



CSNS (China Spallation Neutron Source)

Official Website: <http://english.ihep.cas.cn/csns/>

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The spallation neutron source is always a large-scale scientific facility that reflects the comprehensive strength of a country's scientific and technological level, economic level and industrial level. It is also an advanced experimental platform for multi-disciplinary research. The China Spallation Neutron Source (CSNS) is the first pulsed neutron source facility in developing countries. Thus it is expected to have positive effects in promoting the development of fundamental sciences and technology.

CSNS locates at Dalang Town of Dongguan City, the heart of the Guangdong-Hong Kong-Macao Greater Bay Area. It includes a powerful linear proton accelerator, a rapid circling synchrotron, a target station and three Phase I neutron instruments. It aims to provide a powerful platform for both fundamental scientific research and high-tech development in many application fields, such as material science, life science, resource environment, and new energy.

Neutron scattering technology is widely used in physics, chemistry, life sciences, materials science and technology, resource environment, nanotechnology, etc. It is expected to achieve breakthroughs in important frontier research fields such as quantum regulation and high temperature superconductivity. The development of high-intensity proton accelerator technology also helps building a professional team with experiences in construction and operation of large-scale scientific facilities, which lays a solid foundation for applications such as developing proton therapy and accelerator-driven subcritical system (ADS).

CSNS has made a series of significant innovative technology achievements in particle accelerators, neutron target station and instruments, which has greatly enhanced the country's experience and innovation capability in related industrial technology, especially in fields like magnets, power supplies, neutron detectors and electronics. CSNS has also pushed forward research on high-intensity proton accelerators and neutron scattering in China.