

H-line -A new general-purpose muon beamline at J-PARC MUSE-

Takayuki Yamazaki and Naritoshi Kawamura

Abstract

A new muon beamline named H-line is being constructed at the Muon Science Facility (MUSE) in the Material and Life Science Experimental Facility (MLF) of the J-PARC. The H-line is a general-purpose muon beamline which can provide not only high intensity surface muons with a quasi-monochromatic momentum of 28 MeV/c and full polarization, but also positive and negative muons with a widely tunable momentum. The beamline is planned to be open to a variety of experiments such as precision measurements and rare process searches of particle physics, transmission muon microscopy which enables us to investigate functions of a living cell, and so on. The construction of the H-line is under way toward the first beam in a year. An overview of the H-line and the current status of its construction will be presented.