

Current mission scenario of UZUME (Unprecedented Zipangu Underworld of the Moon Exploration)

*Junichi Haruyama¹

1. Japan Aerospace Exploration Agency

UZUME (Unprecedented Zipangu Underworld of the Moon Exploration) is a mission that an explorer descends into a vertical hole opening on a lunar underground cavern to understand 1) volcanic activity (lava flow covering) peculiar to gravitational celestial bodies, magnetic field generation in ancient times, meteorite impact history (regolith formation), and formation process of vertical holes themselves. Furthermore, it clarifies the difference in the environment (temperature, radiation, magnetic field) at the bottom of the vertical hole to obtain information that contributes to the understanding of the manifestation and sustainability of life, and 2) the environment of the lunar underground caverns to acquire preliminary information for future exploration and lunar base construction. In this presentation, we will introduce a mission scenario that is currently envisioned and discuss how the scientific objectives will be achieved.

Keywords: Moon, hole, cave, UZUME, exploration, Mars