

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Part 1 (2A)

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PRELIMINARY EXPLORATION RESULTS OF CHANG'E-2 LUNAR SATELLITE

Abstract

China Successfully launched its second lunar exploration satellite Chang'e-2 at 18:59:57 on the 1st October 2010. Chang'E-2 is the forerunner of the Chinese second phase lunar exploration project, which will conduct the soft landing and in situ probe. The main objectives of Chang'E-2 is to acquire the high resolution stereo image of the moon surface for the landing site investigations of next lunar mission, to analyze the content and the distribution of the useful elements, to survey the characteristics of lunar soil, and to explore the space environment of the moon. The spacecraft is based on the standby platform of Chang'E-1; a few modifications have been conducted to satisfy the new requirements. The payload consists of the high resolution stereo camera, which is the new designed instrument; The rest payloads such as laser altimeter, microwave radiometer, Gamma and X ray spectrometer, high energy ion detector, solar wind detector are almost the same with them onboard Chang'E-1, only a few adequate modifications were carried out. The payloads were turned on one by one from October 2; finish the orbital commissioning on October 30. During this period the camera of Chang'e-2 has taken the high resolution stereo pictures of Sinus Iridum, which is the preselected landing area of next mission. All the payloads work well. Chang'e-2 begins the normal exploration from 1st Nonmember 2010. In this paper the commissioning status and the preliminary exploration results are described in detail.