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**Quantum impurity spin in Majorana edge modes** RYUICHI SHINDOU<sup>1</sup>, Department of Physics, Tokyo Institute of Technology, AKIRA FURUSAKI, Condensed Matter Theory Laboratory, RIKEN, Japan, NAOTO NAGAOSA, Department of Applied Physics, University of Tokyo and CERG and CMRG, RIKEN, Japan — We show that Majorana edge modes of two-dimensional spin-triplet topological superconductors (superfluids) have Ising-like spin density whose direction is determined by the d-vector characterizing the spin-triplet pairing symmetry in the bulk. Thus, when a quantum impurity spin is introduced at the edge of the spin-triplet topological superconductors (superfluids), the exchange coupling between this impurity spin and the Majorana modes becomes Ising-type. Observing this, we argue that, under the external magnetic fields, this quantum impurity spin exhibits anisotropic dissipative quantum dynamics due to the ‘background’ massless Majorana edge modes. We also discuss how the magnetic response of this impurity spin can serve as a local probe for spin-triplet superconducting order parameter in the bulk.

<sup>1</sup>This work was done when the first author was affiliated to Condensed Matter Theory Laboratory in RIKEN.

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