

Neutrino-graphic imaging of the earth

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Absorption neutrino-graphy utilizes very high energy neutrinos with energies above 10 TeV to measure the nucleon density inside the earth whereas oscillation neutrino-graphy measures the electron density by observing the MSW effect. Two independent physical quantities might provide new geophysical information, e.g., isotope ratio, to us. In this talk, a recent attempt to use atmospheric neutrinos for absorption neutrino-graphy, based on a simulation of atmospheric neutrino events that can be collected with the IceCube neutrino detector, will be introduced as well as a possible oscillation neutrino-graphy with Hyper-Kamiokande.

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