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A low-field SQUID MRI system: design, performance and characterization. BYEONG HO EOM, KONSTANTIN PENANEN, INSEOB HAHN, Jet Propulsion Laboratory/California Institute of Technology — A low-field MRI system with SQUID detector and gradiometer sense coil readout is being developed for clinical imaging. The system is compact and low-weight and operates in minimally shielded environment. An in-vivo image of human hand with sensitive field of view of 3cm, in-plane resolution of 1mm and 4mm slice width can be acquired in \sim 5 minutes. We discuss the system design, optimization, noise characteristics and imaging performance of the apparatus.

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