

French contribution to the ESS instrumentation

Xavier FABREGES^{a*}

a. Laboratoire Léon Brillouin, CEA, CNRS, Université Paris-Saclay, CEA Saclay 91191 Gif-sur-Yvette France

* xavier.fabreges@cea.fr

The European Spallation Source (ESS [1]) is the next generation neutron source based on a linear protons accelerator. Currently in construction in Lund (Sweden), the source will be opened to external users in 2023. The initial instrument suite will be composed of 15 instruments covering most of the European scientific community needs in neutron scattering. Most of these instruments are built by European partners through an in-kind contribution.

In this context, France is involved in the construction of 6 instruments:

- 1) 3 diffractometers: MAGiC, DREAM and NMX
- 2) 2 spectrometers: CSPEC and BIFROST
- 3) 1 SANS: SKADI

An additional work package, covering the ESS needs for state of the art sample environment in low temperature, magnetic fields and high pressure is also under advanced discussions.

After a short introduction on the facility and its specificities, an overview of the French contribution will be presented with an emphasis on the new instrumental and scientific opportunities that will emerge from the source's high brilliance.

[1] <https://europeanspallationsource.se/science-instruments>

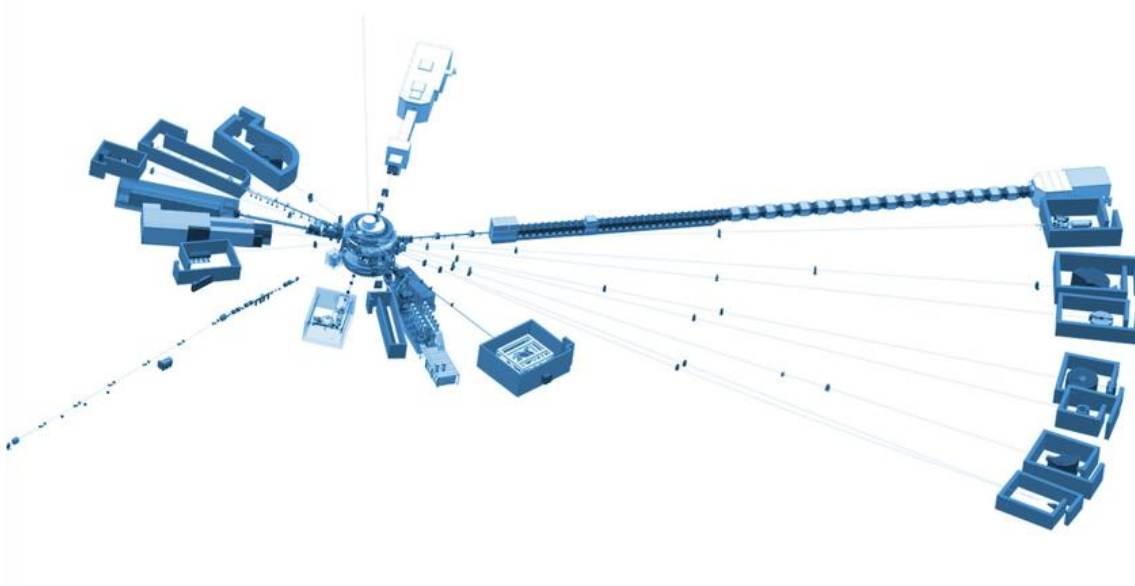


Figure 1: Artist's view of the ESS initial instrument suite at the horizon 2030. Instrument in which France is involved are colored in red.