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## Investigation of hot-spot and quench location due to trapped flux in niobium superconducting radiofrequency cavities

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One of the significant sources of residual losses in superconducting radio-frequency cavities is magnetic flux trapped during the cool-down due to the incomplete Messier effect. If the trapped vortices are non-uniformly distributed on the cavity surface, the temperature mapping revealed the “hot-spots” at the location of high density of pinned vortices. In this contribution, we present the results of combined temperature and magnetic mapping measurements on a single cell 3.0 GHz and 1.3 GHz niobium single-cell cavities. The results show the direct evidence of pinned vortices induced “hot-spots”.

### Footnotes

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