

IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
Balancing Needs: Protection of Space Science (3)

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CONCENTRATED LUNAR RESOURCES: IMMINENT IMPLICATIONS FOR GOVERNANCE AND
JUSTICE

Abstract

It is useful to identify the particular locations on the Moon where disputes may arise. We find that the numerous missions planned for the next decade are likely to target a handful of small sites of interest on the Moon's surface, creating risks of crowding and interference at these locations. The Moon presents finite and scarce areas with rare topography or concentrations of resources of special value. Locations of interest to science, notably for astronomy, include the so-called "Peaks of Eternal Light", the coldest of the cold traps and smooth areas on the far side. Regions richest in physical resources could also be uniquely suited to settlement and commerce. Such sites of interest are both few and small. Typically, there are fewer than ten key sites of each type, each site spanning a few kilometers across. We survey the implications for different kinds of mission and find that the diverse actors pursuing incompatible ends at these sites could soon crowd and interfere with each other, leaving almost all actors worse off. Without proactive measures to prevent these outcomes, lunar actors are likely to experience significant losses of opportunity. We highlight the legal, policy and ethical ramifications. Insights from research on comparable sites on Earth present a path toward managing lunar crowding and interference grounded in ethical and practical near-term considerations.