Abstract. Presently, some nations such as Japan, China, India, Russia, Europe, and U.S. plan lunar exploration missions. Spacecraft scale and cost of a project depend on their mission requirements. Since it needs minimum bus system to go to moon, or to land on moon surface, however, the more spacecraft becomes large, the better cost to performance ration improves. On the other hand, a large scale mission is generally difficult to be approved by government due to its large cost. Therefore, affordability of missions should be discussed.

In this presentation, at first, cost structure of a lunar landing mission is discussed. And then, some examples of spacecraft design, that is, 100 kg, 500 kg, and 1000 kg dry weigh on the moon surface are examined. Finally, some affordable mission cases are proposed.