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## PS3-11 Semiconductor Detectors with Smoothly Tunable Thickness for Study of Relativistic Charged Particles Ionization Loss

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The thickness of the depleted zone in a partially depleted semiconductor detector can be smoothly changed by variation of high voltage power supply of the detector [1]. In present paper we propose application of partially depleted semiconductor detectors for measurements of ionization loss of ultra-relativistic charged particle as a function of its path inside the semiconductor. Results of preliminary measurements of most probable ionization loss in Si of electrons emitted from <sup>207</sup>Bi radioactive source as a function of the power supply voltage of Si detector are presented. Prospects for application of such detectors for research of evolution of electromagnetic field of the particle which crosses a boundary of a solid target [2] are discussed. The paper became possible partially due to grant SFFR #58/17.

### References

1. E. Kowalski. Nuclear electronics, Springer-Verlag, Berlin, New York, 1970.
2. N.F. Shul'ga, S.V. Trofymenko Nucl. Instrum. Meth. B 309 (2013) 167.

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