

Exploration of Near Earth Asteroids (06)
Precursor Missions to NEAs (2)

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THE NEXT ASTEROID SAMPLE RETURN MISSION OF JAPAN - HAYABUSA2

Abstract

On June 13, 2010, Hayabusa spacecraft finally came back to the earth and it returned the capsule on the earth safely. Later we found the material from Ito-kawa, although the amount of the material is quite small. Hayaubusa has a quite dramatic story and we had a lot of experiences about planetary mission. And now we have proposed Hayabusa follow-on mission, Hayabusa-2. It is an asteroid sample return mission again, but the type of the target asteroid is C-type, which is different from the target of Hayabusa, Ito-kawa (S-type). The scale of the spacecraft is similar to Hayabusa, but many parts will be modified so that we will not have the troubles that we experienced in Hay-abusa. Also the spacecraft has new equipment, which is called impactor. The impactor will make an artificial crater on the surface of the asteroid, and we will try to get the sample inside the crater. Then we can get much fresh material. The planned launch year is 2014 or 2015, arriving at the target asteroid 1999 JU3 in 2018, and coming back to the earth 2020. In this paper, we present the current status of Hayabusa-2 mission.