THE FICTITIOUS CHARACTER OF YOUNG BOUNDARY WAVE

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S u m m a r y

The analysis of analytic properties of a boundary wave, which was represented by Sommerfeld as a part of a rigorous mathematical solution of the problem of plane-wave diffraction, is reported. The fact that a boundary wave possesses the amplitude break on the boundary of the geometric shadow excludes its real existence and propagation as a real wave, however, there exists a set of reports. We show, the experimentally observed wave usually presented as a boundary one has another origination. The structure and properties of a new wave, which has singular properties and contains the main numerical information about the diffraction process, are discussed.