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# Search for new gravity-like interactions and test of the equivalence principle using slow neutrons

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We report updates of experimental constraints on new gravity-like interactions by measuring the angular distribution of cold neutrons scattering off atomic xenon gas. The results improved previous upper limit on Yukawa-type parametrization space in the 4 to 0.04 nm range by a factor of up to 10[1]. We also discuss about our plans of a test of the weak equivalence principle and a new force search in the micron range, using a neutron quantum bouncing system[2].
[1] Y. Kamiya, K. Itagaki, M. Tani, G. N. Kim, and S. Komamiya, PRL 114, 161101 (2015)
[2] G. Ishikawa, S. Komamiya, Y. Kamiya et al., PRL 112, 071101 (2014)

**Primary author:** Dr KAMIYA, Yoshio (International Center for Elementary Particle Physics, The University of Tokyo)

**Presenter:** Dr KAMIYA, Yoshio (International Center for Elementary Particle Physics, The University of Tokyo)

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