

ESR Dry Run Status 9 October 2018

control of ring magnet power converter is possible:

but: so far never all ~ 55 power converters worked simultaneously

device control shows wrong status

no information of actual values

activity: reconfiguration of device control by SCUs

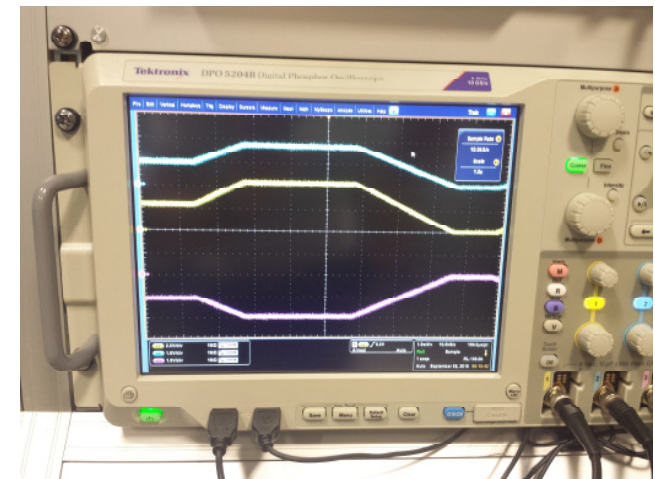
issue: reliability and reproducibility in synchrotron mode

control of electron cooler components

basic functionality, but reconfiguration is ongoing

various patterns were tested in synchrotron mode (prerequisite for deceleration)

details of injection synchronisation have not been tested yet



dipole and two quadrupoles
equipped with Hall probes

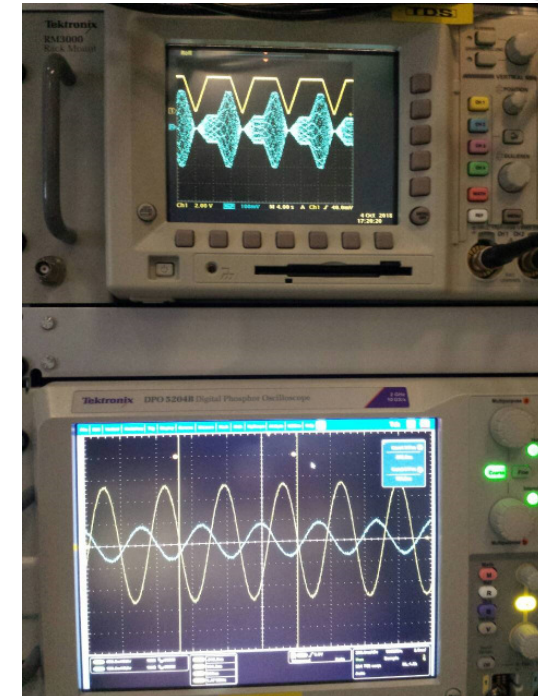
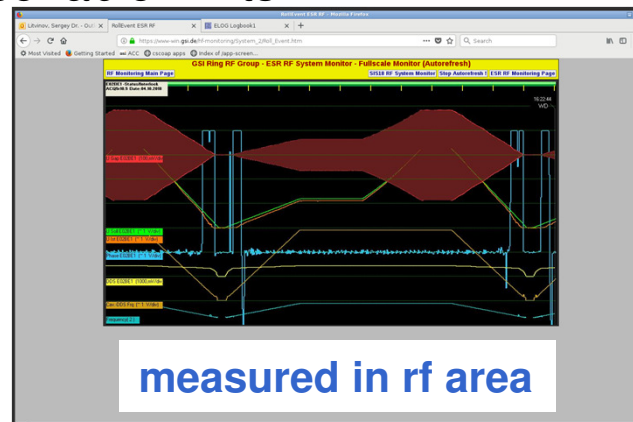
ESR Dry Run Status 9 October 2018

Control of rf cavity achieved

but: values so far do not have reasonable limit

activity: improve model to control/adjust rf parameters

issue: responsibility for reasonable limits



measured in MCR

Test of coupling of SIS and ESR timing system was successful

but: only ESR components were ramped

after the test unexpected errors in the timing system were observed

issue: coordination of ESR parasitic operation with main SIS user operation

ESR Dry Run Conclusions



Reliable operation and realistic information on the actual performance of the devices in the synchrotron mode has not been achieved yet, this is prerequisite for commissioning with beam and meaningful machine and controls development

Operating the ESR from LSA requires significant training time

Continuation of machine development in the first quarter of 2019 will depend on parasitic ESR operation (with minimum impact on SIS user operation)

In the worst case ESR development will be delayed to the end of 2019