***Meeting Minutes***

***109th SRF R&D Meeting***

**Date:** Wednesday, January 11th, 2022

**Participants:** Wolfgang, Jonas, Cem, Ricardo, Karol, Marc, Arti, Birte, Denis, Jacek, Mateusz, Detlef

**Slides:** All presentations and the meeting minutes are available on INDICO

<https://indico.desy.de/indico/category/422/>

**I Status**

Sample Furnace (Rezvan):

After power cut the furnace is operational again

Next: Rezvan will do sample runs until next week; mid of next week CB and Daniel will do the run of a Cu plug for gun cavities

Subsequently the upgrade will start; components partially arrived

- Uni-furnace (Wolfgang + Marc)

furnace in commissioning runs; RGA is improving, but still CH signature is observed

samples in SEM show no carbides

For Isabel Tc(Theiz) scans have been done => analysis just started

in week 6 the vendor will come again; cryopump is not connected yet

HiGrade-Lab (Marc)

Clearance started incl. various transports of cavities and shelves;

Q: Birte about future of OBACHT, A: Marc is operational in manual mode, A Detlef: requires more person power, to be discussed within MSL

QPR (Ricardo):

measurement of QPR with BCP'ed sample took place in 3rd mode incl. variation of T and H

limitation at low magnetic fields and high losses most probably by sample (Q-disease)

Detlef: preparation with D3 for exchange of amplifier started => hopefully possible in 1-2 weeks

Ricardo will present his results in separate meeting

Thermal conductivity (CEM)

Measuring cell test done together with QPR test successful => agreement of thermal conductivity at low T's; deviation around 4.3K with instable bath temperature; possibly already in gas regime and film boiling limit achieved

Detlef: no defined conditions during filling the cryostat, better use 3.5K, which is starting point of Q(T)

B-Mapping system (Jonas)

5 out 6 boards after milling received and ok; 1 board requires additional repair

10 boards for controller exchange at ZE

23 cables are checked: 22 ok; 1 with short and to be replaced

analysis of magnetic hygiene checks:

i) Bartington box shows high noise in sensitivity "1" level; no problem in sensitivity"10" level typically used

Detlef: check by Carsten? exchange of Bartington box?

ii) 1 channel shows bouncing/chattering in low sensitivity range => probably relais problem

next: again check with Insert 2 tomorrow

AOB:

Birte: 16G9 + 16G10 optical inspection is nearly ready; information of Daniel for preparation of tuning tomorrow morning

Detlef: only one insert of next single-cell tests after furnace treatment => slow progress; use cluster for gun 16G8, 1RI01 after EP at RI, baseline of 1DE20 + 1DE17 after 300C/3h

Detlef: Next Nb furnace runs decided for partial pressure operation incl. N-infusion

Next meeting:

Discussion about subsequent Nb furnace runs

Posters for SRF23

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| **Abbreviations:** Christopher Bate (CB), Serena Barbanotti (SB), Thorsten Büttner (*TB*), Getnet Deyu (GD), Alexey Ermakov (AE), Lukas Ebeling (LE), Rezvan Ghanbari (RG), Isabel Gonzales (IG), Vladimir Gubarev (*VG*), Birte van der Horst (*BvdH*), Wolfgang Hillert (WH), Jens Iversen (*JI*), Kay Jensch (*KJ*), Daniel Klinke (DaK), Denis Kostin (*DK*), Ricardo Monroy-Villa (RMV), Carsten Müller (*CMu*), Andrea Muh (*AM*), Detlef Reschke (*DR*), Helmut Remde (*HR*), Jörn Schaffran (*JSch),* Manuela Schmökel (*MS*), Jacek Sekutowicz (*Jacek*), Lea Steder (*LS*), Nicolai Steinhau-Kühl (*NSK*), Alexey Sulimov (*ASu*), Jan-Hendrik Thie (*JHT*), Lennart Trelle (LT), Elmar Vogel (*EV*), Nicholas John Walker (*NJW*), Hans Weise (*HW*), Marc Wenskat (*MW*), Mateusz Wiencek (*MWi*), Jonas Wolff (JW)  | **Abbreviations:** Andrea Bellandi (ABe), Christopher Bate (CB), Serena Barbanotti (SB), Reinhard Brinkmann (*RB*), Thorsten Büttner (*TB*), Arti Dangwal-Pandey (*ADP*), Alexey Ermakov (AE), Lukas Ebeling (LE), Isabel Gonzales (IG), Vladimir Gubarev (*VG*), Birte van der Horst (*BvdH*), Wolfgang Hillert (WH), Jens Iversen (*JI*), Kay Jensch (*KJ*), Daniel Klinke (DaK), Denis Kostin (*DK*), Youfeng Liu (YL), Lutz Lilje (*LL*), Chen Luo (CL), Ricardo Monroy-Villa (RMV), Carsten Müller (*CMu*), Andrea Pörschmann (*AP*), Detlef Reschke (*DR*), Helmut Remde (*HR*), Kay Rehlich (KR), Jörn Schaffran (*JSch),* Manuela Schmökel (*MS*), Jacek Sekutowicz (*Jacek*), Sven Sievers (SSv), Guilherme Semione (*GS*), Lea Steder (*LS*), Nicolai Steinhau-Kühl (*NSK*), Alexey Sulimov (*ASu*), Jan-Hendrik Thie (*JHT*), Elmar Vogel (*EV*), Nicholas John Walker (*NJW*), Hans Weise (*HW*), Marc Wenskat (*MW*), Mateusz Wiencek (*MWi*)  |

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