

Working Groups for November 2012 TTC Meeting @ Jefferson Lab

WG-1 **Conveners**

Y.He (Asia), R. Laxdal (America), S. Bousson (Europe)

SRF systems and components for high-intensity or CW beam operation

Scope Several projects of high intensity hadron linear SCRF accelerators around the world are in operation, construction or design. They involve many forms of SRF cryomodules based on a variety of low, medium and high beta superconducting RF resonators designed to withstand long pulse or CW beam operation. Working Group n°1 should organize a review and a discussion about the recent designs and the recent developments, based on experimental results on cavity RF tests, problems and technical solutions for cavity fabrication, coupler and tuner limitations, cryomodule assembly and RF performance. WG-1 should also be opened to neighboring topics like experience in low-beta machine operation and upgrades, cold RF measurements and coupler test benches, or other CW applications.

WG-2 **Conveners**

Y. Yamamoto (Asia), G. Ciovati (America), D. Kostin (Europe)

High gradient and high Q0 cavity developments

Scope The ability to establish high accelerating fields during long or CW pulses at affordable cooling power, is the root of the success of the accelerator SRF technology. Improving the performance of SCRF cavities is a longstanding and continuous objective of the TTC which encompasses understanding the physics of SRF surfaces, the design of RF resonators, the techniques for cavity fabrication and preparation, the surface investigation devices and the instrumentation at test facilities, etc... Working Group n°2 should aim at continuing this investigation by reviewing and discussing the current trends and experimental results obtained in the past year. WG-2 should also be opened to neighboring topics in the area of cavity performance and RF instrumentation.

WG-3 **Conveners**

E. Kako (Asia) , M. Liepe (America), P. McIntosh (Europe)

Developments of specialized cavity systems

Scope New applications of the SRF technology have led to the recent and innovative development of specialized cavity systems which still require design, R&D and prototyping work in order demonstrate their promises, notably SCRF guns, SRF systems for ERLs and, transverse deflecting cavities (crab cavities). WG-3 should aim at reviewing the progress in this innovative field of research by presenting the most recent design optimizations, R&D realizations and prototyping results. WG-3 should also be opened to neighboring topics presenting a similar character of innovation.

Session 8: WG-4 **Conveners**

H. Hayano (Asia), J. Preble (America), R. Garoby (Europe)

Towards cost-effective SRF - in both construction and operation

Scope Containing or reducing the cost of SRF technology is a key to its application to large accelerators, and even to small facilities. In the continuity of WG-3 at TTC 2011 in Beijing which discussed potential ways to reduce cryogenic power and cryogenics cost, Working Group n°4 should attempt to review and evaluate ways to moderate the cost of the superconducting RF accelerators, including the RF sources and cryogenics. This includes:

- a) the fabrication costs of SRF components, in small or large series
- b) the operation costs of the SC RF accelerating systems
- c) the potential for energy savings and energy recovery.

WG-4 should also be opened to neighboring topics like industrialization, or the impact of pressure vessel directives.