

## Prototyping and assembly experience for large scale cryomodule production

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As In-Kind contributor to the European-XFEL project, CEA is committed to the integration on the Saclay site of the 100 cryomodules (CM) of the superconducting linac as well as to the procurement of accelerator components, including 31 cold beam position monitors (BPM) of the cavity re-entrant type, magnetic shields and superinsulation blankets. The assembly infrastructure has been renovated from the previous Saturne Synchrotron Laboratory facility: it includes a 200 m<sup>2</sup> clean room complex with 112 m<sup>2</sup> under ISO4, 1325 m<sup>2</sup> of assembly platforms and 400 m<sup>2</sup> of storage area. In parallel, CEA has conducted industrial studies and three cryomodule assembly prototyping both aiming at preparing the industrial file, the quality management system and the commissioning of the assembly plant, tooling and control equipment. In 2012, the contract of the integration has been awarded to ALSYOM. This talk will present the challenges of the module integration from the preparation to the industrial phase taking into account the production acceleration started in January 2015.