

## **SiPM for direct VUV registration**

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Silicon photomultipliers (SiPM) are suitable to register a single quanta due to their internal gain about  $10^6$ . SiPM for the 128 and 175 nm registration are needed at this time (liquid argon and xenon luminescence respectively). These elements are the perspective signal sources for neutrino registration and dark matter detection experiments. Moreover, SiPM could be useful in synchrotron radiation and plasma diagnostics as well. Currently the most methods for 128 and 175 nm registration are based on a wavelength shifter (WLS) for transferring the VUV spectra to UV and visible spectra in order to register the secondary radiation by the commercially available SiPM. The alternative approach has been developed for direct VUV registration without using a WLS [1]. The SiPM investigation results are presented in this report for the 112-175 nm spectral range.

### References

1. V. Zabrodskii, P.Aruev, V.Belik, et al., Nuclear Instruments and Methods in Physics Research A 787 (2015) 348–352