

УДК 629.78

## **GNSS NAVIGATION FIELD FOR TRAJECTORY TO THE MOON**

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The 14 space agencies of the International Space Exploration Coordination Group (ISECG) state a desire to return to the moon in the next decade in the 2018 Global Exploration Roadmap (GER). Two Critical technology gaps identified by the GER first is AR&D Proximity Operations, Target Relative Navigation second Beyond-LEO crew autonomy, GNSS on lunar missions would enable autonomous navigation, reduce tracking and operations costs, provide a backup/redundant navigation for human safety, provide timing source for hosted payloads and reduce risk for commercial development, Indeed, space remains a challenging operational environment, particularly on the way from the Earth to the Moon, characterized by weaker signals with wider power variability, larger dynamic ranges resulting in higher Doppler and Doppler rates, critically lower satellite signal availability, and poorer satellites-to-user geometry, The objective of this work is to study the GNSS navigation field for the spacecraft trajectory to the moon.