



 – Protocol		Nr.: Jan 7, 2020, 14:00 – 15:30																																										
Machine Meeting (MM)		Chair: M. Bai																																										
Distribution	Machine coordinators and their deputies, departments leaders accelerator, participants, Management board																																											
Participants																																												
	<p><u>Attendees</u></p> <table border="1" data-bbox="376 472 850 1088"> <tr> <td><input type="checkbox"/> Stephan Reimann</td> <td><input checked="" type="checkbox"/> Markus Vossberg</td> </tr> <tr> <td><input type="checkbox"/> Ralph Hollinger</td> <td><input type="checkbox"/> Klaus Tinschert</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> Fabio Maimone</td> </tr> <tr> <td><input type="checkbox"/> Lars Groening</td> <td><input checked="" type="checkbox"/> Sascha Mickat</td> </tr> <tr> <td></td> <td><input type="checkbox"/> M. Kaiser</td> </tr> <tr> <td><input type="checkbox"/> Gerald Schreiber</td> <td><input type="checkbox"/> Bernhard Schlitt</td> </tr> <tr> <td></td> <td><input type="checkbox"/> A. Schnase</td> </tr> <tr> <td><input checked="" type="checkbox"/> Markus Steck</td> <td><input type="checkbox"/> Danyal Winters</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Sergey Litvinov</td> </tr> <tr> <td><input checked="" type="checkbox"/> Frank Herfurth</td> <td><input type="checkbox"/> Zoran Andelkovic</td> </tr> <tr> <td><input type="checkbox"/> Christina Dimopoulou</td> <td><input type="checkbox"/> Jon Roßbach</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Regina Heß</td> </tr> <tr> <td><input type="checkbox"/> Winfried Barth</td> <td><input type="checkbox"/> S. Yarmychev</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Hartmut Vormann</td> </tr> <tr> <td><input type="checkbox"/> Gertrud Walter</td> <td><input type="checkbox"/> Kalliopi Dermati</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Markus Romig</td> </tr> <tr> <td><input type="checkbox"/> Udo Weinrich</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> D. Severin</td> <td></td> </tr> <tr> <td><input type="checkbox"/> M.Sapinski</td> <td><input checked="" type="checkbox"/> C.Hessler</td> </tr> <tr> <td><input checked="" type="checkbox"/> Peter Spiller</td> <td><input checked="" type="checkbox"/> Jens Stadlmann</td> </tr> <tr> <td><input type="checkbox"/> Markus Schwickert</td> <td></td> </tr> </table> <p style="text-align: right;">*Types: A = Action, D = Decision, I = Information</p>	<input type="checkbox"/> Stephan Reimann	<input checked="" type="checkbox"/> Markus Vossberg	<input type="checkbox"/> Ralph Hollinger	<input type="checkbox"/> Klaus Tinschert		<input checked="" type="checkbox"/> Fabio Maimone	<input type="checkbox"/> Lars Groening	<input checked="" type="checkbox"/> Sascha Mickat		<input type="checkbox"/> M. Kaiser	<input type="checkbox"/> Gerald Schreiber	<input type="checkbox"/> Bernhard Schlitt		<input type="checkbox"/> A. Schnase	<input checked="" type="checkbox"/> Markus Steck	<input type="checkbox"/> Danyal Winters		<input type="checkbox"/> Sergey Litvinov	<input checked="" type="checkbox"/> Frank Herfurth	<input type="checkbox"/> Zoran Andelkovic	<input type="checkbox"/> Christina Dimopoulou	<input type="checkbox"/> Jon Roßbach		<input type="checkbox"/> Regina Heß	<input type="checkbox"/> Winfried Barth	<input type="checkbox"/> S. Yarmychev		<input type="checkbox"/> Hartmut Vormann	<input type="checkbox"/> Gertrud Walter	<input type="checkbox"/> Kalliopi Dermati		<input type="checkbox"/> Markus Romig	<input type="checkbox"/> Udo Weinrich		<input checked="" type="checkbox"/> D. Severin		<input type="checkbox"/> M.Sapinski	<input checked="" type="checkbox"/> C.Hessler	<input checked="" type="checkbox"/> Peter Spiller	<input checked="" type="checkbox"/> Jens Stadlmann	<input type="checkbox"/> Markus Schwickert		
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Important: I = Information D = Decision AI = Action Item				
1	Agenda			
	1. Approval of meeting minutes 2. Follow-up of action items 3. Status update			
2	Update			
	<p>Engineering Run</p> <ul style="list-style-type: none"> • Highlights <ul style="list-style-type: none"> o Uranium beam was successfully re-established in the UNILAC and subsequently throughout the chain. o 1e9 uranium 68+ was successfully extracted from SIS18 o ESR successfully re-established stored and cooled beam in storage ring mode. In addition, Ar beam was successfully decelerated from 70MeV/u to 13MeV/u. o The decelerated Ar beam from ESR was successfully injected and circulated in the CRYRING o over 50% of beam studies were carried out, among which a handful of them are critically relevant to FAIR realization, such as beam instrumentation S.A.T. etc. • Remaining issues <ul style="list-style-type: none"> o UNILAC <ul style="list-style-type: none"> ▪ HSI RFQ not yet reached nominal u4+ level ▪ A4 wasn't available ▪ water leaks including the buncher in TK4 o SIS18 quadrupole power supply problem o ESR Stochastic cooling not yet re-established o CRYRING e-cooler o Overall controls and beam diagnostic issues <ul style="list-style-type: none"> ▪ very slow in making changes ▪ <i>This has been experienced through the chain. The colleagues hope this problem will be eradicated for the beam time 2021 and beyond</i> ▪ update of beam pattern still influences each other ▪ no archiving ▪ quite a number of blind spots, such as screen into the FRS beamline that took 8 hours to be found out and allow ESR to continue ▪ read back of actual values not available esp. for ESR <p>Operations status: https://indico.gsi.de/event/9837/contribution/14 Winter shutdown work started. Primarily repair and maintenance for upcoming Physics run. UNILAC RF conditioning</p>			

	<p>starts next week. Actions: update of the beam time planning to reflect actual situation</p> <p>Ion Source status: No report No issues at the comment. signed contract of 18GHz EZR MOU received shortly before Xmas Action: 1) update of the project status including budget spending 2) BH1 pump station project status (Roland Reich/Ralph Hollinger)</p> <p>UNILAC status: https://indico.gsi.de/event/9837/contribution/5 Newly discovered water leak on A4DR58 is outside vacuum. Expected to be fixed in-time Actions: Results of HSI RFQ RF measurement at the end of Engineering Run</p> <p>SIS18 status: https://indico.gsi.de/event/9837/contribution/7</p> <ul style="list-style-type: none"> Besides GAF works, the quadrupole power supply repair will be carried out to the extent not to impact upcoming beam time The unexpected long latency time of current FAIR control system was also an headache for the SIS18 tuning. The experience so far is some of the tunings with the same hardware now takes significantly longer time (30sec vs. 15 mins) <p>HEST status: No report No issues. Working progress for operation</p> <p>FRS status: No presence</p> <p>ESR status: https://indico.gsi.de/event/9837/contribution/6 For upcoming physics run, there are still a number of challenges ranging from unexpected long reaction time of the current control system to no operational beam instrumentation. The disappeared capability of being able to have the readback values of various devices also makes the machine setup even more painful</p> <p>CRYRING status: https://indico.gsi.de/event/9837/contribution/13 While both D+ and Ar have shown excellent to good beam lifetime, there is still not yet knowledge on how the heavy ion beams will perform. It is suspected that the lifetime of uranium beam will be much shorter. In combination with the current FAIR controls latency time, it is close to impossible to have any chance to tune the beam performance. This means the feasibility of fulfilling CRYRING experiments that require more than 1e7 uranium beam in 2020 is compromised.</p> <p>PSU status: https://indico.gsi.de/event/9837/contribution/11</p> <p>cw-LINAC status: No presence</p>			
3	Discussion		All	
	<ul style="list-style-type: none"> Critical systems https://sf.gsi.de/d/c441335eb0/  CriticalItem sListEmail  GSI_Facility _Criticalt... Mei reminded convenors the effort of collecting list of critical systems/components back in 2017. Giving the latest operation experience, she asked all MKs to help to develop the list so that we will have a more centralized data/knowledge to allow systematic, coherent and transparent planning <p>Action: work with the relevant technical groups, experts to develop the list of the critical systems/components with information of the existing status as well as the spare parts or other mitigation measures</p> <ul style="list-style-type: none"> Technical Requests  DAVE-Request_Dec2...  TVS-Request t Mei also informed convenors that two technical requests were submitted to COMM on Dec. 17. Will follow up with updates 	All MKs		
4	Open Action items			
	<ol style="list-style-type: none"> FAIR Booster mode status: R. Baer, D. Ondreka (TBD) 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 IQS archiving system: how it works and status 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 	Ralph Bär D. Ondreka Ralph Bär RH/Barbara Jens		

	Any other business			
	• <u>Next Machine Meeting:</u> January 14, 2020 - 14:00-15:30 Uhr			