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48th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps (A4)
SETI 1: SETI Science and Technology (1)

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LUNAR OPPORTUNITIES FOR SETI

Abstract

The search for extraterrestrial intelligence would be greatly aided by a telescope positioned on the far side of the Moon. Because the Moon is tidally locked, such a telescope would always face away from the Earth, and would be shielded from terrestrial sources of radio frequency interference (RFI). While RFI can be relatively easily rejected by other radio astronomers, it significantly complicates SETI projects – candidate alien signals may be difficult to distinguish from those produced by human technology. The lunar far side is therefore an extremely attractive site for future SETI initiatives because it offers a dramatically quieter radio environment than other locations in our local universe. With accelerating public and private interest in returning to the Moon, it is now possible to imagine such a telescope being built within the next decade. Advances in battery technology, antenna design, and the miniaturization of electronics have made feasible the construction and placement of a low-mass radio telescope on the lunar far side. The achievement of this vision would mark a new era in SETI.