

METEORITE SEARCH IN ANTARCTICA BY THE 51ST JAPANESE ANTARCTIC RESEARCH EXPEDITION IN THE 2009–2010 FIELD SEASON

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As of 2009, the Japanese Antarctic Research Expedition (JARE) had collected approximately 16200 meteorites in Antarctica [e.g., 1]. Many of the Japanese Antarctic meteorites (~13800 out of 16200) were found around the Yamato Mountains, East Antarctica, and some 2000 specimens were found around the Sør Rondane Mountains (SRM), which are located about 400 km west of the Yamato Mountains [1]. The specimens found in the SRM area are termed Asuka meteorites, which include Asuka-86, -87, -88 and -90 meteorites [2, 3, 4]. Here we report the search for meteorites around the SRM conducted by the 51st JARE (JARE-51) in the 2009–2010 field season.

In January 2010, the JARE-51 performed the first search for meteorites on the bare ice fields around the SRM since November 1990. The meteorite search team of the JARE-51 consisted of seven people, which includes two scientists, a field assistant, a mechanic, a surgeon and two Belgians. The team arrived at Mt. Balchen area (approximately 72.0° S, 27.5° E), which is located at the eastern end of the SRM, on January 2, 2010.

The systematic searches for meteorites were conducted mainly on the bare ice fields around the area using skidoos from January 4 to January 24. A total of 635 meteorites and meteorite fragments was collected during the period. The total weight of the collected meteorites, including the largest piece of ordinary chondrite weighing ~5 kg, is about 20 kg. Although most of them are ordinary chondrites, two ureilites (probably paired) and one iron were recognized in the field. Positions of each meteorites were recorded by GPS. The specimens were individually put in clean polyethylene bags in the field and kept frozen (<-20°C) until they were put in a freezer at the National Institute of Polar Research, Japan. The initial processing (weighing, measuring, photography, naming and brief description) and classification will start being carried out in the summer of 2010. The meteorites collected by JARE-51 will be termed Asuka 09 meteorites.

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