Poster Session (P)
Poster Lunch (1)

Author: Dr. Zhong-Sheng Wang
China Academy of Space Technology (CAST), China, zhongshengwang@hotmail.com

Dr. Zhanfeng Meng
China, mengzf1129@qq.com
Ms. Shan Gao
China, monicags@126.com

# PHASING STRATEGY OF LUNAR ORBIT RVD OPERATION: DESIGN AND FLIGHT TEST

**Abstract**

Lunar orbit rendezvous and docking technology is a must for mannned lunar missions such as Apollo Project or lunar sample return missions. Considering the special constraints of some lunar exploration missions, the paper addresses the design of the phasing strategy of lunar orbit rendezvous and docking operations.

In the paper a 4-impulse scheme is selected as the baseline design to help achieve the basic goal of the phasing stage for the chaser, and an optimal nominal phasing strategy is proposed based on the profile analysis of the tracking access and illumination condition. An optimal phasing strategy is also developed for the orbiter.

Also discussed in the paper is the flight test of the phasing strategy in the extended mission of Chang'e-5 Flight Test Vehicle.