



Search for terrestrial-like exoplanets: low frequency radioastronomy at Moon

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The Moon, the Earth's neighbor, attracts an attention as a celestial body, as a source for mineral and other resources and as a possible base for fundamental scientific researches. The conducting ionosphere of Earth completely shields radioemissions coming from outer space and propagating at frequencies below a few MHz. In contrary, the Moon possessing a weak atmosphere/ionosphere around its surface seems to be a perfect base for carrying out measurements of low frequency radio emissions originated from the space. The radio facility deployed at Moon's surface seems to be a powerful tool for various fundamental space researches related to astrophysics, solar system and magnetospheric investigations. The most intriguing objective is a search of terrestrial-like planets in the exosolar system, i.e. planets possessing the intrinsic magnetic fields and developed magnetospheres which interaction with the star wind results in generation of radioemissions (similar to AKR radiation of the terrestrial magnetosphere).

The paper presents a possible approach to the development of the radio facility deployed at Moon's surface, its implementation for search of Earth's-like exoplanets and estimates of their detectability.

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