

37th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)  
The future of space exploration and innovation (2)

Author: Dr. Svetla Ben-Itzhak  
The Johns Hopkins University, United States

PATTERNS OF INTERNATIONAL COOPERATION IN CISLUNAR SPACE: A NETWORK  
ANALYSIS APPROACH

**Abstract**

This paper uses network analysis to map evolving patterns of international cooperation in cislunar space. Cislunar space is the area around the Earth extending out to just beyond the Moon's orbit, including all five Lagrangian points in the Earth-Moon-system. Focusing on states as the main unit of analysis, this study quantifies and maps international cooperation in cislunar space based on state participation in bilateral and multilateral cislunar agreements. The results reveal some very interesting patterns in the evolution of international cislunar cooperation, with four main clusters – aka cislunar blocs – emerging over the last four years. As network analysis offers several mechanisms through which new cooperative ties are expected to form, this study further probes the future form or direction that international cooperation in cislunar space is likely to take considering (a) specific expectations put forward by theories of network growth and future ties formation and (b) observed trends in international cooperation in space from 1958 until 2023.