



Contribution ID: 268 Contribution code: WEP70

Type: **Poster Presentation**

## A generic distributed stream-processing framework for neutron spectrometer data process based on the asynchronous aggregation network

*Wednesday, 11 September 2024 14:20 (1h 30m)*

In the recent project of China Spallation Neutron Source (CSNS), a new designed distributed stream-processing framework is applied as the fundamental schema of data process system on user cooperative instruments. It is constructed with the open-source Apache Kafka software, which aims to aggregate the big data for manipulate sharing, and also with an synchronous trigger&tagging system, which provide synchronous mark for various data sources. Correlation could be identified among different measurements and subsystems to perform asynchronous manipulation, while quasi real-time characteristics is another profit from the stream-processing framework. Efficiency and adaptability of this technical framework has been verified during the operation of constructed user cooperative instruments in CSNS. An increasing number of data-processing functions and experiment methods have got benefit from it.

### Footnotes

### Funding Agency

### I have read and accept the Privacy Policy Statement

Yes

**Primary author:** LI, Jiajie (Chinese Academy of Sciences)

**Co-authors:** ZHUANG, Jian (Institute of High Energy Physics, Chinese Academy of Sciences); TENG, haiyun (Chinese Academy of Sciences)

**Presenter:** TENG, haiyun (Chinese Academy of Sciences)

**Session Classification:** WEP: Wednesday Poster Session

**Track Classification:** MC7: Data Acquisition and Processing Platforms