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The WATCHMAN Project[1] STEVEN DAZELEY, Lawrence Livermore National Lab., WATCHMAN COLLABORATION — The Watchman collaboration is investigating the feasibility of using antineutrino detection as an unambiguous and unshieldable way to detect the presence of distant nuclear reactors. To do this we propose to construct a kiloton-scale, water-based antineutrino detector 13 kilometers from the Perry reactor at the site of the former IMB detector in Ohio. Complementing the non-proliferation mission, a detector of this size may also be able to contribute to important questions in neutrino physics, such as super-nova neutrinos, sterile neutrino oscillations, and non-standard electroweak interactions. (using a nearby compact accelerator source). Augmenting these goals, WATCHMAN will also serve as a large test bed for future detector technologies such as water-based scintillator, and advanced photon detection. In this talk I will describe the scope of the WATCHMAN concept, the physics and engineering challenges involved, the proposed design and the predicted performance of the experimental non-proliferation and high-energy physics program.

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