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Prospects on the indirect dark matter detection and a future spectroscopic survey of dwarf spheroidal galaxies

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One of the most promising way to detect dark matter is to look for its annihilation or decay products among cosmic-rays. Recently, more and more interesting results are reported by measurements of cosmic-rays from various kinds of targets such as the milky way galaxy, dwarf spheroidal galaxies, cluster galaxies, etc. Among them, dwarf spheroidal galaxy is one of the nearest, dark matter dominated galaxies and therefore one can expect that a large number of dark matter annihilation/decay signals reach the earth from its halo. In this presentation, we will discuss robustness of the gamma-ray search from the dwarf spheroidal galaxies and give prospects of the dark matter halo survey by the Prime Focus Spectroscopy (PFS) of SuMIRe project.

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