-2013) in the south part of the Nanczen Ice Field.

We have reported classification of ~2500 meteorites for the last three years. We plan to issue the next Meteorite Newsletter in this fall.

Current situation of curatorial facility

Our thin section technician, Mr. Sasaki passed away in this July. For that, it will be impossible to make new polished thin sections for the next several months. Further, allocation of new PTSs (newly classified meteorites) will be difficult. We are thinking to allocate chips or thick sections depending on the masses of available samples. We are now seeking a new thin section technician.

Classification of meteorites

We slightly changed the classification methods. In the past, we classified meteorites by petrologic observations of PTSs as well as electron microprobe data of olivine and pyroxene (typically ~30-40 analyses). Polished mounts will be used to classify meteorites on the basis of reflected microscopy and electron microprobe data. We are discussing actual procedures for classification.

In this classification technique, there are fewer problems for achondrites and chemical types of equilibrated ordinary chondrites. There are problems classifying petrologic types of ordinary chondrites. The category of classification will be changed in the future issues of Meteorite Newsletter.

We are now attempting the classification of iron

meteorites using the LA-ICP-MS (Thermo Element XR + CETAC LS213) newly installed at NIPR in the early this year. We made preliminary analyses of iron meteorite standards (Hoba and Filomera) which are successful.

Sample allocation

Sample requests are reviewed routinely, and samples for approved proposals are allocated in a timely manner. The decision is made by the NIPR curators with or without comments from external reviewers, mainly from members of Antarctic Meteorite Committee on the basis of the past sample allocation policy. It is welcome for thesis for students, but the principal investigator should be permanent staff(s) of institutions.

We also accept requests for Asuka 09-12 meteorites collected by joint expeditions between Belgium and Japan. Sample request for these meteorites will be reviewed by members of Antarctic Meteorite Research Centers, and VUB and ULB in Belgium. Currently, samples are allocated for collaborative basis.

Meteorite expeditions

The Phase IX of Japanese Antarctic Research Expedition (JARE) will be planned from 2016 (JARE-58) to 2021 (JARE-63) for six years. The proposals of the research and observational activities in Antarctica during the period are opened. As for the collection of extraterrestrial materials in Antarctica, we should focus on the meteorite search on the bare ice field around the Yamato mountains and the collection of fresh micrometeorites. The plans are still immature, and the support from the community will be indispensable for the realization.