the geomagnetic field. Measurement of the geomagnetic disturbances falling into the class of micropulsations ($\omega \approx 0.01$—5 Hz), allows estimation of the plasma density, energy and location of energetic particles, position of the magnetopause, cross-field conductivities of the lower ionosphere and other parameters of the geospace [1, 2]. The micropulsations can be observed with a variety of techniques, however most of these are indirect methods as long as MHD waves in the plasma are concerned. That is, ground-based observations of the ULF (ultra-low frequency) electric or magnetic field variations actually refer to components of the «secondary» electromagnetic response produced by the lower ionosphere under the impact of an incident MHD wave. The MHD waves proper are observable in or above the ionosphere, either with HF/VHF radars or satellite-borne magnetometers [3, 4]. Spatial characteristics of the magnetospheric pulsation signatures (localization near a certain magnetic shell, cross-phases for a few observation points, state of polarization and angular spectrum) can be studied only through multiple point measurements. (The ESA Project Cluster [5] envisaged direct simultaneous observations of geomagnetic field components at a few points in the magnetosphere with provisions for the temporal and spatial resolution, which enabled calling the facility a «wave telescope»). A MHD wave telescope implements the idea of spaced or interferometric reception at pairs of observation points. If an ensemble of such pairs is available, where the baselines differ in length and orientation, it should be possible to restore the amplitude and phase distribution of the wave field and angular spectrum of the signal received. Some of the baselines might not be real but rather synthesized, based on the orbital motion of the satellite carrier.

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«Reliability» Experiment

INFLUENCE OF LOW-FREQUENCY ATMOSPHERIC ELECTRICAL PROCESSES AND NEAR-SPACE ELECTROMAGNETIC SIGNALS ON THE CENTRAL NERVOUS SYSTEM FUNCTIONAL CONDITION OF A MAN MAINTAINING SPACE SYSTEMS

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The natural low-frequency radiation corresponds to «a noise» initiating thunderstorm activity, Earth's emissions, etc. The noise spectrum always possesses the frequencies (8, 14, 20 and 26 Hz), which are attributed to the «Earth-ionosphere» resonance system. Thus, the man on Earth permanently exists in a species of resonator. There is no resonator influence in near space, as no resonances are observed