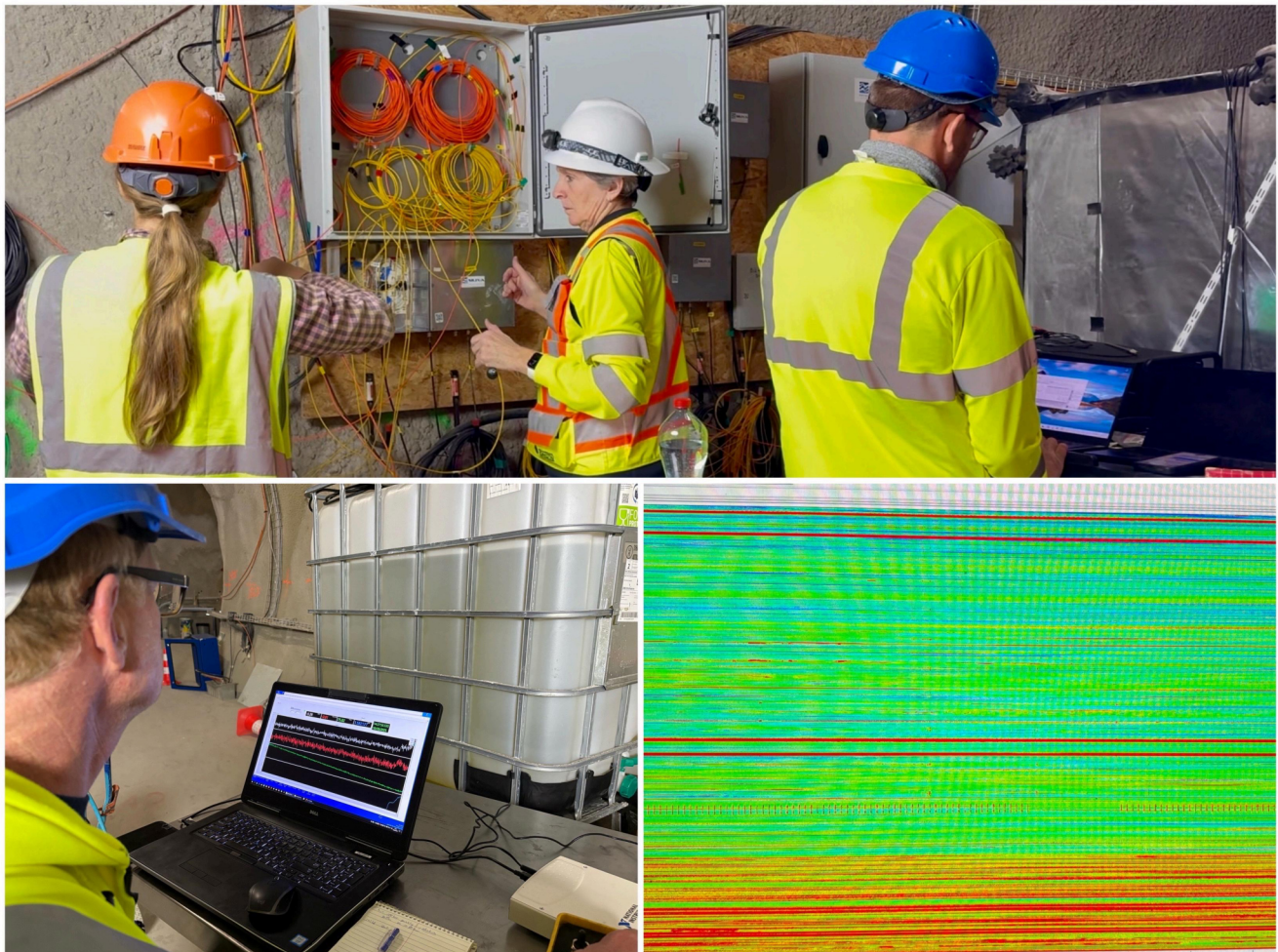
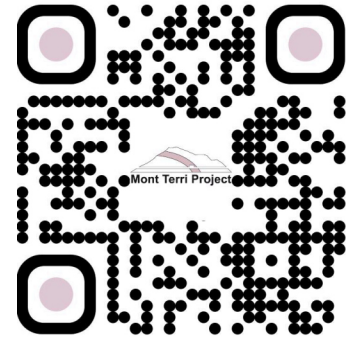


Mont Terri Project Underground Rock Laboratory

Report period: October 27, 2025 – November 2, 2025

Assembled and edited by swisstopo, St-Ursanne



Spotlight of the week: FS-B experiment: after 10 days of preparation, the constant flow into the main fault experiment finally started: from 14:28 to 16:28 water was injected at 40 m depth into BFS-B2 with a constant flow of 5 l/min. The pressure on the interval was at 60 bar whilst the packers were at 90 bar. During the injection all the data acquisition on the fibers (CASSM, iDAS, Terra15, Neubreuscope, Silixa DTS) were collecting (and continue to collect!) terabytes of data. After 90 minutes we observed a small flow out of the (previously filled) casing and the annulus of BFS-B16 - without connection between the two. After the analysis of all the experiment data we'll hopefully be able to understand what happened in the main fault during and after the injection (Fig. S. Schefer, swisstopo).

CD-A (Influence of Humidity on Cyclic and Long-Term Deformations) experiment

- On Friday, October 31, C. Etter and J. Bender (swisstopo) measured the lengths and the apertures of cracks in both twin niches to understand the cyclic deformation and possible deterioration of gallery walls.

CL (CO₂LPIE-CO₂ Long-Term Periodic Injection) experiment

- On Monday, October 27, J. Windisch (swisstopo) took sample #7 from the circulation interval.
- On Wednesday, October 29, C. Marion (eawag) prepared the gas monitoring for measurement. Measure were started to define the background gas concentrations in the monitoring intervals.
- On Wednesday, October 29, J. Gisiger and A. Jakupi (Solexperts) successfully connected the intervals BCL09_03, BCL11_01, BCL-11_02 and BCL-11_03 to the circulation cabinet. All monitoring loops are now connected and circulating.
- On Friday, October 31, D. Jaeggi took sample No8 from BCL9_I2. The sample volume was approximately 2 ml.
- On Friday, October 31, D. Jaeggi (swisstopo) took sample #8 from the circulation interval.
- On Friday, October 31, J. Gisiger (solexperts) came on site in order to increase the pressure of BCL-9_I3. The pressure was dropping after the connection of the interval. By means of an additional syringe pump the pressure was kept at 7.3 bar (actual quasi hydrostatic pressure) during approximately 1 hour. After disconnection of the pump, the pressure was rising again slightly in the interval.

FS-B (Imaging the Long-Term Loss of Faulted Host Rock Integrity) experiment

- On Monday, October 27, A. Rinaldi (ETHZ) configured two interrogators for the stimulation.
- On Monday, October 27, D. Zbinden (ETHZ) performed GPR inside the water filled boreholes BFS-B1 and BFS-B15 before the injection.
- On Monday, October 27, P. Cook (LBNL), A. Rinaldi (ETHZ) and S. Schefer (swisstopo) assembled the double packer for BFS-B2 and P. Cook tested the packers overnight (**Figure 1**).
- From Monday to Tuesday, October 27–28, M. Robertson, S. Glubokovskikh, P. Cook (LBNL) and V. Sobolevskaja (Rice University) together with the swisstopo team finalized the preparations for the injection (**Figure 2**).
- On Tuesday, October 28, P. Cook (LBNL) J. Bender and S. Schefer (swisstopo) lowered the double packer into BFS-B2 and P. Cook inflated the two packers.
- On Tuesday, October 28, from 14:28 to 16:28 water was injected at 40 m depth into BFS-B2 with a constant flow of 5 l/min. The pressure on the interval was at 60 bar whilst the packers were at 90 bar. The teams of LBNL, Rice university and swisstopo were all on site to ensure a scientific and safe injection.
- On Wednesday, October 29, P. Cook (LBNL), J. Bender and S. Schefer (swisstopo) installed the injection tube above BFS-B2 for the upcoming long-term injection (**Figure 3**).
- On Wednesday, October 29, P. Cook (LBNL), J. Bender and S. Schefer (swisstopo) removed the DORSA probe from BFS-B1.
- From Wednesday to Friday, October 29–31, P. Cook (LBNL) started the installation for the long-term injection that will start end of next week.
- On Wednesday, October 29, P. Cook (LBNL), J. Bender and S. Schefer (swisstopo) removed the piezoelectric probes from BFS-B13 and BFS-B14b and packed all the material for Rice University.
- On Thursday, October 30, D. Zbinden (ETHZ) performed GPR inside the water filled boreholes BFS-B1 and BFS-B15 after the injection to hopefully see a difference between the two measurements.

PF-A (Progressive Evolution of Structurally-Controlled Overbreaks: Long-term monitoring, hydromechanical simulation and rock testing) experiment

- On Wednesday, October 29, M. Ziegler (swisstopo) moved the seismic DAS from CL to PF-A to conduct active seismic transmission surveys. The transmissions were manually started.

SW-A (Large-Scale Sandwich Seal in Opalinus Clay) experiment

- On Thursday, October 30, F. Königer (ISU) replaced the computer for the Taupe sensors.
- On Thursday, October 30, S. Schefer (swisstopo) refilled the HPT of shaft 1.

Varia

- After four weeks of civil service, J. Bender has done his duty and continues to work in his normal job. We thank Joël a lot for all the support he gave us, especially with the FS-B experiment.

Visits

Day	Date	Group Name	Group Size	Visitors Guide
Mon	27.10.2025	Wengia Solothurn	18	R. Nicol (swisstopo)
Wed	29.10.2025	Obayashi, Shin Sato	12	C. Nussbaum (swisstopo) R. Nicol (swisstopo)
Fri	31.10.2025	Thales Simulation & Training AG	19	R. Nicol (swisstopo)

Figures



Figure 1: FS-B: Assembly of the packer system (S. Schefer, swisstopo).



Figure 2: FS-B: Soldering the last connection for the piezoelectric measures (S. Schefer, swisstopo).

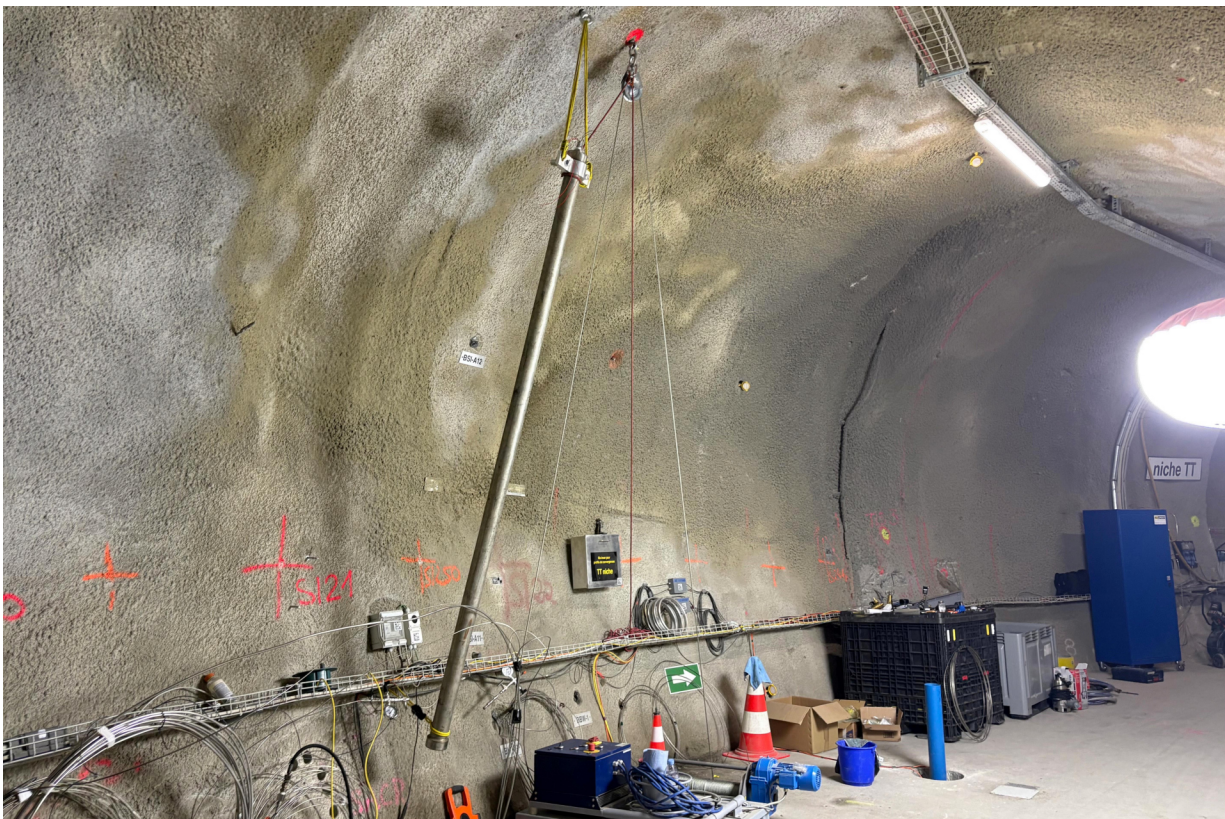


Figure 3: FS-B: Injection tube above BFS-B2 (S. Schefer, swisstopo).