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The VSIPMT Project

The VSIPMT (Vacuum Silicon PhotoMultiplier Tube) is an innovative design for a revolutionary hybrid photodetector.

The idea, born with the purpose to use a SiPM for large detection volumes, consists in replacing the classical dynode chain with a SiPM. In this configuration, we match the large sensitive area of a photocathode with the performances of the SiPM technology, which therefore acts like an electron detector and so like a current amplifier.

The excellent photon counting capability, fast response, low power consumption and great stability are among the most attractive features of the VSIPMT.

We now present the results of a full characterization of the VSIPMT industrial prototypes with their pro and contra and the preliminary tests we are performing to progress in the realization of a larger VSIPMT prototype.

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