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The reactor antineutrino anomaly and large extra dimensions

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Recently, there has been a reevaluation of the reactor antineutrino spectra which increased the mean flux by 3%. The analysis of the former reactor antineutrino experiments with the new spectra revealed a 2.2 sigma deviation from the consolidated 3 neutrino framework. Together with gallium solar neutrino calibration experiments, this deviation is around 3 sigma. We show that in the context of a model with large extra dimensions the mixing between active neutrinos and sterile KK modes could be responsible for this anomaly.

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