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# The Ultra-Slow Muon beamline at J-PARC: the present status and future prospects

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At J-PARC MLF, MUSE provides the world-highest flux of pulsed muon beams. U-Line, one of the four beamlines in the facility, features an intense surface muon beam from Super-Omega and Ultra-Slow Muon (USM) generated by laser ionization of thermal muonium in a vacuum. The beamline has two branches: U1A for muon spin spectroscopy using USMs and U1B for transmission muon microscope. The unique feature of the USM is variable low-energies from sub-keV to tens of keV, compared to the energy of 4 MeV of a surface muon beam. This feature makes it possible to use muons not only as a probe for the bulk but also as a depth-resolved probe for surfaces and interfaces. Commissioning of the beamline and instruments is underway in preparation for the start of user programs. This contribution will present an overview of the facility, its current status, and its prospects.

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