

GRAVITATIONAL WAVES — A MEANS OF COMMUNICATION WITH  
HIGHLY DEVELOPED CIVILIZATIONS

V. B. Kudrin

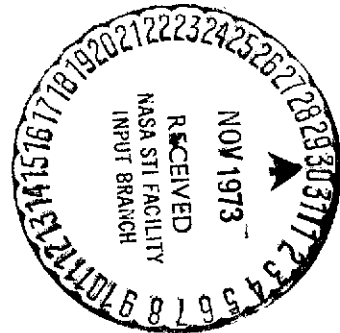
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V. B. Kudrin

At the end of 1971, a Soviet-American conference devoted to the problem of communicating with extraterrestrial civilizations was held at the Byurakansk Astrophysics Observatory. I would like to express a few concepts on the subject of an extremely important report concerning the experiments of the American scientist J. Weber, who, according to his assertion, has succeeded in recording gravitational radiation of such a sum power total that it cannot be explained by the influence of any space objects observable by us. Weber suggests that this radiation emanates from the center of the Galaxy. /98\*

In my opinion, it is this very report which holds the key to solving the problem of communicating with civilizations on other planets.

Almost all of the participants in the conference consider that communication with hypothetical civilizations can be carried out by the aid of electromagnetic waves. The divergence of opinions pertains only to the range of wavelengths: some suggest seeking to communicate through the medium of radiowaves, while others suggest the medium of waves in the optical spectrum.

The participants in the conference declared many times that with a high degree of probability, any extraterrestrial civilization encountered by us has vastly advanced in comparison with our civilization. But if we, at our level of development of civilization, even now understand the shortcomings of electromagnetic communications (unavoidable damping, noise and all of the consequences that entails), then these shortcomings must even more be known to civilizations standing at higher stages of development. /99

If more developed civilizations exist, they could also have more advanced forms of communications. One such form, to my view, could be communications through the medium of gravitational waves. The most important positive properties of gravitational waves is their quality of passing through anything,

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\*Numbers in the margin indicate pagination in the foreign text.

and their lack of extinction when passing through material objects. Their negative property is their extremely low signal level, in comparison with the level of static created by incidental masses. But this difficulty could be overcome if one were to create a system of gravitational wave modulation which would permit error free differentiation of the signal among a great deal of interference of natural origin.

At present we are not yet in a position to imagine how civilizations which have surpassed us in their development could practically have devised such a system of modulation. However, if one accepts the possibility of modulating gravitational waves in principle, then one can attempt to detect these hypothetical signals.

The participants in the Byurakansk conference decided to transmit radio signals into outer space and to attempt to intercept the radio signals of other civilizations. But the time of existence of a civilization of the modern terrestrial type (I shall arbitrarily call it a "radio civilization") is extremely short: on the Earth it is as yet less than 80 years, and possibly soon, the "radio civilization" will give way to some other type.

From this it follows that the probability of our finding a civilization of the modern Earth-type is extremely small, but with the aid of electromagnetic waves one can hope to find only this type of civilization.

In the case of successful acquisition of gravitational waves, the probability of establishing communications with extraterrestrial civilizations significantly increases.