

Lunar Exploration (3)

Lunar Policy (1B)

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THE LUNAR REFORMATION: A REFORMED PLAN FOR RETURNING TO THE MOON

Abstract

Since the 1640s, when John Wilkins first seriously discussed the technical aspects – at least as they were understood at the time – of travel to the ‘World in the Moone’ revealed by the recently invented telescope, visions of missions to the Moon have been core to the idea and ideal of space exploration. Although Mars and other destinations in the solar system have had, at times, equal or even greater political prominence, there is no doubt that the Moon is a central node in planning for the future of space exploration and space development.

As a result of the Moon’s natural importance for the space community, and indeed for human culture in general, a subset of the space community has recognized this importance and focused on realizing the most rapid and extensive set of lunar exploration and development activities possible. The result has been the emergence of a set of dominant beliefs regarding the appropriate motivations and methods for a return to the Moon within parts of the international space community; that humans should build permanent habitable bases on the surface of the Moon for a wide variety of purposes - whether public, private or a combination of both – and that moving towards this goal starting with government-led human surface landings at the present time represents a logical focus for both near and long-term space policy.

This approach to lunar surface missions and development, although understandable and laudable as a driver for particular groups within the broader space community, is a potentially destabilizing trap from the perspective of overall space policy. There are a number of legitimate reasons to think about expanded and intensified lunar activities at this time. However, the financial and opportunity costs associated with adhering fully to the approach described above are far too high and threaten the viability of human missions beyond the Earth-Moon system for a generation or more. The lunar surface remains a compelling destination, but the prevailing dogma regarding how to realize that future is damaging. We must reform our thinking if we to realize a course that allows for both interplanetary human spaceflight missions and returns to the lunar surface in the next few decades.

This paper will lay out the arguments against the prevailing approach to lunar surface return and for a reformed approach to a lunar return that also meaningfully enables interplanetary spaceflight.