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Search for Exotic Spin-Dependent Force with Atomic Comagnetometers

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We report a new experimental result on searching for exotic spin- and velocity- dependent force using a tungsten nucleon source and an K-Rb-21Ne comagnetometer [1]. The pseudomagnetic field from this exotic force is measured to be \leq 7 aT. This sets new limits on coupling constants for the neutron-nucleon and proton-nucleon interactions in the force range of \geq 0.1 m.

[1] Wei, Kai, et al. arXiv:2203.07050 (2022).

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