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A Modular NaI(Tl) Detector Array for Parity- and Time Reversal-Odd Measurements for NOPTREX JASON FRY, Eastern Kentucky University, IVAN NOVIKOV, Western Kentucky University, NOPTREX COLLABORATION — The NOPTREX collaboration proposes to conduct a sensitive search for time reversal invariance violation (TRIV) in polarized neutron transmission through polarized nuclei, exploiting properties of low energy neutron-nucleus resonances which amplify TRIV. The same amplification mechanisms known to generate parity violation (PV) can also enhance TRIV effects. NOPTREX also plans to measure PV asymmetries in eV neutron-nucleus resonances to higher precision for input to TRIV parameters in key nuclei of interest, such as ^{139}La and ^{131}Xe, and in a broad search of heavy nuclei. We will discuss the ongoing efforts to develop and characterize a ^{10}B + NaI(Tl) detector array to measure both PV in nuclei with higher precision and parameters of TRIV neutron resonances, and report on the results of MCNP simulations of the array performance.

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