

SPACE EXPLORATION SYMPOSIUM (A3)
Solar System Exploration (6)

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THE RETURN CAPSULE LANDING AND IMPACT ANALYSIS FOR THE SAMPLE RETURN
MISSION

Abstract

Though analyzing the deceleration and landing process of the return capsule for the typical sample return mission, the characteristics of its successful deceleration and landing on earth are concluded in the paper, including capsule aerodynamic configuration, thermal protection system and so on are studied in detail. Based on the finite element analysis software, landing and impact simulation is researched for the return capsule for a certain sample return mission. It is rasied that the primary landing and impact technical specifications of the return capsule for the Chinese interplanetary sample return mission. It also can provide some references to making further study of the interplanetary sample return mission in the future.