

# High pulsed power measurements of superheating fields for SRF materials

*Sunday 25 August 2024 16:00 (2 hours)*

The Cornell High Pulsed Power Sample Host Cavity (CHPPSHC) is a new system designed to measure the superheating field of candidate superconducting RF (SRF) materials, giving insight into their operational limits. This system is designed to reach peak magnetic fields of up to 0.5 T in only a few microseconds, allowing us to achieve a pure magnetic field quench on the sample. We present an overview of the CHPPSHC system and proof of principle data from a niobium sample.

## Footnotes

## Funding Agency

**Primary author:** VERBONCOEUR, Nicole (Cornell University (CLASSE))

**Co-authors:** HOLIC, Adam (Cornell University (CLASSE)); LIEPE, Matthias (Cornell University (CLASSE)); PORTER, Ryan (Cornell University (CLASSE)); OSEROFF, Thomas (Cornell University (CLASSE)); SHPANI, Liana (Cornell University (CLASSE)); SEARS, James (Cornell University (CLASSE))

**Presenter:** VERBONCOEUR, Nicole (Cornell University (CLASSE))

**Session Classification:** Student Poster Session

**Track Classification:** MC4: Technology: MC4.8 Superconducting RF