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## Perspectives for UHE acoustic neutrino detection

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In recent years the astro-particle community is involved in the realization of experimental apparatuses for the detection of high energy neutrinos originated in cosmic sources or produced in the interaction of Cosmic Rays with the Cosmic Microwave Background. For neutrino energies in the TeV-PeV range, the underwater optical Cherenkov technique is considered optimal. For higher energies, three experimental techniques are under study: the detection of radio pulses produced by showers following a neutrino interaction, the detection of air showers initiated by neutrinos interacting with rocks or deep Earth's atmosphere and the detection of acoustic waves produced by deposition of energy in the interaction of neutrinos in acoustically transparent mediums. Different groups are conducting studies to characterize acoustic properties of different mediums and developing the technologies required for future large-scale acoustic arrays. Test experiments were carried out using military arrays of hydrophones or available scientific infrastructures and first searches for neutrino signals were performed. Though the studies on this technique are still in an early stage, its potential use to build very large neutrino detectors is appealing, thanks to the optimal properties of mediums such as water, ice or salt as sound propagator. The status of simulation work, medium studies, sensor developments and first results from test experimental setups will be discussed.

### Summary

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