

Sample Collection Devices for Near-Earth Asteroid Sample Return

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Abstract

It has been suggested that a mission to an asteroid to take samples and return them to Earth is the logical next step in the exploration of the solar system. Such a mission poses several new challenges, not the least of which is actually taking the samples. Several methods have been proposed, and a few have been funded for development. However, to date, the Moon is the only extraterrestrial body for which samples have been returned to Earth by spacecraft to Earth. The Moon has been sampled by the manned Apollo program and by the robotic Luna program. The optimum strategy for taking samples depends on many factors, but mostly size and nature of the target object. Additional information is contained in the original extended abstract.