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## Quench Location in the LARP MQXFS1 prototype

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The high luminosity upgrade project US LARP/HiLumi has successfully tested the first 1.5 m prototype quadrupole MQXFS1 at Fermilab's Magnet test facility. Several thermal cycles and test programs were performed, with different pre-load configurations. To localize the quenches a quench antenna and the information of the voltage taps is used. The Quench Antenna was placed in the warm bore of an anti-cryostat centered in the magnet. We varied the length between quench antenna segments from 1" to 6", and shifted the location of the antenna to localize the quench origin along the various wedge and spacers transitions in the lead end of the magnet. We will present results on the identified quench locations for the second and third thermal cycle in this paper.

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