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Superconducting Shield (SuShi) septum - towards a full prototype

Wednesday, April 11, 2018 8:30 AM (20 minutes)

A bulk superconducting magnetic shield can create the sharp transition between the high-field and no-field zones of septum magnets. This technique promises to reach significantly higher fields than what is possible with current technology, without compromising compactness. The experimental results with three different shield materials will be presented and compared. Simulation results explaining the observed relaxation phenomena in MgB₂ will be shown. A fully fledged prototype - including the shield and a compact, simple and cheap magnet - will be proposed and its conceptual design will be presented.

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