## December 3rd, 2019

Donnerstag, 28. November 2019 08:30

- Protocol			Nr.: Dec. 3rd, 2019 , 14:00 – 16:00		
Machine Meeting (MM)				Chair: M. Bai	
Distribution	Machine coordinators and their d	eputies, departments leader	s accelerator, participants,		
	Management board		· · · · · · · · · · · · · · · · · · ·		
Participants					
Magda Gorska Timo Dickel	Attendees				
Mario Bevcic	🗹 Stephan Reimann	Markus Vossberg			
Dirk Acker Thomas Stoehlker	Ralph Hollinger	Klaus Tinschert			
Momme Kreutz		Eabio Maimone			
	✓ Lars Groening	Sascha Mickat			
	Gerald Schreiber	Bernhard Schlitt			
	Markus Steck	<ul> <li>Danyal Winters</li> <li>Sergey Litvinov</li> </ul>			
	🗹 Frank Herfurth	Zoran Andelkovic			
	Christina Dimopoulou	Jon Roßbach Regina Heß			
	✓ Winfried Barth	<ul><li>S. Yaramychev</li><li>✓ Hartmut Vormann</li></ul>			
	Gertrud Walter	Kalliopi Dermati Markus Romig Stephan Teich			
	🗹 Udo Weinrich				
	D. Serverin				
	M. Sapinski	✓C. Hessler			
	Peter Spiller	🖌 Jens Stadlmann			
	Markus Schwickert				
		*Types: A = Act	ion, D = Decision, I = Information		
Important: I = Information D = Decision AI = Action Item				Confidentiality Notice It is requested not to scatter the protocols over the predetermined distribution circle or leave them on the publicly available printers.	
1	Agenda				
1	1. Approval of meeting minutes: 5r 2. Follow-up of open action items: 1. status of spare parts of the		ann/W. Barth		
2	3. Status update and others Update				
-	Engineering run status: http://ind	ico.gsi.de/event/9728/contr	ibution/13/material/slides/0.pot	x	
	Engineering run plan is now updat http://indico.gsi.de/event/9728/c Currently, beam availability is 35% No major technical issues for SIS18 controls) has become really critica established	ım.			
	Outstanding issues: • UH4 vacuum is under close observation. So far, has been stable • trimming latency of up to 1min (FAIR controls) has become really critical				
	Ion Source status: no report Working on establishing uranium beam from terminal North for the engineering run				
	UNILAC status:http://indico.gsi.de/event/9728/contribution/13/material/poster/0.pdf HSI-RFQ:				

HSI-RFQ:

		RF conditioning status: about 7.25 Volts reached, but reflected power now reaches 60kW RF commissioning ongoing, incl. A4 (max. 7.2 V), will not be ready for uranium before tomorrow. SIS18 will be setup with uranium 68+ upto A3 energy		
SIS18 status: http://indico.gsi.de/event/9728/contribution/6/material		SIS18 status: <a href="http://indico.gsi.de/event/9728/contribution/6/material/slides/1.pptx">http://indico.gsi.de/event/9728/contribution/6/material/slides/1.pptx</a> re-establish the MMTI, a function that was operational with the old controls		
The status of the e-septum for slow extraction will be reported to the next MM due to the constrain. The slide is at <u>http://indico.gsi.de/event/9728/contribution/6/material/slides/0.pptx</u>				
	HEST status: no report LSA database problems			
		Bernd Schlei is responsible for uploading the LSA database		
		FRS status: no report No major issues		
		ESR status:http://indico.gsi.de/event/9728/contribution/7/material/slides/0.pdf Many progresses made: various beam manipulations including beam stacking, RF capture, tune		
		measurements, etc. Currently, working on establishing decelerated Ar18+ at CRYRING injection energy Continue deceleration with Ar beam. Foreseen no beam tomorrow due to Uranium setup. FRS at the moment plans to have uranium beam asap as primary beam.		
		Action: Coordination among FRS, ESR and HKR after MM. Agreement/plan will be available to Olog		
	Issues: beam horizontal profile monitor not yet working. Action: Timo(BEA) is checking the MCP. Waiting for the opportunity			
		<b>CRYRING status:</b> <u>http://indico.gsi.de/event/9728/contribution/1/material/slides/0.pptx</u> Encouraging progress made with e-cooler Lhe level in the Dewar. Reached for the 1st time measurable level until yesterday.		
		Currently bake out for preparation for receiving beam from ESR		
		Postmortem report of the latest VAC incident can be found at $\underline{link}$		
		<b>PSU status:</b> http://indico.gsi.de/event/9728/contribution/12/material/slides/0.pdf Internal technical review was held on Nov. 25. APO is leading the Summary report of the review findings and action items.		
		cw-LINAC status: http://indico.gsi.de/event/9728/contribution/9/material/slides/0.pptx No major issues		
	3	Discussion		All
		Status of spare parts of the UNILAC IH section: H. Vormann/W. Barth		
		slides can be found in the UNILAC status http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and		
		slides can be found in the UNILAC status <u>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx</u> and <u>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx</u> . In short,		
		slides can be found in the UNILAC status http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and		
		<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on</li> </ul>		
		<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This</li> </ul>		
		<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> </ul>	LAC/OPE	
		<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items:     <ul> <li>close to the end of Engineering run</li> </ul> </li> </ul>		
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> <li>o carry out the power measurements of HSI RFQ</li> <li>re-install the phase probe</li> <li>prepare the available spare parts</li> </ul> </li> </ul>	LAC/OPE LINAC RF Momme Kreutz (VAC)	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> <li>o carry out the power measurements of HSI RFQ</li> <li>re-install the phase probe</li> </ul> </li> </ul>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D.	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> <li>carry out the power measurements of HSI RFQ</li> <li>re-install the phase probe</li> <li>prepare the available spare parts</li> </ul> </li> <li>Open Action items <ul> <li>FAIR Booster mode status: R. Baer, D. Ondreka (TBD)</li> </ul> </li> </ul>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D. Ondreka	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> <li>o carry out the power measurements of HSI RFQ</li> <li>re-install the phase probe</li> <li>prepare the available spare parts</li> </ul> </li> </ul>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D.	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> </ul> </li> <li>Open Action items phase probe</li> <li>prepare the available spare parts</li> </ul> <li>Open Action items 1. FAIR Booster mode status: R. Baer, D. Ondreka (TBD)</li> <li>Provide a list of planned controls release and changes in 2020-2021 along with their potential impact and effect on the GSI exisiting facilities and systems such as beam instrumentation, power</li>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D. Ondreka	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> </ul> </li> <li>Action items: <ul> <li>close to the power measurements of HSI RFQ</li> <li>re-install the phase probe</li> <li>prepare the available spare parts</li> </ul> </li> <li>Open Action items <ul> <li>FAIR Booster mode status: R. Baer, D. Ondreka (TBD)</li> </ul> </li> <li>Provide a list of planned controls release and changes in 2020-2021 along with their potential impact and effect on the GSI exisiting facilities and systems such as beam instrumentation, power convertor etc</li> </ul> <li>Status report on the SIS18 electrostatic septum, in particular 1) clarify the designed and measured strength of existing electrostatic septum in terms of beam rigidity 2) project plan of the new electrostatic septum that can fulfill the needs of slow extraction of 18Tm beam</li>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D. Ondreka Ralph Bär	
	4	<ul> <li>slides can be found in the UNILAC status</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/0.pptx and</li> <li>http://indico.gsi.de/event/9728/contribution/4/material/slides/1.docx. In short,</li> <li>The RF coupling loop for IH2 is recently vacuum tested and leak was found. Nevertheless, the IH1 coupling loop can be used even it is a bit longer than the other one</li> <li>triplet lens in the IH2 spare was found and un-boxed. Surface shows rusty and needs to be copper polished if not copper plated. To replace the current lens with this spare one takes 2-3 weeks, estimated by Mario</li> <li>No end plate spares were found</li> <li>Winfried proposed to excercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au. This could cause the vacuum run away again if there is the leak. On one hand it is good to confirm the situation, on the other hand depending on where the leak is, there could be significant impact on the beam time 2020.</li> <li>Action items: <ul> <li>close to the end of Engineering run</li> <li>exercise the IH2 with the operation conditions required for 2020, i.e. 50Hz Au</li> <li>o carry out the power measurements of HSI RFQ</li> <li>o re-install the phase probe</li> <li>prepare the available spare parts</li> </ul> </li> <li>Open Action items <ul> <li>I. FAIR Booster mode status: R. Baer, D. Ondreka (TBD)</li> </ul> </li> <li>Provide a list of planned controls release and changes in 2020-2021 along with their potential impact and effect on the GSI existing facilities and systems such as beam instrumentation, power convertor etc</li> <li>3. Status report on the SIS18 electrostatic septum, in particular 1) clarify the designed and measured strength of existing electrostatic septum, in terms of beam rigidity 2) project plan of the new electrostatic septum that can fulfill the needs of slow extraction of 18Tm beam 1. Dec. 10, 2019</li> </ul>	LAC/OPE LINAC RF Momme Kreutz (VAC) Hartmut Ralph Bär/D. Ondreka Ralph Bär Peter Spill/J. Stadlmann	

5. IQS archiving system: how it works and status	RH/Barbara	
6. Postmortem report on the topic of current controls related issues, in particular the issue that blocked beam injection into SIS18 at the beginning of the Engineering Run template can be found at https://www.gsi.de/fileadmin/Beschleunigerbetrieb/PostMortemAnalysisReport_Template.docx	Jens	
7. PostMortem report on the UNILAC IH vacuum issues	Winfried Barth	
Any other business		
<u>Next Machine Meeting:</u> 10. Dezember 2019 - 14:00-15:30 Uhr		