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## Challenges for conduction-cooled SRF cavity technology

*Thursday, 7 December 2023 16:00 (1h 30m)*

Challenges for conduction-cooled SRF cavity technology specially focusing on (i) cryocoolers, (ii) thermal link, (iii) Nb<sub>3</sub>Sn thin-film, and (iv) tunability of Nb<sub>3</sub>Sn-coated cavities.

Discussion:

- Introduction: The current state-of-the-art for conduction-cooled SRF cavity technology : G. Ciovati (JLab)

- Short presentations (< 3 min.) on each topic, followed by discussions:

(1) Choice of cryocoolers: T. Yamada (KEK), R. Dhuley (FNAL), R. Kostin (Euclid), and J. Hao (PKU)

(2) Thermal link design: N. Stilin (Cornell), T. Yamada (KEK), R. Dhuley (FNAL), R. Kostin (Euclid), and T. Proslie (CEA)

(3) Nb<sub>3</sub>Sn thin film performance

(on Cu) : C. Pira (INFN) and S. McNeal (Ultramet)

(on Nb) : U. Pudasaini (JLab) and J. Hao (PKU), and L. Shpani (Cornell)

(4) Tunability of Nb<sub>3</sub>Sn coated cavities: G. Ereemeev (FNAL)

(5) Any Others ...

**Presenters:** YAMAMOTO, Akira (KEK); PIRA, Cristian (INFN LNL); CIOVATI, Gianluigi (Jefferson Lab); ERE-MEEV, Grigory (FNAL); KNOBLOCH, Jens (Helmholtz-Zentrum Berlin / Universität Siegen); HAO, Jiankui (Peking University); SHPANI, Liana (Cornell University); STILIN, Neil (Cornell University (CLASSE)); DHULEY, Ram (Fermilab); KOSTIN, Roman (Euclid Techlabs); MCNEAL, Shawn (Ultramet); PROSLIER, Thomas (commissariat de l'énergie atomique); YAMADA, Tomohiro (KEK); PUDASAINI, Uttar (The College of William and Mary/ Jefferson Lab); YANG, Ziqin (IMP CAS)

**Session Classification:** Hot Topic Session