

The petrologic type and the size distribution of clasts of Adzhi-Bogdo regolith breccia meteorite

yuuta kuwajima[1]; Hirokazu Fujimaki[2]

[1] Geology Sci., Tohoku Univ; [2] Earth and Planetary Sci., Tohoku Univ.

The size distribution of clasts in the regolith layer has been little studied by using the actual meteorite sample until now. Therefore, we analyzed the size distribution of the varied petrologic type clasts in order to estimate the size distribution of the regolith layer of the parent body. It is also the important target to investigate and describe the petrographic characteristics of the regolith breccia meteorite that we use.

The regolith breccia meteorite that we use is an Adzhi-Bogdo meteorite. According to Bischoff et al.(1993) and Wlozka(1993), Adzhi-Bogdo meteorite is LL3-6 chondrite regolith breccia. The rock consists of sub mm- to cm-sized fragments embedded in fine-grained clastic matrix.

It was turned out that most of the clasts are type 4-6 and S1 according to the result of petrographic analysis, and we distinguished the clasts whose petrologic type are comparatively higher in type 4-6 and the clasts whose petrologic type are comparatively lower in type 4-6 by the petrographic feature and the variation of mineral compositions in each clast type. As a result of analysis of the size distribution, the size of high petrologic type clasts is larger and the size of low petrologic type clasts.

Therefore, it seems that the clasts dug up from deep depth in parent body are large and the clasts dug up from shallow depth are small.