Magician of gravity ~Gravity of Moon, Mars and Enceladus is made with variable gravity producing apparatus~

\*Yusuke Kamino<sup>1</sup>, \*Akira Nagata<sup>1</sup>, \*Yutarou Arai<sup>1</sup>, Hiraku Toda<sup>1</sup>, Keita Nakamura<sup>1</sup>, Jun Imabayashi<sup>1</sup>

1.Kasugaoka High-school of Osaka prefecture, The evening course

Our science club possesses a short drop shaft for microgravity experiments. Then, we thought it was possible to make gravity of Moon and Mars on the earth. Using a Atwood's machine which appeared on a physics textbook, we tried to make gravity variable apparatus. We manufactured apparatus for the preliminary experiment to examine Moon, Mars, Europa and Enceladus. For example, how does water run at the Mars surface? An unexpected phenomenon may be observed under the gravity in the Moon. Although our apparatus has the problem which restrains the vibration when falling, we made various stellar gravity with adjusting a weight using an basic principle.

Keywords: microgravity, gravity variable apparatus, planetary exploration