

# The 2024 International Workshop on the High Energy Circular Electron Positron Collider

Contribution ID: 157

Type: **not specified**

## Intelligent special power supply service provider from Fulde Electronics

*Friday, 25 October 2024 14:15 (15 minutes)*

Fulde Electronics Co., Ltd. is a manufacturer focusing on the development and production of high-reliability power supplies, the company is committed to the development of high- and low-voltage DC separated, chassis plug-in power supplies, energy storage, UPS power supplies and other special power supplies. Now the power supply products have been served in the European Organization for Nuclear Research (CERN) HGTD project, China's "artificial sun" (EAST) project, the Jiangmen Neutrino Experiment, Spallation Neutron Source, LHAASO and other large scientific facilities. Among them, the maximum voltage of high-voltage chassis can meet the demand of plus or minus 5000V5mA, ripple voltage 5mVpp, current monitoring resolution is less than 10nA, low-voltage chassis can realize 85% high efficiency under the premise of ripple voltage 5mVpp, high-voltage power supply and low-voltage power supply are supported by OPC-UA, EPCIS and other kinds of communication protocols, single-channel can be independently controlled and protected.

At present, our high voltage power supply has provided 2500 channels in LHAASO and is expected to provide 500 channels per year in the future operation and maintenance; 200 channels in CERN and has been running stably for 2 years, and is expected to provide 9000 channels of high voltage in the next year; and 2000 channels of low voltage power supply in the Spallation Neutron Source and has been running stably for 3 years; the UPS power supply provided by the Jiangmen Neutrino Experiment, as well as the low-voltage power supply for electronics, has been in continuous and stable operation for 2 years.

High reliability as an important requirement for power supplies for large scientific facilities. In recent years, our company has done a lot of targeted research on the reliability and stability of power supplies in harsh environments such as high altitude, thunderstorms, high humidity and strong electromagnetic interference, and finally has successfully passed the tests of these complex environments. At the same time, in order to meet the new demands for large scientific facilities in the future, our power supply products are committed to the high power density under the premise of low-temperature wave, high reliability under the premise of intelligent, and anti-irradiation direction to continue to serve the construction of high-energy physics devices.

**Primary author:** LAI 来, Yongqian 永乾

**Co-author:** Ms LI, Qiuping (Fulde Electronics Co., Ltd)

**Presenter:** LAI 来, Yongqian 永乾

**Session Classification:** International Industrial Connection