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Scientific Objective of China Lunar and Martian missions in the near future from 2017 to 2020s

Chunlai Li, Xingguo Zeng, Guihua Zhang, Wei Zuo, and Xingye Gao
National Astronmical Observatories of China,Chinese Academy of Sciences,Beijing,China (licl@nao.cas.cn)

China has achieved great success in the recently CE-1∼CE-3 lunar missions, and in the near future from 2017 to 2020s, 2 lunar missions will be launched which are CE-5 and CE-4, and a Maritain mission will also be launched which is Mar-1. The scientific objective of these missions are now being discussed.CE-5 will be launched in 2017, it will hosts a Lander and an Obiter, CE-5 Lander will soft-land in the lunar surface, get the lunar samples, rise to the CE-5 Orbiter and then send the Lunar Samples back to the Earth. CE-5 plans to capture two types of lunar samples:1) lunar loose soil sample, about 1500g, which includes lunar dust, single mineral, rock debris, Impact and space weathering products (such as Glass, Fe);2) lunar drilled soil sample, which is about 500g in weight, 12mm in diameter and 2m in length. The initial scientific objective of CE-5 concludes: 1) Investigation and analysis of the landing site, 2) Research and analysis of the Lunar Samples. CE-4 will be sent off in 2018, it is the backup satellite of CE-3, so that it also contains a Lander and a Rover, the difference is that it will set a relay satellite in Earth Moon L2 Point for Earth-Moon Communication, it will be the first robotic Lander designed to land in the far side of the Moon. The initial scientific objective of CE-4 is to provide scientific data for the lunar far side research. The first China Martian program will be launched in 2020, it will contain a Lander, a Rover and a Orbiter, the initial scientific objective will include:1)Martian Geomorphology and geology investigation; 2)Martian soil investigation and ice distribution analysis; 3)Martian surface substances composition analysis; 4)Martian atmospheric ionosphere and climate environment analysis; 5)Martian physical field and inner structure analysis. The further and detailed scientific objective will be made after a deeply discussion with the lunar and planetary research scientists around the world.