17th International Conference on RF Superconductivity
Whistler Conference Centre
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Main and Sub-classifications

Explanation Table for Main and Sub-Classification - Table 1a

Topic	Sub-Topic	Description
Projects/Facilities - Progress	Ongoing incremental improvements	Recent progress at on-going SRF accelerator facilities
	Upgrade plans/status	Upgrades at existing SRF accelerator facilites - plans and status
	Funded facilities - progress report	Funded projects in progress - status report
	Operational Experience from Existing Facilities	Existing SRF accelerator facilities - operational experience
New Proposals	Electron linacs	New proposals or concepts for SRF e-linacs
	Hadron linacs	New proposals or concepts for SRF proton/ion linacs
	Storage rings	New proposals or concepts for SRF storage rings
	ERLs	New proposals or concepts for SRF ERLs
	Compact accelerators - applied	New proposals or concepts for SRF industrial/medical SRF linacs
	Other	New proposals for new concepts/applications
Fundamental SRF R&D - Bulk Nb	Theory	Advances in fundamental SRF bulk Nb theory including new models and simulations
	Large/Single Grain	Advances in understanding the role of large grain or single grain bulk Nb material on performance
	Field-dependence	Advances in understanding field dependent performance effects (LFQS, MFQS, HFQS) including their frequency dependence
	Thermal Studies	Advances in understanding the role of thermal effects including temperature gradients through transition and speed of cooldown
	Flux trapping	Advances in understanding the role off flux trapping in reduced cavity performance and mitigation strategies
	Quenches	Advances in understanding the causes of quench and mitigation strategies.
	Processing studies (doping, heat treatment)	Advances in understanding the role of doping and various heat treatments from 120 baking to degassing to annealing and others
	Material Studies	Advances in understanding bulk niobium material properties as used in SRF cavities including forming, welding, processing through material characterization studies
	Multipacting/ Field emission theory	Advances in understanding of multi-pacting or field emission
Fundamental SRF R&D - Other materials	Nb coatings and films	Advances in development of Nb coatings and films
	Non-niobium films	Advances in development of non-Nb coatings and films
	Thin films theory	Advances in fundamental SRF thin film theory including multi-layer
	Multi-layer coatings	Advances in development of multi-layer films
	Sample testing diagnostics	Sample testing equipment and results including rf characterization

Explanation Table for Main and Sub-Classification - Table 1b

SRF Technology - Cavity	Elliptical design	Design studies for elliptical cavities including HOM suppression
	Non-elliptical design	Design studies for non-elliptical cavities including QWR, HWR, Spoke and CH cavities
	Elliptical fabrication	Fabrication experience/optimization for elliptical cavities including material testing, welding/forming studies, ingot Nb cavities
	Seamless technology	Fabrication through seamless techniques including hydro-forming and spinning
	Non-elliptical fabrication	Fabrication experience/optimization for non-elliptical cavities including frequency stack-up control, weld preps, materials
	Elliptical performance	Performance results from elliptical cavities including production statistics, vertical test vs string tests
	Non-elliptical performance	Performance results from non-elliptical cavities including production statistics, vertical vs string tests
	Cavity testing diagnostics	Diagnostics developed for better understanding of cavity performance including Temperature mapping, second sound, Field Emission detection
	Deflecting mode cavities	Design, fabrication, performance of deflecting mode cavities.
	SRF gun cavities	Design, fabrication, performance of SRF gun cavities.
	Specialty cavities	Design, fabrication, performance of specialty cavities ad novelty cavities including photonic band gap (PBG) structures
SRF Technology - Processing	Frequency tuning	Methods of achieving the goal frequency after fabrication including plastic deformation, custom etching, virtual welding
	Surface treatments	Methods of surface treatment including electro-polishing, Buffered chemical polishing, Eco-chemistry, centrifugal barrel polishing, plasma etching
	Heat treatments	Methods and results from various heat treatments including doping
	Cleaning	Methods for cleaning cavities including high pressure water rinsing, steam cleaning, plasma cleaning and dry-ice cleaning
	Assembly	Methods of clean final assembly including diagnosistic techniques for high performance in vertical tests and strings
SRF Technology - Ancillaries	Tuner	Design, fabrication and performance of tuners
	HOM Coupler/Damping	Design, fabrication and performance of HOM couplers and HOM dampers
	Power Coupler	Design, fabrication and performance of fundamental power couplers and antennas
	LLRF	Design and performance of SRF LLRF systems including microphonic suppression
	De-tuning suppression/damping	Design and performance for suppression of cavity detuning including active and pasive damping
SRF Technology - Cryomodule	Designs and prototyping	Designs and prototyping experience for cryomodules for various applications including high/low beta, cw/pulsed, single/multi cavity, test facility/linac
	Magnetic Materials/Shielding/SC solenoid	Characterization of magnetic materials, magnetic shielding methods both from background fields and from magnetic components internal to the cryomodule and testing results
	Diagnostics	Research and development of diagnostics for assembly into cryomodules
	Assembly techniques	Assembly techniqies and experience of cryomodules particularly for high quality and/or large scale production
	CM infrastructure/test facilities	Infrastructure development for cryomodule assembly and testing