Abstract Submitted
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TRISTAN project - To search for keV-scale sterile neutrino with KATRIN[1] YUNG-RUEY YEN, Carnegie Mellon University, TRISTAN COLLABORATION — A viable candidate for dark matter, keV-scale sterile neutrinos would be detectable from their distinct distortion of the beta-decay spectrum. The KArlsruhe TRItium Neutrino (KATRIN) experiment has recently started its precision measurement of the endpoint spectral shape of the tritium beta-decay to directly probe the neutrino mass. To eventually take advantage of the KATRIN beamline, particularly the high luminosity tritium source, the TRISTAN project is currently an R&D effort to develop a new detector system optimized for the keV-scale sterile neutrino search where the measurement has to cover the entire tritium beta-decay spectrum energy range. This talk will discuss the design requirements for the TRISTAN detector as well as the latest results from the prototypes.

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