

Neutrino oscillation tomography of the Earth and core composition with large water cherenkov detector

Sunday, July 31, 2022 2:50 PM (25 minutes)

The neutrino oscillation probability depends on the electron density of the media and next generation neutrino detector will have the capability to resolve the earth's electron density distribution with some accuracy. If we combine the earth's matter density distribution and electron density distribution, then we can obtain the average chemical compositional distribution as Z/A ratio. Also if we assume some chemical composition model of the Earth, then we can obtain the matter density distribution of the Earth complementally. We will discuss about the possibility to measure the compositional distribution of the Earth using next generation large water cherenkov detector.

Attendance type

In-person presentation

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