



UNIVERSIDAD COMPLUTENSE  
MADRID

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## RESEARCH PROJECT THE EFFECTIVENESS OF PRANAN DEVICES IN NEUTRALIZING THE HARMFUL EFFECTS OF ELECTROMAGNETIC FIELDS ON THE BRAIN BIOELECTRICAL ACTIVITY<sup>(1)</sup>

Effect of external inhibition (using Phiwaves and Phone devices) in  
electromagnetic exposures to radio frequencies emitted by mobile phones on  
the EEG brain bioelectrical activity

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The main study was conducted with 20 subjects with an average age of 32.8 years. Electroencephalography (EEG) records of 3 minutes duration were made in open eyes condition at basal state and with a cognitive task of words memorizing in the two experimental conditions (with and without electromagnetic fields isolation devices) with the Phone device attached to the back of the mobile phone and carrying Phiwaves device in the shirt or jacket pocket and with no devices.

### CONCLUSIONS

The ICEM (Phone and Phiwaves) has a significant effect on all tested brain bands, being its highest incidence in the slow bands, both in the delta band as in the theta band. Fast bands manifest different behaviors in which significant reductions in certain brain structures alternate combined with significant activations on other brain areas. Furthermore, the ICEM incidence (Phone and Phiwaves) affects most brain areas with a high incidence in the left hemisphere, especially in the task of words memory. The ICEM use results in improved functional capacity during cognitive tasks and improved overall brain functions in the basal state. The effect of the ICEM (Phone and Phiwaves) has such magnitude, neurofunctional consistency and significant differences on a large majority of brain areas that we can justify its effectiveness in modifying certain brain oscillations and its effectiveness as an inhibitor of electromagnetic fields.

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