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“Search for sub-microsecond bursts of Cherenkov radio emission caused by the interaction of high-energy neutrinos with lunar regolith”

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G.A. Askaryan had shown in 1960s [1,2] that the interaction of high-energy particles with the rather dense dielectric medium should form the negative charged cascades moving with superluminal velocity in the medium. This Askaryan's effect is laid on the basis of the radio-astronomical method for detecting ultra-high-energy neutrinos, proposed later by R.D.Dagkesamansky and I.M. Zheleznykh [3]. This report provides a brief overview of the application of this radio astronomy method to search for Cherenkov radio bursts from the Moon. Some results of the search for such radio bursts on the meter wave radio telescope BSA FIAN are presented.

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