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Muon Accelerator Program Document 4377-v1

H2 Gas-Filled Helical FOFO Snake for Initial 6D Ionization Cooling of Muons

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Abstract:
An H2 gas-filled channel for 6D ionization cooling of muons is described which consists of periodically inclined solenoids of alternating polarity with 325MHz RF cavities inside them. To provide sufficient longitudinal cooling LiH wedge absorbers are placed at the minima of transverse beta-function between the solenoids. An important feature of such channel (called Helical FOFO snake) is that it can cool simultaneously muons of both signs. Theoretical considerations as well as results of simulations with G4beamline are presented.

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- Gas-Filled HFOFO.docx (204.1 kB)

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