

BPM electronics upgrade in the scope of SOLEIL II

Tuesday, 24 March 2026 10:55 (25 minutes)

SOLEIL II is the low emittance upgrade project for SOLEIL light source. Dark period is foreseen in October 2028 for a duration of 2 years (including commissioning time).

In this scope, it has been decided to anticipate the upgrade of the old BPM electronics to:

- Develop the commissioning tools on the new system and its final interfaces.
- Restart the new machine with an already validated and operational BPM system which is a key diagnostic for an efficient commissioning.

220 commercial Libera Brilliance Plus modules have been delivered at the end of 2025, and one cell of SOLEIL storage ring (7 BPMs) is already equipped with the new system.

The talk will focus on:

- The dedicated hardware and software developments that have been done by Instrumentation Technologies to fit SOLEIL requirements,
- The FAT and (ongoing) SAT results
- The strategy that is followed to upgrade such a critical system on an operational machine.

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Session Classification: Session