

P140-011

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Study on extra-terrestrial lava tube with proposals for future explorations of the Moon and Mars

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Recently, possible evidence of lava tubes has been found on the Mar by some Mars explorers of the US and Europe. If the lava tubes formed on the Mars in ancient days, water once might flow go and back and contribute on transferring and concentration of some materials in them. Explorations of lava tubes on the Moon and Mars are demanded.

We, therefore, have started studying the extra-terrestrial lava tube explorations with lander(s) and rover(s); for instance, during descending phase, we will acquire the tube structures by high-resolution visible and radar images. After landing on the surface of a celestial body, rover(s) will be run to the entrance of lava tubes or holes and investigate the inner region by imaging with light.

In this presentation, we will talk about concept of our extra-terrestrial lava tube explorations with our recent studies on the lava tube remote-sensing.