


FAIR Project Status

RRB Meeting, 05th June 2023

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Technical Managing Director FAIR GmbH & GSI GmbH

Finland France Germany India Poland Romania Russia Slovenia Sweden United Kingdom Czech Republic

FAIR ACC & EXP Highlights (Part 1)

November 2022

Transport of the heavy first Cryo2 compressor units from Linde took successfully place.

November 2022

FAIR receives cryogenics center piece- “Cold Box” of the cooling system for the superconducting magnets.

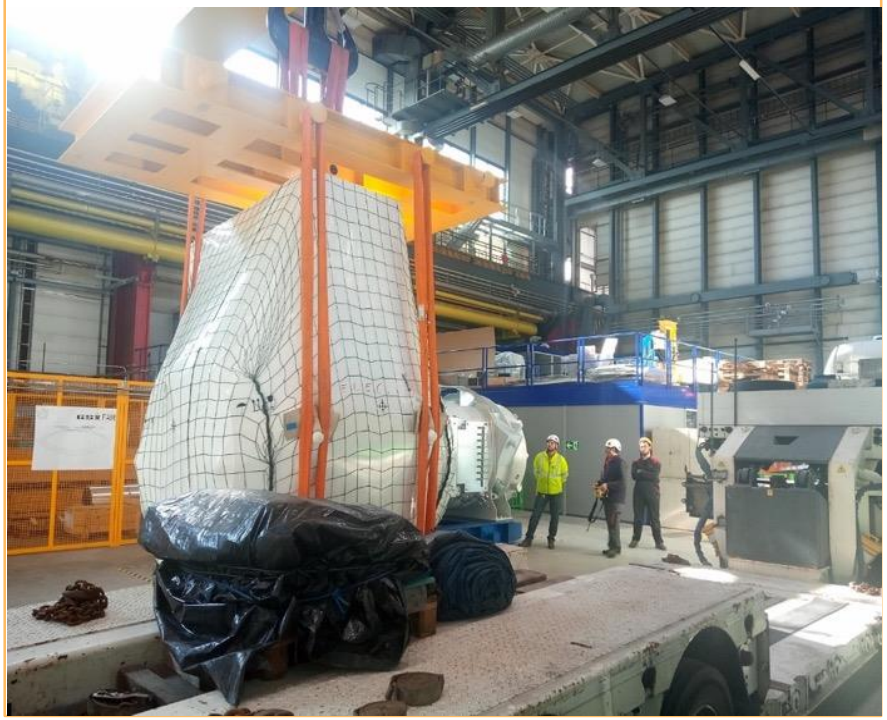
FAIR ACC & EXP Highlights (Part 2)

January 2023

The SFRS Super Conducting Long Mulitplet and dipole during test phase in the test facility at CERN.

February 2023

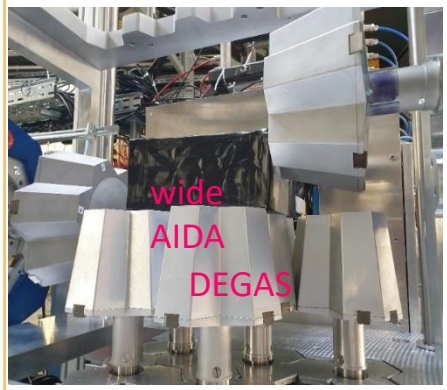
SFRS series Short Multiplet arrived at GSI/FAIR campus for storage.

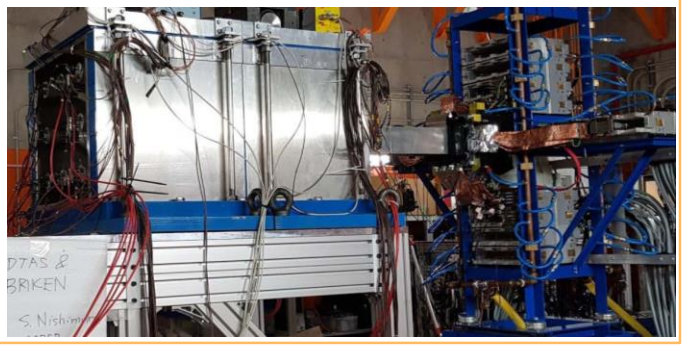


FAIR ACC & EXP Highlights (Part 3)

Q1 - 2023

NUSTAR - DESPEC set-ups prepared for Phase-0 and ready for ES/FS.





April / May 2023

Components of the Upstream Platform (Czech in-kind contribution to FAIR) have been delivered to FAIR and installed in the CBM cave.

FAIR Civil Construction Highlights (Part 1)

FAIR Civil Construction Highlights (Part 2)

FAIR Civil Construction Highlights (Part 3)

FAIR Civil Construction Highlights (Part 4)

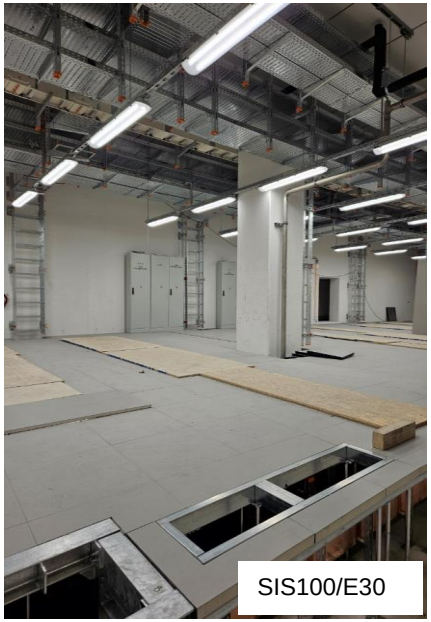
Construction Area South – Experiment Buildings

FAIR Civil Construction Highlights (Part 5)

SIS100 Tunnel – TBI Installation

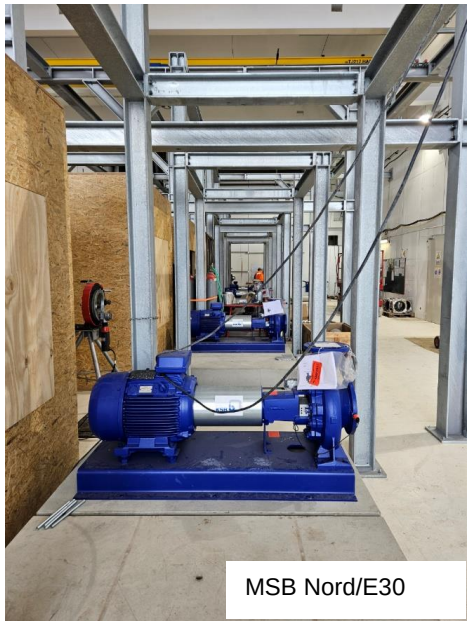
FAIR Civil Construction Highlights (Part 6)

SIS100 Tunnel + Main Supply Building – TBI Installation


SIS100/E30

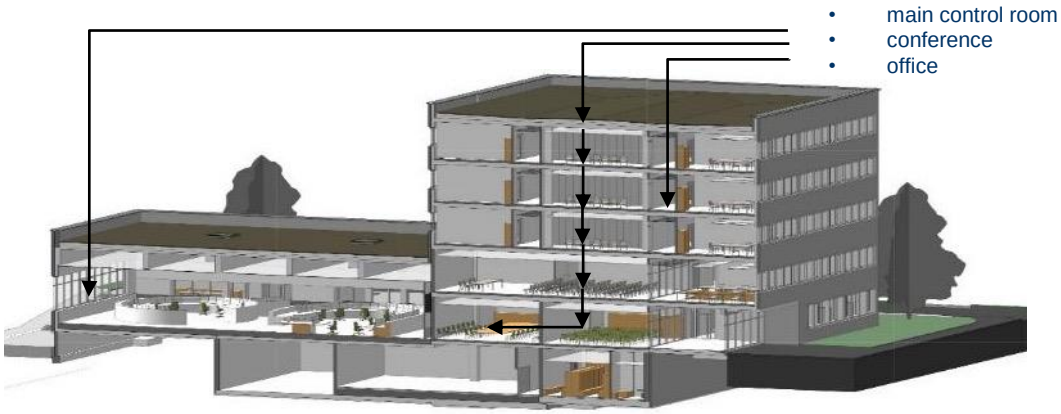

SIS100/E30


SIS100/E10


MSB Nord/E30

FAIR – GSI Campus Development Highlights

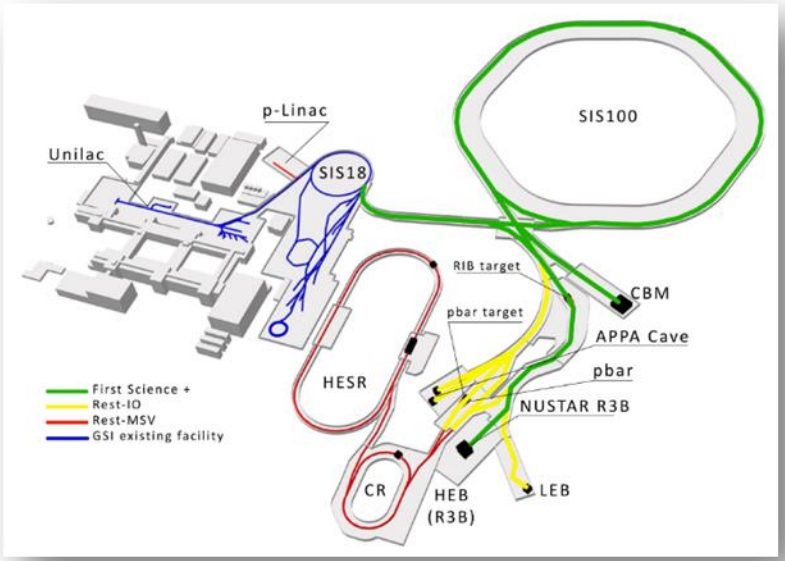
FAIR Control Center (FCC)



Campus Masterplan

FAIR- stepwise approach towards MSV

- Due to budget constraints a Scientific Review panel was tasked by the FAIR Council in 2022 to perform a “First Science and Staging Review of the FAIR Project”.
- The Scientific Review panel recommended in October 2022 that the scenario FS+ (SIS100, Super-FRS-HEB and CBM) would be the most appropriate starting scenario to achieve world leading science.
- FAIR Council decided on 9th & 10th March 2023 to proceed with FS and to make a further decision on FS+ in July 2023.



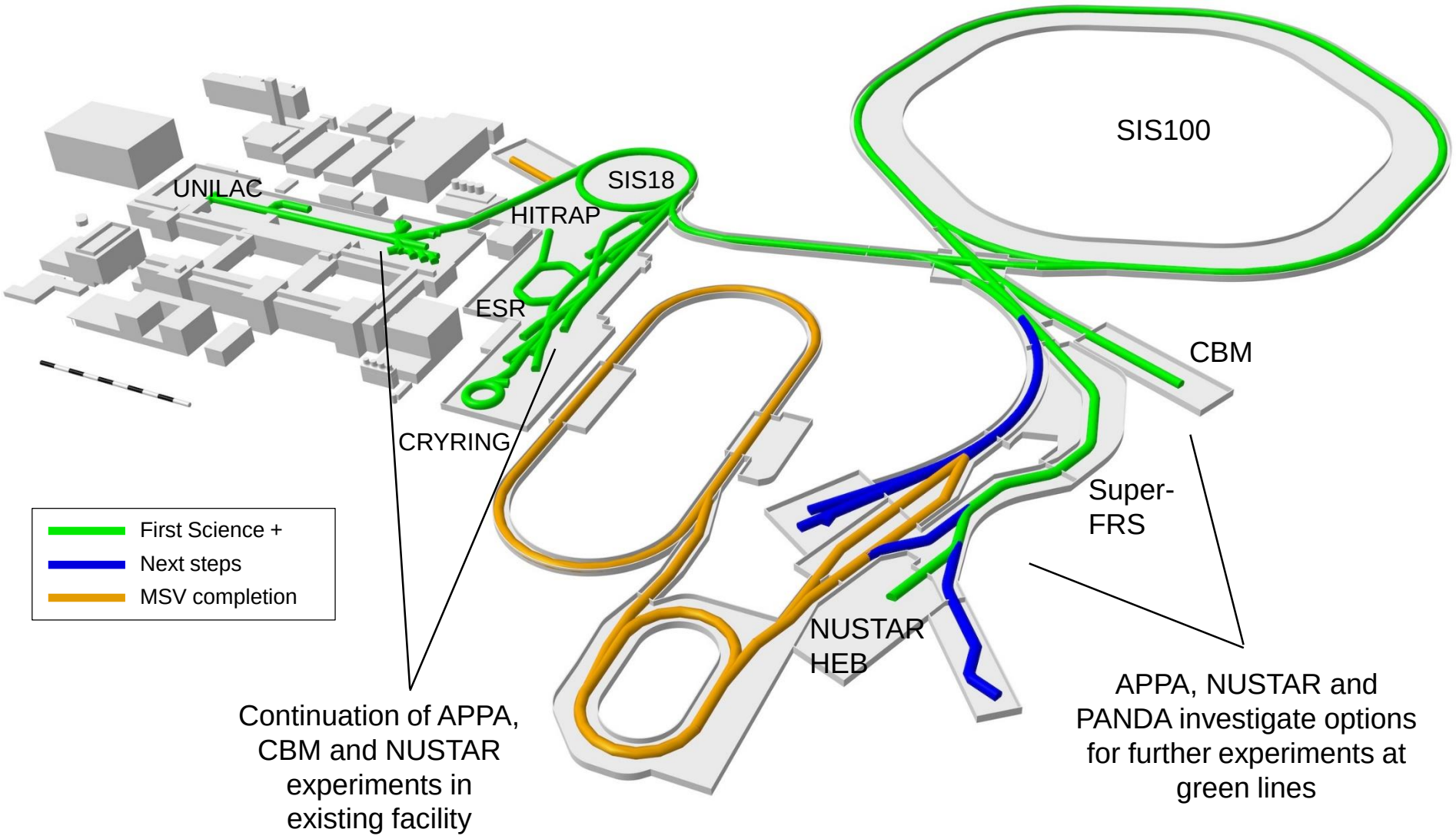
until 2028

after 2028

FAIR in 2028

- So, the „FAIR2028“ science program will include:
  - APPA experiments at the low-energy rings, at the caves at SIS18 and UNILAC, PHELIX and a limited set of experiments which could be hosted at the SIS100 caves
  - NUSTAR at the SFRS with SIS100 beams, plus SHE experiments at UNILAC and ILIMA at the low-energy rings
  - CBM at the new cave with SIS100 beams, and HADES at SIS18
- We will optimize our efforts towards optimum use of our resources and of the space in the new caves for these goals.
- For activities which will have beam only at a later stage, such as PANDA, suitable programs are being developed, when possible using the caves and beams available at GSI/FAIR.

FAIR 2028


SIS100
SIS18
UNILAC
HITRAP
ESR
CBM
CRYRING
Super-
FRS
NUSTAR
HEB
First Science +
Next steps
MSV completion
Continuation of APPA, CBM and NUSTAR experiments in existing facility
APPA, NUSTAR and PANDA investigate options for further experiments at green lines

FAIR Project - Summary and next steps

- Civil works for building shells are well in progress to be completed by end 2023
- Start of ACC installation in Q1-2024 for ES and FS is in preparation
- Re-baselining of the Project time schedule until 2028 is in finalization for approval by FAIR Council in July 2023
- Allocation of resources available from Freeze Projects to new assignments is in progress and will provide additional impact on achieving ES and FS Targets. Nevertheless the GSI-resource situation is extremely tight
- Full update of Costbook for First Science to be presented to IKMG for approval by FAIR Council in July 2023
- Replacement purchases for In-Kind components from Russia are in progress in line with time schedule to meet the 2027/28 deadlines
- Timely delivery of In-kind supplies from Poland, Germany and India is essential for the ES/FS time schedule
- Commissioning pre-budget need to be available from early 2024 onwards
- Non-German Shareholders are requested to bring their additional contributions to FAIR project in order to secure the execution of FS and enable the continuation towards FS+ and MSV

Thank you for your attention !