



Jupiter's and Saturn's ice moons: geophysical aspects and opportunities of geophysical survey of the planetary geoelectrical markers and oreols of the subsurface liquid ocean on the surface ice moons

Yuri Ozorovich (1), Vacheslav Linkin (), Alexandr Kosov (), Alain Fournier-Sicre (), Stanislav Klimov (), Denis Novikov (), Anton Ivanov (), Dmitriy Skulachev (), and Yaroslav Menshenin ()

(1) Space Research Institute, E/m sounding, Moscow, Russian Federation (yozorovi@iki.rssi.ru), (2) FAST-ER, France, (3) Swiss Space Center, (4) Skoltech Institute

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Yu. Ozorovich¹, Space Research Institute RAS, Moscow,
Alain Fournier-Sicre², FAST-ER, France.

V. M.Linkin¹, A.S. Kosov¹, D.P. Skulachev¹, S. Gorbato¹, S. Potemkin¹, S. Klimov¹,
D.Novikov¹, A. Ivanov³, Y. Menshenin⁴

¹Space Research Institute, Russian Academy of Sciences, 84/32 Profsoyuznaya st., Moscow, 117810, Russia (yozorovi@iki.rssi.ru), (interecos@gmail.com).

² FAST-ER, France

³ Swiss Space Center

⁴ Skoltech Institute

This paper presents a new conceptual and methodological approach for geophysical survey of the planetary geoelectrical markers and oreols of the subsurface liquid ocean on the surface ice moons on the base "conceptual design phase" of the future space missions on the ice moons. At the design stage of such projects is considered the use of various space instruments and tools for the full the complex geophysical studies of the manifestations and planetary processes of the subsurface liquid ocean on the surface ice moons.

The existence of various forms of the cryolithozone on terrestrial planets and their moons: advanced Martian permafrost zone in the form of existing of the frozen polar caps, subsurface frozen horizons, geological markers and oreols of the martian ancient (relict) ocean, subsurface oceans of Jupiter's and Saturn's moons-Europe and Enceladus, with the advanced form of permafrost freezes planetary caps, it allows to develop a common methodological basis and operational geophysical instruments (tools) for the future space program and planning space missions on these unique objects of the solar system, specialized for specific scientific problems of planetary missions.

Geophysical practices and methodological principles, used in 1985-2015 by authors [1-5], respectively, as an example of the comprehensive geophysical experiment MARSSES to study of the Martian permafrost zone and the martian ancient (relict) ocean, creating the preconditions for complex experimental setting and geo-physical monitoring of operational satellites of Jupiter and Saturn- Europe and Enceladus. This range of different planetary (like) planets with its geological history and prehistory of the common planetology formation processes of the planets formation and to define the role of a liquid ocean under the ice as a climate indicator of such planets, which is extremely important for the future construction of the geological and climatic history of the Earth.

Main publications:

[1]https://www.researchgate.net/publication/282151921_JUPITER%27S_MOON_EUROPA_PLANETARY_GEOELECTRICAL_

[2]https://www.researchgate.net/publication/281270655_YUPITERS_MOON_EUROPA_PLANETARY_GEOELECTRICAL_MA

[3] https://www.researchgate.net/publication/276005128_Science-technology_aspects_and_opportunities_of_em_sounding_frozen

[4]https://www.researchgate.net/publication/275638508_Cryolithozone_of_Mars_-_as_the_climatic_indicator_of_the_Martian_relict_ocean

[5]https://www.researchgate.net/publication/275266762_Microwave_remote_sensing_of_Martian_cryolithozone