

Exploration of Near Earth Asteroids (4)

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Author: Mr. ZHANG Wangjun

Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China,
zhaa4561@sina.com

STUDY AND DESIGN OF THE BOINIT-ANT-ROBOTIC LANDING ON THE ASTEROID

Abstract

Recently, with the development of the robotic technology, the hexapod bionic robot is present. It has high adaptability, mobility and flexibility, and then has the ability of obstacle-avoidance and obstacle-negotiation in unstructured environment. Therefore the hexapod bio-robot can be used to satisfy the requirement on the asteroid exploration. This paper gives the preliminary scheme design of the hexapod bio-ant-robotic on the asteroid exploration. And the moving system, cushion landing system, adhesion asteroid system, sampling system are emphasized. Finally, the given-walk strategies are validated by the motion simulation. Besides, the hexapod bio-ant-robot can be as sampling method for asteroids exploration in the future because it can achieve in-situ detection on the asteroid by itself.