

Dear Jan Saliga and Sergio Rapuano,

following the discussions at the IMEKO-TM4 conference in Benevento, we have prepared a modified manuscript about our contribution: “Broadband Corbino spectroscopy and stripline resonators to study the microwave properties of superconductors”.

Compared to the previous manuscript, we have made the following changes:

- Title changed (from “Measuring the microwave response of superconductors: broadband Corbino and resonant stripline techniques” to “Broadband Corbino spectroscopy and stripline resonators to study the microwave properties of superconductors”).
- Affiliation information extended.
- “Keywords” and information about “Funding” included.
- Page 3, below equation 1: more information about sample geometry and role of the substrates added, including new references [17,18]: “Here d is the thickness of the superconducting thin film and a_1 and a_2 are the inner and outer diameters of the Corbino disk, respectively [4, 5]. This Corbino disk is created by deposition of concentric conductive contacts (e.g. made of gold) onto the superconducting film, and it defines the geometry of the sample impedance Z_L that is probed. The thin-film samples are usually deposited onto dielectric substrates, and typically these sub-strates do not affect Corbino microwave measurements much in the frequency range below 20 GHz [17, 18]. In Figure 2 we show typical microwave spectra, both real and imaginary parts of the conductivity, for a TaN film of thickness 5 nm that was sputtered onto a sapphire substrate.”
- Page 3, right before section 4: Additional information about the ongoing discussion concerning contributions to sub-gap absorption that are not part of the BCS description. This includes new references [25-28].
”For highly disordered superconductors close to the SIT, the conductivity in the superconducting state at frequencies below $2D$ has recently gained substantial attention because deviations from the canonical predictions of BCS theory might occur [25-28].”
- “Acknowledgement” added.
- Furthermore, a few grammatical errors were corrected and the list of references was updated.

With these changes, we hope that our contribution is appropriate for publication in Acta IMEKO.

Sincerely,

Marc Scheffler

(on behalf of all authors)