



## Electromagnetic Radiation Generated by Acoustic Excitation of Rock Samples

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### Abstract

The paper presents an experiment on acoustic excitation of electromagnetic radiation (EMR) signals in skarn, sandstone, and magnetite ore samples. For the skarn and sandstone samples, the EMR signal amplitude was observed to decrease with increasing ultimate strength. Supposedly, this effect can be explained by assuming that EMR is generated when an acoustic wave propagates through an electrical double layer. The presence of piezoelectric inclusions (*e.g.*, quartz) in the magnetite ore enhances the analog EMR signal and its spectral components.

**Key words:** rocks, electromagnetic radiation (EMR), skarn, magnetite ore, sandstone, artificial acoustic excitation.