Lunar Exploration (2)
Lunar Exploration (4) (4)

Author: Mr. Ming Zhang
China Academy of Space Technology (CAST), China, 13426209018@139.com

Dr. Haijin Li
Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China, haijinli@126.com
Mr. Huijun Li
Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology, China, 13426209018@139.com
Mr. Yingjun Lei
Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China, leiyingjun@163.com

THE COMPARISON OF POWER SYSTEM DESIGN AND ANALYSIS FOR TASKS OF UNMANNED LUNAR EXPLORATION AND MANNED LUNAR EXPLORATION

Abstract

Abstract: First, the domestic and international relative tasks of unmanned lunar exploration and manned lunar landing are investigated in the paper. Their power system are compared and analyzed, and the research are developed based on the characteristics of task, system architecture, generation and storage, control and transmission and etc. Second, based on current developing status of space power technology and plan of manned lunar landing project of China, the requirement of manned lunar landing, manned inspection, lunar research station and lunar base for power technology are carded, and the key technic indicators are proposed. Finally, based on the experience of Chang E, the power system design of landing module of following manned lunar landing is researched, and the relative key technologies are analyzed and discussed. Key words: Lunar Exploration; Unmanned Exploration; Manned Lunar Landing; Power system; Design and Analysis; Key Technology