

SMALL SATELLITE MISSIONS SYMPOSIUM (B4)  
Hitchhiking to the Moon (8)

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ACCOMMODATING LUNAR HITCHHIKERS – LESSONS LEARNED AND PROSPECTS

**Abstract**

An early attempt at hitchhiking to the Moon went badly wrong. In 1962 NASA ordered the JPL Ranger project, already faltering due to previous launch and spacecraft failures, to add several non-lunar, magnetospheric science instruments on board its next block of spacecraft. This was technically possible and accommodation designs were prepared, but the order sowed discord among the project's participants. It was not even very good science, as the Ranger would make only one quick pass through the Van Allen Belts on its 66-hour flight to the Moon. Soon the order was canceled. This paper will review lessons learned from the Ranger episode and point to the good prospects that now exist for the addition of well-planned auxiliary activities, both in flight and on ground, such as cubesat dispensing and tracking, in future missions to the Moon.