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Resonance structure of the charge-exchange strength function of Tellurium isotopes 128 and 130.

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This work presents the charge-exchange strength functions $S(E)$ of isotopes $^{128,130}\text{Te}$. Both experimental data on the $S(E)$ charge-exchange strength functions obtained in $(^3\text{He}, t)$ reactions and the $S(E)$ strength functions calculated in the microscopic theory of finite fermi-systems are analyzed. The resonance structure of the strength function $S(E)$ is investigated, and the Gamow-Teller and Pygmy resonances are distinguished. The resonance structure of the power function $S(E)$ is crucial for the calculation and analysis of neutrino capture by atomic nuclei. The possibility of using these isotopes in next-generation neutrino experiments is also discussed, in particular in the Baxan Large Neutrino Telescope project.

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