



Contribution ID: 1067

Type: **Contributed Oral Presentation**

C1Or2B-06: Quick-replacement high-temperature superconducting current leads for use in a research cryostat

Monday, July 22, 2019 5:15 PM (15 minutes)

We report the use of a series of high-temperature superconducting leads in a cryostat that require no soldering to replace in the event of a failed lead. The temperature range spanned by the leads is 50 to 3 Kelvin and they typically carry currents up to 4 amperes although they have a much higher capacity in this temperature range. The leads are integrated into the cryostat by clamping both ends to gold-plated copper pads. Support of the leads over the 25 cm length is provided by a simple G10 strong back. Details of the clamping interface, measurements of joint resistances, and other interesting observations will be discussed.

Author: Dr KIMBALL, Mark (NASA/Goddard Space Flight Center)

Co-authors: Mr SAMPSON, Michael (NASA); Dr CANAVAN, Edgar (NASA-Goddard Space Flight Center); Mr LETMATE, Richard (ATA AEROSPACE)

Presenter: Dr KIMBALL, Mark (NASA/Goddard Space Flight Center)

Session Classification: C1Or2B - Superconducting RF Systems, Power Cables, and Leads I